



**University of
Reading**

**Teachers' self-perceptions of their
professional learning in the context of
recent educational reforms in Oman**

**A Thesis submitted for the Degree of Doctor of
Philosophy**

Institute of Education

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Dedication

O'Allah Almighty! All praise and gratitude be to you.

Declaration

I confirm that this is my own work and the use of all material from other sources has been properly and fully acknowledged.

Hilal Alshandudi

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Abstract

This study seeks to answer the following research question: ‘To what extent do Omani teachers working in Post-Basic Education Schools (students aged 16-17) perceive their professional learning to be effective in the light of recent educational reforms?’ It aims to contribute to the debate about the tension between the planning and implementation of educational reforms, to improve understanding of the factors that affect implementation and lead to successful change, and to raise implications for the general understanding of the relationship between educational reforms and enhancement in teachers’ learning.

This was an empirical, essentially qualitative, multi-site case study using mixed data collection methods that were applied in three sequential phases. The data collection instruments were piloted in phase one, then refined to improve their validity and the reliability of the findings. In phase two, questionnaires were used to gather quantitative data from 12 of the 37 schools in one educational district in Oman. The aim was to understand the bigger picture and identify the main issues needing further investigation. A total of 159 teachers responded, representing an 88.3% response rate, while all 12 school leaders completed their questionnaire. The issues which emerged were investigated in depth and qualitatively in phase three, when 12 teachers, four head teachers and three inspectors participated in semi-structured interviews in four schools. Three theoretical ideas underpinned this study and helped in understanding and interpreting the findings: complexity theory, contingency theory and social constructionism.

The findings revealed a mismatch between what was offered and what teachers’ reported benefiting the most from. This divergence was caused by an underestimation of the complex nature of planning for improving teachers’ learning and an oversimplification of implementers’ roles in the change process.

The study highlights the consideration that needs to be paid to the variation among schools and teachers and stresses the importance of enabling schools to respond appropriately to their contexts. This study also illuminates the interconnected external and internal factors that

influence teachers' beliefs and practice in relation to change at various levels and identifies the potential negative consequences of lack of motivation, non-adaptive structures and centrally imposed guidelines and regulations on teachers' willingness to change and on schools' contingent ability to meet their changing situations.

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List of Abbreviations and Acronyms

BERA	British Education Research Association
CPD	Continuous professional development
EEP	Electronic educational portal
EFA	Education For All
GCC	Gulf Cooperation Council
HRDD	Human Resources Development Department
IBoE	International Bearu of Education
ICT	Information and communication technology
INSET	In-service training
MDGs	Millennium Development Goals
MKO	More knowledgeable other
MOE	Ministry of Education
MOHE	Ministry of Higher Education
MOM	Ministry of Manpower
MOSD	Ministry of Social Development
NPM	New Public Management
OECD	Organization for Economic Co-operation and Development
OPLC	Online professional learning community
PBESs	Post-Basic Education Schools
PD	Professional development
PISA	Programme for International Student Assesement
PL	Professional learning
PLC	Professional learning community
SC	Specialized Centre for Teacher Training
SQU	Sultan Qaboos University
TIMSS	Trends in International Mathematics and Science Study
UK	United Kingdom
USA	United States of America
ZPD	Zone of proximal development

Chapter 1 Introduction

1.1 Introduction

This study investigates the interactive relationship between educational change and professional learning (PL), highlighting the gap between planning and implementation, where things are enacted differently in schools from what is planned at the top of the educational hierarchy. More specifically, it examines teachers' perceptions regarding the improvement of their professional learning in the context of recent educational reforms in Oman.

This chapter establishes the rationale and significance of the study (Section 1.2), sets out the aims, objectives and research questions (Section 1.3) and provides an outline of the structure of this thesis (Section 1.4).

1.2 Rationale, significance and outcomes

In their response to the demands of globalization, fierce economic competitiveness, unprecedented advances in information technology and the expansion of global knowledge, many Arabic countries have introduced reforms in a highly centralised system, controlled by the MOE. The effectiveness of such reforms relies to a great extent on the questionable impact they have in improving schools' performance and effectiveness as a whole and students' achievements in particular.

However, there is substantial evidence in the literature that links teachers' quality with students' achievements (e.g. Lunenburg, 2011; Stewart, 2014). Hopkins (2000) argued: 'It is unlikely that developments in students' learning will occur without developments in

teachers' practices' (p.10). This claim is supported by Resnick (2010), who believed that teachers' professional learning (see Section 3.3) opportunities contributed positively to students' learning outcomes. In addition, using planned professional development to increase teachers' ability to adapt their teaching to meet students' needs and improve their learning experience is a feature found to characterise top-performing education systems in PISA assessments (OECD, 2012) and is referred to in the McKenzie report as a 'main driver' in improving students' outcomes (Barber & Mourshed, 2007), although these might not be in line with what teachers think they need.

Thus, the effectiveness of these educational reforms relies heavily on the extent to which they are accompanied by improvements in teachers' learning. Nevertheless, while teachers are asked to enact these reforms, they also are expected to respond appropriately to the changing requirements and developments in their subject specialisations and in the context of their schools, including the diverse and changing needs of their students (Watson & Michael, 2016). However, in most centralized educational systems, teachers are rarely involved in shaping these reforms, which require them to adopt and implement changes in how they teach and how their students learn (Netolicky, 2016).

Although much research has focused on the characteristics of effective PL programmes and what improves teachers professionally (e.g. Husbands, 2016; W. Jones & Dexter, 2014), the outcomes of many educational reforms have been rather disappointing in creating changes in teachers' classroom practice (Cordingley, 2015; Opfer, Pedder, & Lavicza, 2011; C. Watson & Michael, 2016).

In 2011, the Ministry of Education (MOE) in Oman introduced reforms which regarded teachers' professional development as a core element in improving the educational

system and achieving inevitable change (MOE, 2011). However, the issues of teacher quality and improved teaching practice remain problematic in Oman.

Although the number of professional development (PD) programmes for teachers has increased and the MOE budget allocated by the MOE to staff training reached its peak in 2012, exceeding seven million Omani rial (RO) for the first time (MOE, 2012/2013); there is little explanation of the scant improvement in students' achievement and the stagnation of teachers' practices (Al Balushi & Griffiths, 2013). The expectation was that this increase would promote improvements in teaching and learning and help to redress the weaknesses observed in the efforts to develop a high quality teaching workforce in the past (Al Balushi & Griffiths, 2013).

In addition, although Oman's ranking in the Trends in International Mathematics and Science Study (TIMSS), based on students' achievement, has improved slightly compared to the other participating countries (2007: 36/49, 2011: 36/42, 2015: 27/39), it is still below expectations (AlMaskari, AlMawali, AlHarthi, & AlRasbi, 2016; NCES, 2017), for the current position please see Appendix 1.

Reacting to these unsatisfactory results, the Education Council, which oversees education policy in the country, has urged the MOE to take action to identify the factors that lead to enhanced student outcomes (ONA, 2017). Improving teachers' quality was one of the areas stressed. A joint report by the MOE and the World Bank has also revealed many shortcomings in enhancing teachers' quality (MOE & World Bank, 2012), while other recent studies have had similar results (Al-Ani, 2016; Al-Maamari, 2014; Al-Yaroobi, 2013; Alazri, 2013), showing that many reforms have failed to bring about the desired improvements in classroom teaching and learning.

There was a recognition in the MOE that something was missing, there being 'no systematic data on the impact of the courses on classroom practice' (MOE & World Bank, 2012, p.130). This, along with the increasingly strongly felt forces for change (Section 2.4.1), have led to the effectiveness of many educational reforms being questioned.

Blame has always been laid on teachers for these disappointing outcomes. However, the fact that teachers are not involved in decision about policy initiatives in the centrally-led Omani education system indicates that this conclusion might not be based on evidence. In 2011, Oman witnessed demonstrations by teachers who demanded better working conditions, higher salaries and a reversal of some elements of recent reforms. This was seen as an indicator of the failure of the MOE to convince teachers of the significance and priority of its top-down reforms (Al Balushi & Griffiths, 2013). Such indicators of unwillingness to accept the top-down change approach adopted by the MOE and of resistance to such changes are what drives this study. Thus, in order to discover what might have gone wrong, it will be necessary to pay closer attention to what actually goes on in Omani schools and to examine whether teachers are able and willing to use what they learn in the classroom, whether or not they actually do so and why.

My decision to conduct this study was influenced by my experience at three levels in the Omani education; as a teacher (of English language at elementary and secondary levels), as an educational researcher (working in the Minister Office in the headquarter of the MOE for two years and in the Technical Office for Studies and Development for three years), and as a studies and follow-up educational specialist (in the Human Resources Development Department in one educational district for three years).

As a new teacher in an elementary school I can still remember the little guidance and support I had received during my first two working years. Being moved to secondary

school level, I realized that I needed to adapt my teaching to meet the new situation, especially in relation to teaching new curriculum and dealing with older learners. Learning from colleagues was an alternative to the scarce PD opportunities I had received at that time.

I then had the opportunity to move to work in the MOE headquarter, in both the Minister office and the Technical Office for Studies and Development. This allowed me to have a closer view and gain better understanding of how policy is made and how decisions are taken at the top of the hierarchy of the educational system to be implemented in the widely spread schools around the Sultanate. However, it allowed me, at the same time, to be aware of a detachment between the ambitious expectations in the MOE and the actual conditions in schools, especially in relation to improving teaching and learning. I then moved to work in one of the education office districts, in the Human Resources Development Department in specific, as a studies and follow-up educational specialist. Large part of my new responsibility was linked to assessing improvement in teachers' practice. Being in this position reinforced my feeling of the existence of a gap between how things are planned at the top of the educational hierarchy and what is enacted in the schools.

In 2014, I had the opportunity to continue my higher studies. This triggered the idea of undertaking research on the effectiveness of top-down designed initiatives in enhancing teachers' practices and improving their learning. Realizing that official policy documents might reflect the perspective of policy makers, investigating the problem from the perception of teachers, head teachers and inspectors, those who are supposed to implement the reforms, by giving them a voice seemed important in understanding the felt discrepancy and revealing its causes. Being an insider, although might have led some participants to be more cautious in expressing their opinions, has enabled the researcher

to better understand various perspectives and facilitated more willingness among participants to be involved in the study.

This research has allowed the participants to express their concerns and opinions on the effectiveness of recent educational reforms in Oman in improving their professional learning and changing their teaching practice, with the aim of identifying and exploring the factors influencing teachers' engagement, attitudes and learning in formal, informal and self-directed PL opportunities in the Omani context, while at the same time eliciting the views of head teachers (as communicators between the MOE and teachers, and as supervisors of teachers' practice) and inspectors (as PL providers, trainers and appraisers).

The results of this study will inform both policymakers and practitioners in Oman of better ways to improve educational planning and teachers' practice (implementation). Thus, it is expected that it will enhance the quality of educational planning and PL programmes in the MOE in Oman and make them more relevant to classroom practice, which would be reflected in better performance by teachers' and enhanced student outcomes.

1.3 Research aims and questions

This research aims to:

- Help improve planning by the MOE in Oman.
- Contribute to finding better ways of putting planning into practice and making it more effective.
- Give teachers a voice to express their opinions of the content and delivery of PL.

The objectives of this research are:

- To understand what makes teachers' PL more effective.
- To understand clearly the best ways of improving teachers' PL.
- To understand more about whether the existing PL opportunities have led to improvements in teachers' practice.
- To understand the barriers to improving teachers' practice in connection with the design and delivery of PL experiences.

The main research question is:

To what extent do Omani teachers working in post-basic education schools (students aged 16-17) perceive their professional learning to be effective in the light of recent educational reforms?

This question raises six sub-questions:

1. What does PL mean to teachers?
2. To what extent do teachers perceive themselves as having an active role in improving their own PL?
3. What sort of PL opportunities do teachers consider to be the most useful in their professional development?
4. To what extent have these opportunities led to enhancements in teachers' practice?
5. What factors hinder the improvement of teachers' PL?
6. To what extent are teachers supported in improving their learning?

1.4 Structure of the thesis

This chapter has set the scene and painted an overall picture of the study, after which the following three chapters of this thesis aim to provide a detailed view of its context (Chapter 2), a review of the relevant literature (Chapter 3) and an account of the methodology used (Chapter 4). Chapter 5 presents the results of a pilot study and analyses the quantitative and qualitative data gathered in the two phases of the main study. Chapter 6 discusses the findings and relates them to the literature and to the theoretical ideas that underpin the study. Chapter 7 summarises the main findings and provides answers to the research question and sub-questions. It also presents a revised model of PL based on the findings, describes the contribution of this study to knowledge, evaluates the conceptual framework and research design, discusses the study's limitations, then concludes by presenting some implications for policymakers and practitioners and by suggesting some areas for future research.

Chapter 2: Context of the study

2.1 Introduction

This chapter sheds light on some key aspects of international education context (Section 2.2) and the Omani context (Section 2.3). Section 2.4 describes the Omani education system, highlighting the education policy, philosophy and structure, the main important education policy reforms and provides a detailed picture of the centrally-planned professional development in the MOE. Section 2.5 presents a brief summary of what was discussed in this chapter.

2.2 International education context

As this study is located within an extensive body of literature dealing with education change and PL, it was important to start by discussing some of the main change forces (see Sections 2.2.1 to 2.2.5) that influence education globally and lead countries, including Oman, to reform their educational systems.

2.2.1 Globalization

Ritzer (2010) defined globalization as

...a transplanetary process or set of processes involving increasing liquidity and the growing multi-directional flows of people, objects, places, and information as well as the structures they encounter and create that are barriers to, or expedite, those flows (p. 2).

Ritzer used the metaphor of 'liquidity' to denote the inevitability of globalization, while 'flows' refers here to the influence and interconnectedness of relations, exchanges of commodities, services, information and ideas and the movement of people across national borders (Little & Green, 2009). This, however, is argued to have led to unprecedented

global competition, offering a stronger position for rich states and influential cultures over smaller and developing countries (Zajda, 2005).

Burbules and Torres (2000, p. 14) illustrated the effects of the characteristics of globalization under three headings:

1. *In economic terms: reduction on barriers to the free flow of goods, workers and investments between nations,*
2. *In political terms: (loss or erosion of national autonomy and weakening in the notion of 'citizen' as a unified and unifying concept),*
3. *In cultural terms: clashes between standardization and homogeneity with local oriented movements that take a more defensive approach.*

Educational institutions have had to respond to the ways in which globalization has changed the world, to be able to meet these political, economic and social demands (Othman, 2012). Thus, they have had to reflect changes in the global economy, especially in terms of the knowledge and skills that students need to attain (Little & Green, 2009). This has required the revision of national educational policies, ideologies and beliefs, leading to debates over the competing demands of centralization and decentralization, nationalization and internationalization, standardization and diversification, state control and privatization, and the role of the state versus individual choice. As a result, many developing countries have initiated reforms to their education systems with the aim of achieving better outcomes.

However, globalization has also created new challenges for education systems, including requirements to reflect market-linked mechanisms, especially with regard to finance, curricula, assessment and teacher training, which have often been seen to conflict with the values of education (Moloi, Gravett, & Petersen, 2009). The role of education in such a globalized world is important because states' success in achieving sustainable

development depends to a great extent on their ability to reform their educational systems effectively so that they meet these changing demands (Little & Green, 2009).

2.2.2 Neoliberalism

Profit and economic competitiveness are key drivers of neoliberalism (Raduntz, 2005), an ideology promoted mostly by politicians and opposed by many educational academics. It is an economic model that 'supports competition, minimizes government interference and promotes a marketized education system' (Raduntz, 2005, p.234). Neoliberalist policies seek to reduce state sponsorship and financing of education while imposing management models borrowed from the business sector (Letizia, 2013). In this sense, education is viewed as a commodity, which entails championing the privatization and marketization of public education, a standardized formal curriculum, performance accountability and result-driven effectiveness measurement that is defined in market terms (Hill & Kumar, 2009).

However, neoliberalism in its current version, as an '*advanced form of global capitalism*' (Letizia, 2013, p.165), seems to characterize learning as an individual profitable activity, whereas educational values go beyond competing for profits. Yet, for education professionals, being defensive might be seen as inadequate in countering the neoliberal agenda. Inventive alternatives need to be found to ensure that the quality of education outcomes is balanced with the responsibility and efficiency of using the available resources (Levidow, 2006).

2.2.3 New Public Management

New public management (NPM), which was a result of competition between countries in global markets, aims at modernizing the management of the public sector so that it operates in a more efficient and effective way that imitates private sector mechanisms

(Common, 1998). In practice, this is translated into the adoption of five key principles that generally reinforce market-like mechanisms: focusing on the quality of outcomes and customers' needs rather than on inputs (Roberts, 2014); emphasizing accountability and standards-based performance (Hood, 1995; C. Talbot, 2007); promoting a culture of achieving more with less (Common, 1998); privatizing public services (Ferlie, Lynn, & Pollitt, 2007) and increasing emphasis on management skills rather than policymaking, through decentralization and enabling managers to exercise greater autonomy (Hood, 1995).

In addition, international organizations like the UN and the World Bank play a vital role in pushing governments to modernize the public sector to meet the best-practice criteria of these organizations (Dale, 2005) and to fulfil international obligations like Education for All (EFA). As a result, access to education in general and to knowledge in particular has improved in many countries.

Nevertheless, Hood (2013) has warned that such a direct policy transfer, especially in education, might lead to the adoption of inappropriate approaches to administration, especially in developing countries. This warning is based on the view that NPM has many limitations. One argument is that what works in the private sector may not necessarily work in the public sector: 'the convergence of public and private sector employment practices has also been questioned' (Bach & Bordogna, 2011). One example of the divergence between the expectations of private business and the educational sector is that education requires long-term investment, where a decade or more may elapse before the return on that investment can be determined. In addition, educational aims go beyond ensuring efficiency to the quality of the outcomes and the preparedness of individuals for the future.

Whether or not NPM is the best ideology for running the educational sector is a question that needs further investigation by educators, but what is evident is that taking NPM as a package from the private sector and applying it with no modification or adaptation to the public sector may have undesired results. It might be more useful to consider '*an adaptation of private organizational models, rather than a direct copying of them*' (Trotta, Scarozza, Hinna, & Gnan, 2011, p.23).

2.2.4 Development of a knowledge-based economy

Rapid advances in technology and information production have led to a shift from traditional investments in natural resources and the production of goods to the development of human capital, the production of information and investment in knowledge provision (Arundel, 2005), in what is known as the knowledge economy (KE) (Brinkley, 2006). The KE concept concerns local economies and in particular education, which has become a capital good (Othman, 2012); as a result, universities and schools have become new markets for profitable commodities like computers and electronics (Raduntz, 2005). In addition, the recognition of the KE has created new demands for educational institutions, particularly to respond to the changing nature of work skills. According to Shields (2013), the global KE has become a key driver of educational policymaking at all levels.

2.2.5 Increased pressure due to international competition

It is argued that globalization has created an environment in which comparative education can flourish:

Globalization has become a central and pervasive element of the comparative education literature, giving it a new lease of life. (Dale, 2005, p. 117)

This has been accompanied by the domination of international educational trends and exams, such as EFA, the Millennium Development Goals (MDGs), Trends in International Mathematics and Science Study, (TIMSS), the Organization for Economic Co-operation and Development (OECD) and its assessment system 'Programme for International Student Assessment' (PISA). States and educational institutions have sought to adhere to these international obligations and reflect on the results of international comparative data. These have played an albeit indirect key role in imposing changes at the state level (Zajda, 2011). For instance, Morrow and Torres (2000) commented on the vital impact of international exams and comparisons on education and education policies of countries.

Educational standards are being established by specific international organizations and are considered landmarks in many educational domains (Morrow & Torres, 2000p. 42).

This argument was supported by Dale (2005) who highlighted the 'readiness of Ministries of Education around the world to respond to the OECD's scenarios for future schooling' (Dale, 2005, p. 118).

Hence, international comparative organizations like the OECD have actually affected educational policy and how it is made worldwide. As a result of their activities, participating countries have been prompted to review their educational systems, introducing reforms, reproducing success stories and borrowing best practice from other countries that are ranked highly in these comparative data, such as Finland and Singapore. However, such borrowing can sometimes be used to legitimate existing policy decisions that are driven primarily by political beliefs, serving political interests (Shields, 2013).

Countries look at these comparative indicators as criteria of what is considered a good education, what Shields (2013) has referred to as an '*international model*' of policies and practices (p.62). Shields (2013) argued that this has weakened state control over

education, but governments still seem to have substantial control of major parts of their educational systems, especially curriculum and funding (Morrow & Torres, 2000).

2.3 General aspects of the Omani context

To expose the factors that influence Omani policy in general and the country's educational policy and choices in particular it is helpful to begin by examining five key aspects of the context of this study: geography, history, political and cultural identity, economic development, and education.

2.3.1 Geography

The Sultanate of Oman (Figure 2.1) is an Arab country located in the southeast of the Arabian Peninsula (MOI, 2006). It is the second largest country in size and population on the Peninsula after Saudi Arabia (Alazri, 2013), with a population of four million (dispersed all around the country with higher densities in the capital, Muscat, on the coast and in the interior) and a land area of 309,000 square kilometres (120,000 square miles). The country is geographically diverse, with extensive desert in the centre, oases in the interior, 3165 kilometres of coastline, mountains in the north and green agricultural lands in the south (MOI, 2012). As a gateway between the Indian Ocean, East Africa and the Arabian Gulf, Oman occupies a vitally important strategic location (MOE, 2006). In the west, Oman shares the desert of the Empty Quarter with Saudi Arabia and the UAE; to the north and southeast, it has coastlines on the Arabian Gulf, the Gulf of Oman and the Arabian Sea (AlNabhani, 2007).



Figure 2.1 Oman Map (source: <https://www.google.co.uk/search?q=oman+map>)

2.3.2 History

Oman is one of the most ancient countries in the Arab world. Its history and civilization extend back five thousand years, when it was inhabited by fishing communities. The Omanis were among the first people to embrace Islam in around 630 AD. Oman has enjoyed full or partial sovereignty for most of its history. However, the Portuguese occupied some parts of the country in the 18th century. In the 19th century, Oman became a powerful empire with a very powerful navy, defeated the Portuguese and expanded its territory across the Arabian Gulf to the East African coast, parts of Persia and Pakistan. Oman also established political links with other great powers of the time, including Britain, France and the United States (MOI, 2003).

In recent times, the main historical event that caused a radical shift in the Sultanate was when his Majesty Sultan Qaboos bin Said took the throne of Oman on 23rd of July 1970. Since then, the Sultanate of Oman has enjoyed unprecedented prosperity and has regained its status among the nations of the world (MOI, 2006).

2.3.3 Political and cultural identity

Oman is a Sultanate whose government is nominated by the Sultan, who has absolute authority. The Sultan himself, who has advisors in various fields, designates the government members. The cabinet runs the affairs of the country based on the directives of the Sultan and the Basic Law of the State by creating five-year development plans. There

are two advisory councils for the government: the State Council, whose members are designated, and Al-Shura Council, an elected body. These two councils form what is called the Oman Council.

Administratively, Oman is composed of eleven governorates: Muscat, Dhofar, Musandam, Alburaimi, Albatinah North and South, Aldhahirah, Aldakhliiah, Alsharqiyah North and South and Alwusta. These are divided into 61 wilayats (cities) and constituencies (MOI, 2012). Although each governorate has a government representative (the Wali) and branches of government entities (DGs or local administration), centralization is obvious in the work of government, especially in vital issues like policies and finance.

The Basic Law of the state, which was issued by royal decree No. 101/1996, states that all members of Omani society are equal in their rights before law, with no distinction or preference based on their sex, origin, social status, religion or doctrine (Alazri, 2013). Politically, Oman has remained free of the conflicts affecting neighbouring countries, driven by a decision not to interfere in any conflict while calling for peace and dialogue as the best way to solve issues between countries.

It can be said that Omani culture is based on three main pillars: Islam, the Arabic language and shared heritage. Islam is the official religion of the country and Arabic is the official language. Omani society is committed to ethical and moral values based on Islamic principles. Furthermore, the dispersal of a relatively small population over a relatively large area gives Oman a cultural diversity that is represented by considerable variation between the north, centre and south of the land in its traditional songs, dances, customs and food. The influence of neighbouring countries is also obvious, especially in border towns, where people have similar cultural habits, accents and customs to those of their foreign neighbours.

2.3.4 Economic development

While Oman's economy is highly dependent on oil revenues and most Omanis work in the government sector, the Sultanate's policies have consistently given attention to diversifying revenue through productive sectors such as gas-based industries, information technology, mining and tourism (MOI, 2003). These diversification efforts are translated into five-year strategic plans that set the objectives for all government sectors. Oman also pays close attention to human resource investments and the capability of school leavers to gain market skills that allow them to compete globally and to contribute to the country's prosperity (MOE, 2014a).

2.4 Education in Oman

2.4.1 Educational policy, philosophy and structure

The education system in Oman is centrally determined, controlled and evaluated. Education policy is based on the directives of the Sultan and the Basic Law of the State (IBoE, 2010/2011). While it seeks to provide education for all, it also aims to modernize the country and to meet the challenges of globalization in the 21st century (Al Balushi & Griffiths, 2013).

The Omani educational philosophy is based on Islamic, national and educational principles (MOE, 2014a). It also aims at nurturing students' intellectual, emotional, spiritual and moral development and at ensuring that they are prepared for the rapid changes in all scientific domains by acquiring problem-solving and critical thinking skills (IBoE, 2010/2011).

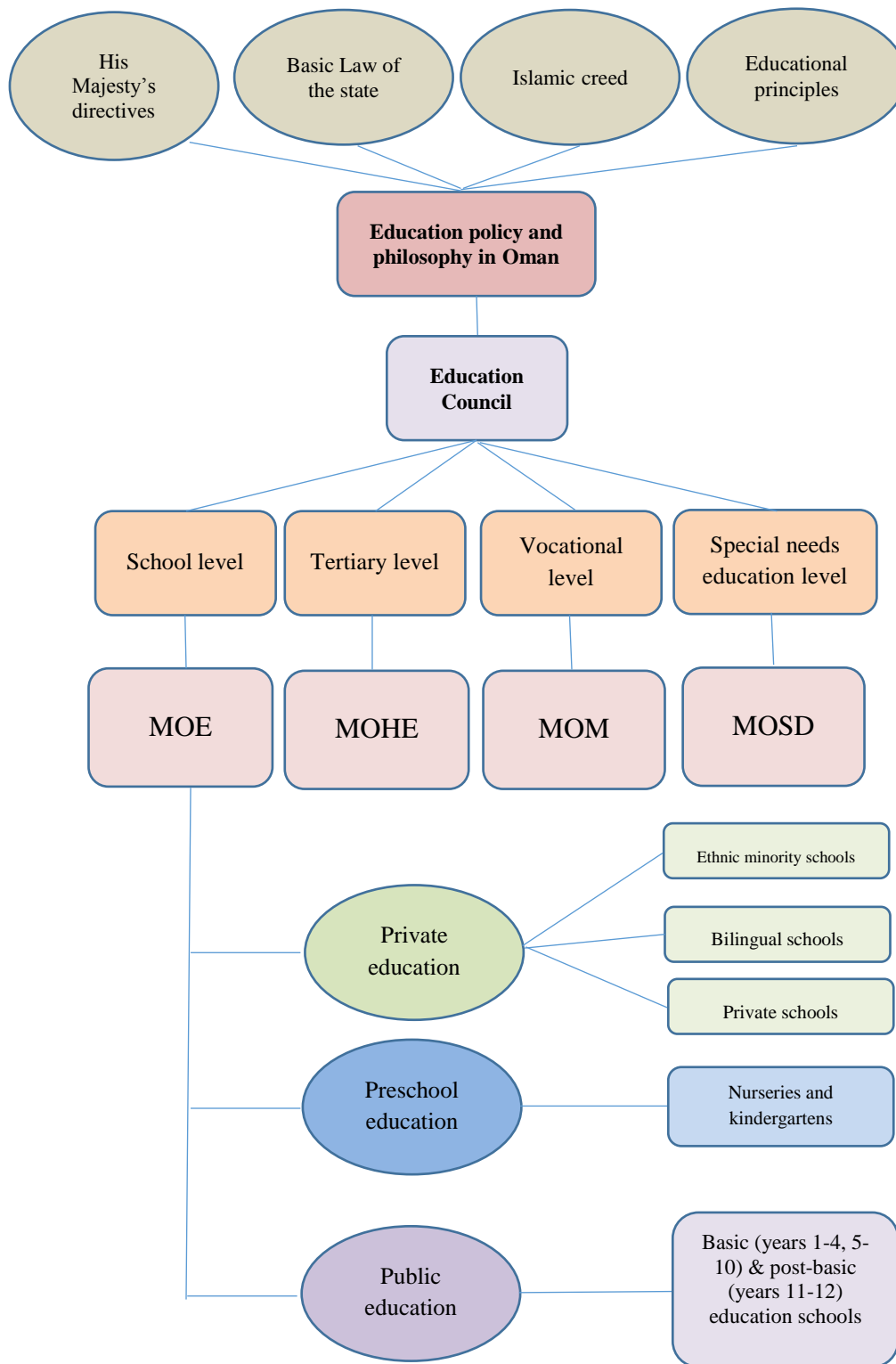


Figure 2.2 Education policy, philosophy and structure in Oman

Figure 2.2 shows that educational policies in Oman are legislated and determined by the Education Council, which is chaired by the Minister of the Diwan of the Royal Court and

whose 15 other members are individuals representing various government bodies. In practice, four ministries administer the educational sector at four levels; the Ministry of Education (MOE) at the school level; the Ministry of Higher Education (MOHE) at the tertiary level; the Ministry of Manpower (MOM) at the vocational level and the Ministry of Social Development (MOSD) at the special needs education level.

2.4.1.1 Education for all (EFA)

The government's commitment to EFA was reflected in one of his majesty's early speeches in 1970, when he said, 'We will teach our children even under the shade of trees' (MOFA, 2013), indicating his determination and commitment to providing education for all. The actual translation of this commitment at the pre-tertiary education level was the responsibility of the MOE (see Section 2.4.1.2).

Based on this, the Basic Law of the country declares education to be a fundamental right of every citizen and anyone who lives legally in Oman, provided free of charge for all children aged from six to 17 years (grades 1-12) (MOE, 2008), and paid for using oil revenues, although attendance is not compulsory. In 2001, the World Bank described Oman's success in providing and spreading education as 'massive', 'unprecedented' and 'unparalleled by any other country' (Albarwani & Baily, 2016).

However, with the start of the 21st century, a mixture of increasingly strong external and internal forces for change led policymakers to reconsider the focus of the education system and to revise its priorities. These change forces are described below:

a) Globalization

As is the case with all other developing countries in the Middle East, Oman has been impacted by globalization, which 'has brought its own strains, challenges and opportunities' (MOE & the World Bank, 2012, p.5). Oman's relationship with globalization is relatively new and can be linked to changes in many policies including education: 'dealing with globalization has started by reforming the educational system' (Al-Harthi, 2002, p.110). Such influence was evident, according to Al'Abri (2011), in the implementation of Basic Education, a major reform in 1998, which was a response to the economic, technological and knowledge-economy challenges of globalization. Global educational trends such as EFA and the United Nations Millennium Development Goals were also considered direct effects of globalization (Al'Abri, 2011). This reform aimed at developing schools' performance in preparing young learners for the future, including equipping them with the skills needed to be locally and internationally competitive.

However, more than a decade later, a study by Al-Maamari (2014) revealed some limitations in realizing this vision, which he related to two main reasons: 'inadequate preparation of teachers' and 'the use of pedagogies that favour acquisition of discrete assessable learning outcomes' (p.114). His argument seems to support the findings of an earlier study that there was a need for educational reforms to focus on creating and developing 'critical cultural literacy' by challenging the 'taken for granted world' (Al-Harthi, 2002), which implies that change should not be superficial but should affect how people—specifically implementers—think and act. Such criticisms and limitations seem to emphasize the need to revise and evaluate the effectiveness of educational reforms in Oman in facing the challenges of globalization and to assess their impact in developing teaching and learning in schools.

b) Increasing regional and global economic competition

Oman's economy is seen as interconnected with its counterparts in the rest of the world. Omani education has been affected by a fierce regional and global economic competitiveness, which resulted into a need to redirect educational policy so that it fits better the overall changes in the national and international economy. To achieve competitive advantage, policymakers in Oman recognized the need to modernize the public sector so that it meets the best-practice criteria of international organizations such as the World Bank. This was seen as an innovation aiming to enable public sector organizations to improve the quality of their public services and to sharpen their focus on meeting the needs of their customers. Thus, there was clear interest in enabling the private sector to play a bigger role in providing public services: 'The labour market in Oman is in transition from predominantly public sector employment to a more mixed economy with a vibrant private sector' (MOE & World Bank, 2012, p.33).

In education, this shift 'from an input-based to an output-based budgetary approach' (MOE & World Bank, 2012, p.41), was translated by adopting some of the principles of New Public Management (NPM), mainly the need to meet the market requirements and adopting private sector strategies, including outcome accountability, performance measurement and rewarding system (Hood, 2013), to manage education in Oman. Consequently, preparing young learners for the demands of the work market is a theme running through many MOE publications (e.g. MOE, 2014a) and a significant objective of most recent educational reforms (e.g. MOE & UNESCO, 2012). In addition, developing human resources was viewed as a key to achieving this competitive advantage. A joint report between the MOE and the World Bank stated: 'To keep pace with technological advancements and to attain international competitiveness, the development and

upgrading of human resources is a high priority on the country's development agenda, and education is central to this national priority' (MOE & World Bank, 2012, p.32).

However, the differences between the public and private sectors in their values (e.g. competitiveness and profit vs cooperation and people's well-being) call into question the convergence between the two (Bach & Bordogna, 2011) and accordingly the suitability of translating such strategies into education. In addition, some studies (e.g. Anwar & Chaker, 2003; Khan, 2011) have shown the limitations of adopting NPM principles in the Middle East, including the UAE and Oman, mainly due to their inconsistency with the environment, values and culture of these developing countries. A study by Al Wahshi (2016) found that NPM might not be applicable to the Omani educational context due to the exercise of centralized control, which allowed little school autonomy and limited participation in decision making.

c) Internal pressure and international comparisons

There was strong internal pressure on MOE policymakers to respond to many internal evaluations and worrying reports (e.g. Al-Barwani & Osman, 2011), media coverage and educational international comparisons like the Trends in International Mathematics and Science Study (TIMSS), where Omani students' scores were not satisfactory compared to some neighbouring countries (AlMaskari et al., 2016). The MOE seemed to acknowledge this, noting that TIMSS had shown 'that Omani students fall far behind students in most other participating countries' (MOE & World Bank, 2012, p.30).

Similar findings emerged from another international report, by the Organization for Economic Co-operation and Development (OECD, 2012), of the results of the Programme for International Student Assessment (PISA) survey, which compared the skills and knowledge in science, mathematics, reading, collaborative problem solving and financial

literacy of 15-year-old students from various education systems worldwide. The report revealed that students from oil and gas-rich members of the Gulf Cooperation Council (GCC), including Oman, had attained lower scores in mathematics than those from relatively resource-poor nations (OECD, 2012). These indicators suggest that education has high social value in countries with few natural resources, while those wealthy nations including the GCC countries that do not invest heavily in education are likely to face economic and social difficulties in the future. It was concluded that these countries need to invest more in human development in general and in education in particular.

Such results triggered a recognition of the need to change the educational system and to revise the effectiveness of existing reforms to overcome the weaknesses in students' outcomes. Improving teachers' practice was considered crucial to achieving this end (Algefri, 2008); however, recognizing the need for it may be much easier than ensuring it happens.

d) The need to develop a knowledge-based economy

Advances in knowledge have also inspired the need to reform education in Oman (Al-Rahbi, 2008), triggered by a recognition of the importance of diversifying the economy to reduce dependency on oil revenues. Developing human resources and investment in knowledge provision were of particular significance. This emphasis was translated into policies designed to promote knowledge acquisition as a source of economic development (Lightfoot, 2014), aiming to enhance the role of education in supporting the knowledge-based economy (Zaki & Kamli, 2014) and creating a vision to increase Oman's participation in knowledge production that would enable the transformation of the country into a modern society (MOI, 2012).

Thus, while the MOE still provides free education for all residents of school age, it encourages and facilitates the establishment of private and international schools (MOE & UNESCO, 2012). However, there is little to suggest that such strategies, which were clearly influenced by the World Bank and other international organizations, have been critically evaluated (Brandenburg, 2012). One of the key questions is whether these strategies suit Oman's societal context and the nature of its education, along with other considerations in relation to equity and inclusion: 'education was seen as a fundamental human right rather than an economic investment' (Shields, 2013, p.25).

e) Societal and economic development

The many economic changes affecting Oman have been accompanied by changes in its society, including increasing numbers of young female jobseekers: 'While girls outnumber and outperform boys in the education system, female workers are underrepresented in the labour market' (MOE & World Bank, 2012, p.33). There has also been a need to respond to an increase in the population and in the number of school graduates, along with an emerging gap between their skills and markets requirements (Al-Farsi, 2007; Al-Naibi, 2002). One of the government's strategies to face such challenges was its Omanisation policy (Issan & Gomaa, 2010), which aimed to replace all foreign school teachers with Omanis, while improving the linkages between education, the quality of school leavers and their skills on one hand and the labour market on the other (MOE, 2011).

At the school level, the MOE recognized that success in facing these forces for change effectively relies largely on the attention being paid to developing and improving other areas:

The MOE seeks to provide distinguished human resources, curricula, buildings and assessment tools for different students. This could be done by implementing

technology to reflect Oman's digital society and by giving the local society and the private sector a larger role in the promotion of educational services. (MOE, 2016)

Thus, it can be argued that Oman's success in responding to the increasingly strong regional and global forces of competitiveness and change relies in large part on its success in developing its human resources. In the education sector, developing teachers' performance has been seen as critical in this regard. However, such changes might require radical changes in how education policy is made and better attention to how it is implemented, which implies that the MOE should relax its central control and move towards context-based decision making.

2.4.1.2 Ministry of Education

The MOE is the principal executive authority that oversees pre-school, primary and secondary education (basic and post-basic education) in both public and private schools. While the ministry has total responsibility for running and funding public education, its role in private education is limited to regulation and supervision.

The MOE has its headquarters in Muscat, the capital city, with eleven district education offices across Oman. It is headed by the minister of education, three undersecretaries and several advisors (Appendix 2). Each of the 12 directorates general at MOE headquarters has a head, deputies, department heads and section heads. In the education offices, the structure is almost the same. A director general with one or two assistants leads each district. There are also five to six departments, each run by a head, one or two assistants and section heads. Each education office is responsible for between 17 and 175 schools, depending on the population density of its district. Schools report to the education offices and these in turn report to the MOE headquarters.

2.4.2 Education Policy Reforms

Education at the school level in Oman has undergone very considerable development in the last 47 years. The number of government schools, for example, has increased from only three (all for boys) in 1970 to 1068 (male, female and coeducational) in 2015/2016, with 56,586 teachers and 540,068 students (MOE, 2015/2016). Throughout the intervening years, many reforms have been introduced. The focus of these can be summarized into three phases, as shown by Figure 2.3. The focus in phase three was shifted to ensuring the quality of teaching and learning.

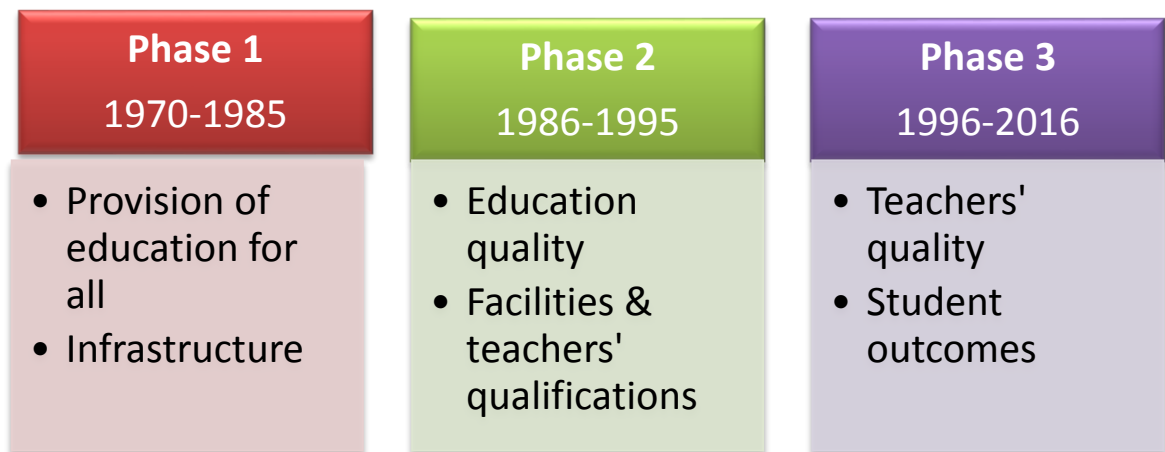


Figure 2.3: Three phases of educational focus in Oman

Once the structure of the different levels of education in the Sultanate had been established, implementation of education planning began in accordance with the policy of the five-year strategic plans of the country. The education system in Oman has had to respond to national, regional and global trends and influences. AlNabhani (2007) illustrated some change factors for education in Oman:

There is a very rapid expansion in all aspects of life in Oman and in education as well. These expansions form a challenge for education in a number of different areas. The economic expansion and diversification require more qualified human resources. This is in addition to the movement from a religious centred to wider curricula focusing more on science and technology (p.27-28).

In recognition of the need to cope with these challenges and to respond to the shortcomings of the education system identified by a number of internal evaluations (Al-Lamki, 2009), the MOE adopted several educational reforms. With regard to enhancing teaching quality, the expectations of policymakers seemed clear:

The aim of reforms is to promote teachers' involvement in reflective practice and collaboration (MOE, 2004, p.10).

The strategies employed by teachers aim to develop skills and attitudes that encourage autonomous and cooperative learning, communication, critical thinking, problem solving, research and investigative techniques, creativeness, innovation and the development of aesthetic sense' (IBoE, 2010/2011, p.10).

Policymakers and educational planners also seemed convinced that reforming the education sector and enhancing teachers' quality would require changes to the whole system: 'Structural changes are taking place at the same time as the ministry is gradually implementing educational reforms' (MOE, 2004, p.10).

The MOE admitted that teachers would need to be supported to realize its expectations:

Teachers have been trained in the new teaching methods and in how to adapt their classroom management techniques in line with current worldwide developments. Along with whole class teaching, teachers are now expected to use a variety of other teaching and learning methods, such as individual, pair work, small group and out-of-school work (IBoE, 2010/2011, p.22).

The support was mainly linked to helping teachers to improve their performance. The following subsections explain the most recent educational reforms relevant to enhancing teaching quality, enacted in 1998, 2007 and 2011.

2.4.2.1 Large-scale educational reform, 1998

The educational reform of 1998 was the most ambitious and comprehensive in Oman, involving changes in the structure of the school system, in the curriculum, in student assessment and in teacher training. For instance, the Basic Education and Post-Basic Education programmes replaced the older 6-3-3 levels of the general education system. Basic education lasts for 10 years of study and is divided into two cycles: cycle one, catering for students aged 6-9 years (grades 1-4) and cycle two, catering for students aged 10-15 years (grades 5-10). Post-basic education, for students aged 16-17, covers four semesters in two years (grades 11 & 12) (MOE, 2014b). This reform promoted the adoption of student-centred techniques, which led to class sizes being reduced. Another key feature was the introduction of coeducation to basic education schools in cycle one, although teaching and administration at this level were restricted to female staff.

The guiding principle behind this reform was to include relevant knowledge and skills-based content that would prepare young Omanis for life and work under the new conditions created by the global economy (MOE, 2014b). Therefore, new subjects such as IT and life skills were introduced and increased emphasis was given to mathematics, science, social studies, Arabic and English.

One aim of this reform was to gradually grant schools more authority and autonomy; thus, the MOE started a process of decentralization by introducing a system of school self-administration (Algafri, 2008). Under this scheme, schools received financial allocations to spend on enhancing their teachers' quality and in-service training (MOE & World Bank, 2012).

2.4.2.2 Reform of secondary education, 2007

The first (1998) cohort was expected to complete the basic education phase in 2007/2008. This required making decisions regarding reshaping schooling at the post-basic (secondary) level, leading to changes in curricula, assessment and teacher training in particular. The planning for this reform took the form of wider consultations, including workshops, seminars and national conferences. This led to the creation of an operational plan for the reform of secondary education: 'An operational plan has been implemented in Post-Basic education in 2007 to improve the quality of education provided for Omani generations' (Issan & Gomaa, 2010, p.19). The focus was on ensuring that Omani school graduates had the knowledge and skills to undertake higher education studies and meet the requirements of the labour market. Augmenting physical resources, enhancing curricula and improving teachers' quality were considered fundamental (Issan & Gomaa, 2010). It was also acknowledged that the reform would require changes in how teachers were trained, which eventually led to the setting up of a specialized centre for teachers' professional training (MOE, 2014c).

2.4.2.3 The strategic planning approach, 2011

The strategic reform of 2011 was triggered by the need for a wider involvement of stakeholders in shaping education policy and meeting the increasing complexity of the education environment (MOE, 2011). According to the MOE, the cornerstones of the strategic plan were consultation with all components of the educational system and careful analysis of the external and internal environment. The idea was to create positive attitudes among practitioners by allowing schools and teachers to contribute more fully to making decisions on education policy and reforms. It was believed that this would strengthen the feelings of ownership and commitment to the change process among teachers. However, although officials from the MOE visited the education offices and met

with some school heads and teachers, it seems that the scope of consultation was limited and that it fell short of the aspirations of teachers (MOE & World Bank, 2012).

2.4.3 Centrally-planned professional development

Omani policymakers have realized the importance of developing human capital and resources for the Omani economy (Common, 2011) and its considerable impact on the competitiveness of the country (Porcaro, 2014). Thus, teachers' PD has received increasing attention, especially in light of the directives from his Majesty the Sultan that developing human resources 'should be a major priority in all plans and programmes' (MOE, 2014c, p.3). Taking account of his Majesty's orders and of international research including the McKinsey report. 'How the world's most improved school systems keep getting better' (Barber & Mourshed, 2007), the MOE in Oman started paying greater attention and committing more resources to improving teachers' learning (MOE, 2014a). This was driven by a conviction that improving the quality of teachers was 'an essential component of the reform process' and that 'the successful implementation of any reform initiative depends on a well-trained and well-informed staff' (MOE, 2008, p.44).

2.4.3.1 Central PD plans

An annual PD plan is prepared centrally, determining the training needs of all teaching, administrative and supervision staff under the MOE (MOE, 2014a).

The MOE follows five-year plans, aligned with the government's five-year national strategic plans and elaborated by a committee established by ministerial decree, which sets the MOE's principles, goals and programmes. The committee is usually headed by one of the ministry's three undersecretaries, supported by a technical team whose role is to detail and design the plan and its programmes (MOE, 2011). The committee contains

representative members from all departments of the ministry so that all stakeholders' perspectives are taken into account. The five-year plan which ran from 2011 to the end of 2015 (the 8th Plan) was based on data gathered from the educational field, the evaluation of the last plan, analysis of current educational situation, new educational needs, challenges and priorities and the likely future needs of the educational sector in Oman, including teachers' and students' needs (MOE, 2011).

The 8th Plan had fourteen goals representing various areas of concern (Appendix 3). These goals were translated into 46 programmes which were implemented at the operational level and evaluated centrally using achievement indicators called *balanced scorecards* (MOE, 2011). Many of these programmes sought to improve teachers' quality by focusing on improving their subject knowledge and pedagogical skills, but the use of balanced scorecards as performance indicators did not provide any real evidence of how much teachers' practice had improved and did not consider the implementers' opinions of the suitability of the Plan or of its effects of teachers' PL experiences; these are areas that this study aims to investigate.

2.4.3.2 In-service teacher training

Overall, professional development programmes are provided at three levels (MOE, 2015):

Central level: These take the form of short courses and workshops conducted mainly at the main Training Centre of the Directorate General of the Human Resources Development in Muscat. The MOE provides transport, meals and accommodation for teachers who attend these courses during school time. The broad range of topics includes classroom management, information technology, language and teaching pedagogies. In 2015, 18 central PD programmes were offered to 1446 male and 2076 female teachers (MOE, 2015).

District level: Training at this level is prepared by inspectors, who deliver it in the training centres of the education offices, with the aim of providing enrichment and remedial training programmes based on the common professional needs observed. Inspectors are also responsible for the annual teacher appraisal. The district education offices delivered 716 PD programmes for teachers in 2015 (MOE, 2015).

School level: Training in schools is part of the MOE's 'school as a training centre' initiative to provide more school-based training, with the aim of transforming and enabling schools as training units for teachers, based on specific mechanisms determined by the MOE: 'School-based training is a strategic policy decision in a young country like Oman' (MOE, 2004, p.11). The MOE provides schools with limited budgets for professional development: 'Each school receives RO 300 per year; in addition, 610 schools have received an additional RO 200 to develop and implement a school professional development plan' (MOE & World Bank, 2012, p.130). The expectation is that school leaderships can use this financial support and any other available resources to enhance teachers' learning and professional development (MOE, 2014a). The MOE also provides support for teachers in their professional learning:

The ministry is keen on providing professional support for teachers. It recruits qualified supervisors [inspectors] to help teachers in performing their duties. It also makes available the references and guidebooks for all subjects. The ministry organizes workshops and seminars to develop teachers' skills and abilities (IBoE, 2010/2011, p.22).

In addition, the MOE provides professional academic programmes in collaboration with Sultan Qaboos University, the public university in Oman. Some teachers also have the opportunity to attend conferences or upgrade their qualifications in Oman and abroad, although the numbers might be much smaller and vary from one year to another, depending on the budget available. The MOE also provides online discussion forums,

which are seen as platforms for exchanging ideas and experience between teachers, head teachers, inspectors, parents and officials.

However, MOE officials admitted that realizing the expectations of educational reforms, with regard to teaching enhancement, would require making some adaptations:

The ministry realized that without creating a structure that provides continuous learning opportunities for human resources at various levels in the ministry, local authorities and schools, educational change is not likely to occur (MOE, 2004, p.10).

The actual translation of this increased attention and acknowledgement of the need for adaptations took several strategies that were rendered into centralized and school-based initiatives: promoting school-based teacher learning opportunities and allowing them more freedom in meeting the professional needs of their staff and setting up a specialized centre for teachers' professional training.

2.4.3.3 Promoting school-based training

Reflecting on international research findings as to the advantages of school-based professional development, the MOE encouraged school leadership teams to provide embedded and collaborative opportunities for their teachers that suited their differing priorities and needs (MOE, 2008). Schools were asked to organize professional development workshops for all subject areas during the first week of each academic year. In addition, the ministry required school leaders to create a professional development plan for the whole year, stating the number and topics of professional development activities that would be conducted. However, a joint MOE and World Bank report acknowledged the need for more ongoing improvement in teachers' quality in schools (MOE & World Bank, 2012).

The MOE also acknowledged the possible benefits of allowing more decentralization: ‘there may be considerable advantages to allowing schools to organize some of their in-service teacher training needs’ (MOE & World Bank, 2012, p.130). Therefore, it envisioned an initiative to treat each school as a training unit, promoting a school-based, job-embedded, collaborative and reflective learning environment for teachers. This initiative also stressed the significant role of head teachers, senior teachers and teachers in staff development.

Schools are expected to provide opportunities for their staff to work together to analyse, discuss, reflect on, plan and act to improve the effectiveness of teaching and learning in their classrooms. All staff in the school are encouraged to carry out research, develop their ideas, put them into practice in the field, and to report back on their findings. (MOE, 2008, p.45).

The ministry realized that this vision might require more resources for schools, increased PD budgets and more autonomy in spending their allotted funds and in deciding their professional priorities and needs.

2.4.3.4 The Specialised Centre for Professional Training of Teachers

The Specialized Centre was established in recognition of the challenges and expectations around improving teachers’ quality in Oman. The aim was to provide ‘effective’ training programmes to develop teachers’ skills and to improve and evaluate their performance (MOE, 2014c). The central vision clearly summarizes its driving goals:

‘...to include teachers as active partners in the development of education, using best international practice, leading to the achievement of the highest standards’ (MOE, 2014c, p.7).

As the centre is supposed to serve all the teachers in the Sultanate, it employs 31 administrative staff, three training experts and 46 trainers to deliver three phases of

training. Phase one is face-to-face training, which focuses on introducing the training content to the participants and evaluating their acquisition; the second phase is online interaction, where the participants receive training through the internet and interact with each other in professional dialogues; and the final phase is workplace learning, where teachers adapt what they learn to their classrooms and share their experience with colleagues in their school.

Teachers who receive training at the centre are also provided with various kinds of support, including a day off each week to complete their learning activities, transport and accommodation, a training allowance, ongoing communication with trainers and technical support, a tablet computer and provision of prepaid internet services.

2.5 Summary

This chapter has set the study in its international and Omani context. It has also described some key aspects relevant to this study, mainly educational policy, reforms and professional development. The next chapter offers a detailed review of the literature, focusing on educational change and teachers' professional learning.

Chapter 3 Literature Review

3.1 Introduction

In an international context characterised by complexity and change, individuals, groups, institutions and countries need to adopt new policies that suit their changing contexts and ensure that their strategies and practices respond appropriately to the requirements of these new contexts. This is of particular significance to educational institutions and teachers. However, the challenging task of understanding this complexity and responding to it by translating policy into practice in education has always had unintended outcomes (Hopkins, Stringfield, Harris, Stoll, & Mackay, 2014; Youngs & Bell, 2009). Some of these challenges are related to how to manage and achieve teacher change and the best approaches that might lead to enhancing teachers' learning, which is an area of intense debate (see Section 3.3).

In Oman, as in many other countries throughout the world, improving the performance of teachers is given high priority. This attention to teachers' practice is underpinned by a belief that the quality of teaching is the key to improving students' outcomes and developing the educational system as a whole. Hence, enhancing teachers' professional practice has been a strategic goal for the MOE and a key element in the planning of the most recent educational reforms. However, the results of international comparative studies, such as the Trends in International Mathematics and Science Study (TIMSS), have revealed little improvement in the ranking of Omani students among participating countries (AlMaskari et al., 2016). In addition, the findings of many studies have described teaching practices as traditional (Al-Barwani & Osman, 2011; Al-Yaroobi, 2013; Alazri, 2013). Other studies have suggested a detachment between what is centrally planned and what teachers in schools needed (Al-Lamki, 2009; Al-Sarhani, 2010; Al-Uwaisi, 2002).

This may challenge the effective fulfilment of intended changes in teachers' practice and may indicate a discrepancy between planning and implementation. This is what this chapter will shed more light on by elaborating two key concepts: educational change (Section 3.2) and teachers' professional learning (PL) (Section 3.3). These concepts are combined to understand and analyse teachers' perceptions of their PL opportunities in the context of the recent educational reforms, such as the adoption of a strategic planning approach in 2011, changes at the secondary education level and curriculum reforms.

3.2 Educational change

The inevitability of change is a widely acknowledged reality (Bryson, 2004; Fullan, 2007) and of particular significance for educational institutions as change has become a common theme in many educational systems, taking a core position in plans for institutional reforms and school improvement initiatives (Wedell, 2009).

It is, however, a domain which has witnessed various phases of focus from large-scale reforms in the 1970s and 1980s (Fullan, 1993) to capacity-building initiatives more recently, yet change is neither completely understood nor properly estimated (Fullan, 2007) and problems persist with implementation and sustainability of change (Sahlberg, 2011). Fullan (2007) has suggested that the solution when dealing with change lies in changing practices and beliefs and targeting innovation.

Morrison (1998) defined change as

... a dynamic and continuous process of development and growth that involves a re-organisation in response to felt needs. It is a process of transformation, a flow from one state to another, either initiated by internal factors or external forces, involving individuals, groups of institutions, leading to realignment of existing values, practices and outcomes. (p.13)

This definition seems inclusive, as it contains most of the key up-to-date, research-evidenced features of effective educational change. However, there is still an area of debate regarding the best ways to manage and achieve change and the suitability of these for the nature, dynamics and complexity of educational settings (Kennedy, 2014; Zehetmeier, Andreitz, Erlacher, & Rauch, 2015).

3.2.1 Leading and managing change

Educational change can be categorised as the result of two broad directions of reform initiatives: 'top-down' or 'bottom-up'. Top-down reforms are centrally led and imposed change models where policy makers are the planners and teachers are 'objects of changes' (Glickman, Gordon, & Ross-Gordon, 2010; Pyhältö, Pietarinen, & Soini, 2014). These change models reflect 'rational planning and a one-way view (usually top-down) of communication' (Robinson, 2001, p.21) and assume that 'development progressed in an orderly (linear) fashion' (Reilly, 2000, p.8), which implies that its order and outcomes can be predicted and controlled. In bottom-up reforms, which are voluntary change models, teachers are active participants and contributors in initiating and directing the change process (Edwards, 2005).

However, it seems that both top-down and bottom-up change initiatives have their limitations, as indicated by Fullan's (2007) argument that the first often lack the implementers' feeling of ownership and consequently their commitment to the change, while the second have rarely led to sustainable change because they were often based on individual judgements rather than empirical evidence.

The main criticism of the two approaches concerns a detachment between theory (knowledge about the factors that influence change) and practice (the actual outcomes in classrooms) (Kennedy, 2014; Lunenburg, 2011). Whereas in top-down approaches, what needed to be changed was clear in planners' minds, teachers were left unaware of how to

change and how to translate the 'complete recipes for action' (Camburn & Han, 2015, p.515) in their context. This detachment has led to a discrepancy between planners' plans and expectations on one hand and implementers' (teachers and head teachers) aspirations and contextual settings on the other (Sugrue, 2004; Wedell, 2009), along with a very limited teacher contribution to shaping the change process (Hargreaves, 2009). Theory-based change approaches and adopting 'best practices' have been shown to be essential but no longer sufficient in achieving change in practice (Villegas-Reimers, 2003).

In the same vein, relying on bottom-up change approaches that had no basis in empirical evidence only turned schools into places for experiments of trial and error, causing more discrepancy and unsustainability (Priestley, Miller, Barrett, & Wallace, 2011). In these approaches, knowledge development is restricted by a poor basic understanding of the theory behind the practice (Goldsmith & Schifter, 1997); reforms cannot be fragmented, nor can they be effective if implemented in isolated classrooms. In addition, 'the diffuse borderline between political and professional responsibility seems to represent a major problem' (Møller, 2009, p.38). This means that inequality in education could be increased and schools hold the total responsibility for any deficiency. It is apparent that relying on a biased 'linear' strategy that favours the agenda of either the policy makers or the implementers is not an appropriate way to achieve effective change in teacher practice.

The theory-practice dislocation has also been evident in many Western countries, including Australia, where 'evaluations of curriculum initiatives have demonstrated that there is a gap between the intended and enacted curriculum' (Keys, 2005, p. 499). It has also been found to be apparent in many Arab countries (Akkary, 2014), Asian countries like Indonesia (Tanang & Abu, 2014) and African countries like Egypt (Loveluck, 2012); educational reforms in many of these countries were centrally-led and driven by political agendas. Mansour, Heba, Alshamrani, and Aldahmash (2014), for instance, highlighted the

detachment in the Saudi educational system between policy planners' expectations in educational reforms and the outcomes in schools. They attributed this detachment to the failure to consider the wider socio-cultural context in which reforms occurred. Similar findings were reported in similar socio-cultural contexts like Kuwait (Winokur, 2013) and Oman (Al-Lamki, 2009). In Oman, for instance, studies have suggested that education policies currently in place and institutional and cultural values may have restricted and discouraged any changes in practice because the suggested ideas, which were often borrowed from outside, were not suitable to the context (Said, 2005).

Fullan (2007) suggested that one way to heal the theory-practice disjuncture, caused mainly by adopting a biased top-down or bottom-up approach, would be to adopt a 'non-linear' change strategy, implied by the use in Figure 3.1 of the two-way arrow, combining the two approaches in the form of 'capacity building with a focus on results' (p.11).

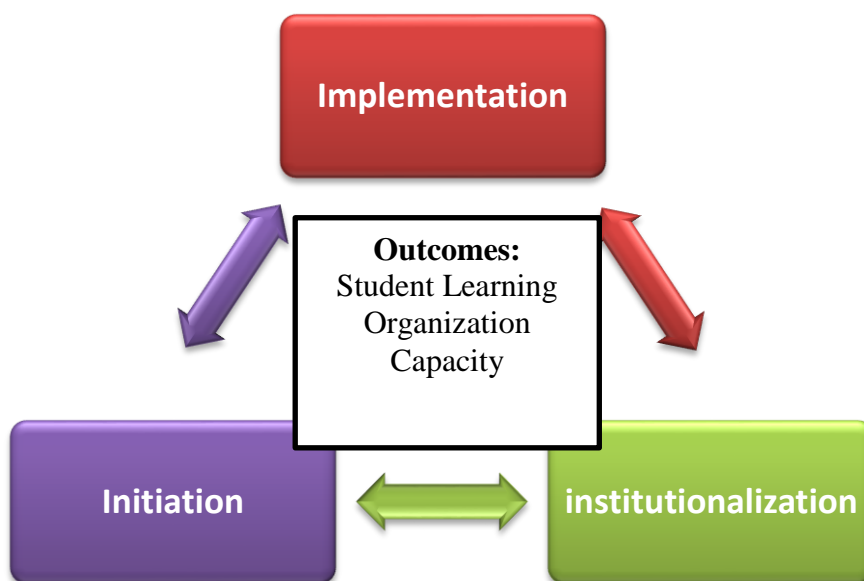


Figure 3.1 Fullan's model of the change process (Fullan, 2007)

Fullan's suggested model relies on balancing bottom-up with top-down, initiation with implementation, planners with teachers and theory with practice. It holds that

professional programmes aiming to change teacher practice should be designed around research-evidenced practices, yet in the implementation phase teachers should be able to adapt what they learn to suit their own context. This view is supported by Camburn & Han (2015), who argued that the implementation phase should be flexible and offer 'potential courses of action' from which teachers could select what suits them, their settings and their individual needs. Akkary (2014) also urged that educational reforms in the Arab region should be attentive and responsive to the context of schools. However, the centralized 'controlling' educational systems in these countries seem to pose a challenge to achieving this end.

Teachers' PL sits at the core of this debate (see Section 3.3), since an essential part of educational change relies on the extent to which teachers are active and engaged in developing and improving their practices (Pyhältö et al., 2014), yet teachers need to absorb and understand the latest information, theories and findings of empirical research in their subject areas. Whether this is the case in Oman is what this study will try to determine.

However, there is no doubt that bridging the theory-practice gap entails analysing and understanding what makes some educational reforms successful while others are not. 'The more factors there are supporting implementation, the more a change in practice will be accomplished', according to Fullan (2013, p.112), who identified three broad sets of factors that affect implementation, linked respectively to characteristics of the change, to local characteristics and to external factors, as shown by Fig. 3.2.

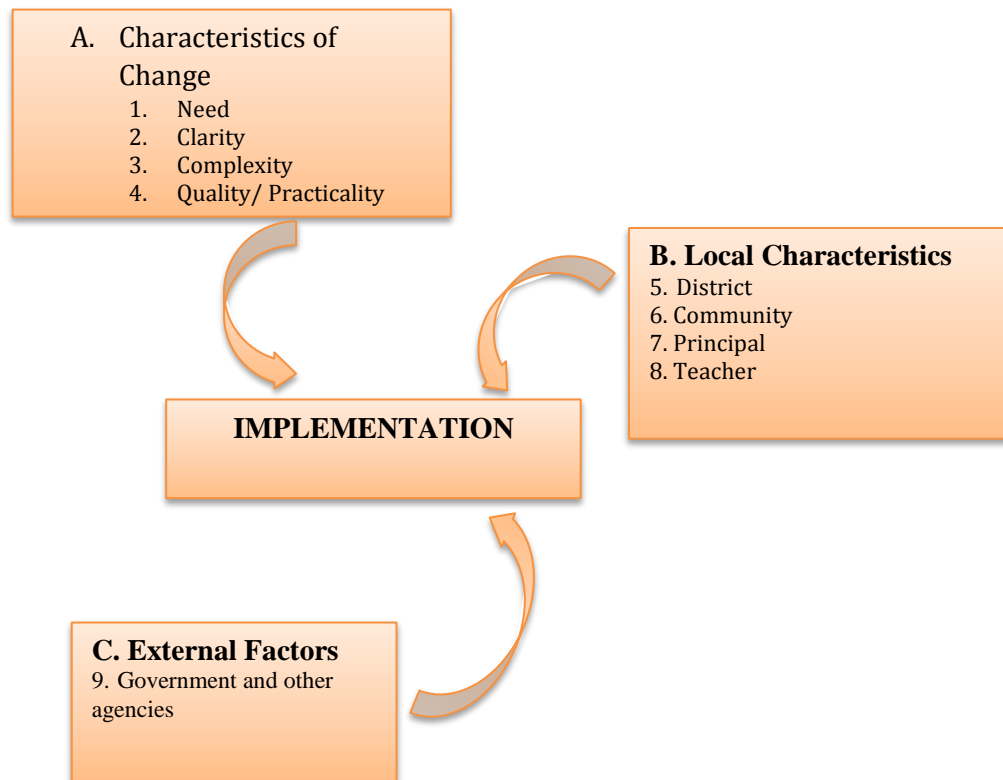


Figure 3.2 Interactive factors affecting implementation (Fullan, 2013)

As Fig. 3.2 indicates, effective implementation is a result of considering these interrelated factors and giving them all due significance. However, Fullan argued that identifying these factors might only account for the small part of what leads to successful change, the largest and most challenging part being in ‘establishing effective processes that will sort out and develop the right solution, one that is suited to the context in question’ (Fullan, 2013, p.121). Indeed, focusing on planning might lead to oversimplifying what is needed in the implementation. Effective implementation goes beyond identifying the factors that cause change, to influencing these so that they interact, support and facilitate the process of relearning.

Thus, it can be inferred that the failure of educational change is caused not only by poor planning or a shortage of resources, but rather by the failure of educational planners to consider the roles of implementers in change or to pay adequate attention to factors affecting change implementation in schools.

With regard to teachers' professional learning, research has highlighted the factors behind the effectiveness of some reforms in changing teachers' practice. These found that embedding the learning experience in the context of the teachers and linking it directly to what happens in the classroom has usually led to effective change (Cohen, Peurach, Glazer, Gates, & Goldin, 2014). Research has also revealed that teachers often change when they are provided with opportunities and space to interact with others and to reflect collectively, for example when observing each other lessons, analysing students' work together and reflecting on others' practice (e.g. Robson, 2016; Voogt et al., 2015). Other studies have shown that teachers change when their learning experience is linked to their context (Borko, 2004). These factors that lead to effective change seem to be reflected in the argument of Putnam and Borko (2002) that teachers' learning experience should be understood as situated (in the context of the learner) and as social and distributed (with others). In addition, Fullan (2013) argued that it is essential for change initiatives to create new meaning in relation to both knowledge and moral responsibility, which cultivate passion and commitment to the change among the implementers, the teachers.

Despite this, 'a great majority of policies and innovations over the past 35 years did not get implemented even when implementation was desired' (Fullan, 2007, p.84). Priestley et al. (2011) called for closer attention to understanding the 'weak rate of return in terms of actual changes in the social practices that comprise teaching and learning in schools' (p. 265).

Furthermore, there is inadequate research into what happens when new ideas about professional learning are put into practice (E. Camburn & Han, 2015; Webster-Wright, 2009). While the characteristics of effective PL experiences might be well known, what seems to be missing is an understanding of how and why teachers change or do not change (Opfer & Pedder, 2011). This assertion is supported by Evans (2014), who urged

researchers to focus on understanding how teachers develop professionally, and by Fullan (2013), who advocated a focus on understanding the process of change. King (2016, p.576) was more specific in pointing to the problem when he argued, in reference to the Irish context, that ‘little evidence exists as to whether and how teachers implement and sustain new practices’.

More specifically, it is still inadequately understood how teachers react to and engage in a new learning experience that requires changes in the way they work and in their beliefs about the ways in which pupils learn effectively, which in turn results in less clarity about ways to support them in their learning. Resolving the detachment of practice from theory requires the investigation, analysis and understanding of how teachers respond to, cope with and understand change and what affects their experience from their perspective and in their workplace. However, it might be useful first to reveal how and where teachers and head teachers are positioned in educational reforms.

3.2.2 Head teachers’ role in leading and managing change

School leaders’ involvement in the change process has been extensively scrutinised and the importance of their interpretation of their central role and influence on teachers’ work has been emphasised (Bredeson, 2000; Bush, 2011). This role is reflected in four main areas of impact: their contribution to improving teaching and learning; the development of a learning culture in schools; leaders’ direct involvement in shaping teachers’ professional development; and evaluating the outcome of professional development on teachers’ practice and students achievements (Bredeson, 2000). Bredeson linked school heads’ influence over teachers’ learning to their ability to create learning cultures and communities and to stimulate teachers to work collaboratively and reflectively.

School leaders' influence was also linked to their ability to change teachers' beliefs (Scribner & Bradley-Levine, 2010), to respond to socio-cultural factors that affect teachers' learning (Margolis & Doring, 2012) and to engage in practices that support teachers' learning (Dinham, 2007). However, external and internal imperatives, along with a need to match expectations with outcomes, have put heavy pressure on school leaders to meet the challenge of rethinking the effectiveness and suitability of their leadership models in improving their teachers' practice and in developing them professionally.

Nonetheless, although the McKenzie report argued that school heads who have teaching experience are more likely to understand and respond to teachers' needs (Barber & Mourshed, 2007), Barnes et al. (2010, p.242) asserted that 'few principal development programs have focused directly on the problem of instructional improvement'. Moreover, Møller (2009) argued that the tendency of managerial accountability systems to focus on adhering to centralized standards has resulted in restricting school leaders' 'imaginative approach' to teacher development. Thus, heads have been denied the autonomy necessary to deal with deficiencies in teachers' performance and to provide them with resources and conditions that would help to achieve the desired outcomes. Thew (2006) urged the granting of more autonomy and support for school leaders, which could take the form of better skills in developing teachers' professional learning.

However, the effectiveness of head teachers' role in enhancing their teachers' learning might be affected by their own beliefs. For instance, Bottery (2004) argued that school leaders' behaviours, conceptions and attitudes contribute significantly to the success or failure of their schools. School heads could pay attention to the implementation of educational reforms at the cost of being creative in solving their schools' challenges (Quong & Walker, 2010).

Sharing and distributing leadership responsibilities (Melville, Jones, & Campbell, 2014), in the form of daily interaction with teachers, delegating some authority, modelling behaviour and holding meetings (Sadler, 2003), appeared as one of the best solutions to facing these challenges. Whether this has led to enhanced teacher practice in classrooms and more commitment to change is as yet a rarely investigated area, although there are indications of a positive relationship between the two (Hallinger & Lu, 2014).

As this study investigates teachers' professional growth, it is worth paying particular attention to head teachers' role and their influence on teacher change.

Many studies have linked effective school leaders to effective teachers' learning (Leithwood, Harris, & Hopkins, 2008; Sanders, 2016), arguing that school leaders' contribution to teachers' professional development (PD) entails more than ensuring that they enhance their subject knowledge, that it goes beyond mere instructional leadership and that it is linked to the quality (Sigford, 2005) and support that head teachers offer to teachers in their learning (Clement & Vandenberghe, 2001).

This support can take three forms according to Davis et al. (2005): '(1) developing a deep understanding of how to support teachers (2) managing the curriculum in ways that promote student learning and (3) developing the ability to transform schools into more effective organizations that foster powerful teaching and learning for all students' (p.6). Alternatively, Supovitz, Sirinides, and May (2009) viewed this support as taking the form of fostering teachers' collaboration and communication, which they argued would contribute to better students' learning. In contrast, Brezicha, Bergmark, and Mitra (2015) found that providing differentiated support which accounted for teacher's beliefs, prior experiences and social networks helped them to understand reforms better and to participate more fully in their successful implementation.

Conversely, head teachers do not exercise their role in a vacuum. Hallinger (2003) argued that the effectiveness of school leaders in developing their teachers is affected by 'the external environment and the local context of a school' (p. 329). Effective school leaders' work was found to be responsive to these contexts, rather than dictated by them (Leithwood et al., 2008). The unique socio-cultural context in which schools exist requires their leaders to have a wide range of leadership skills that enable them to deal with teachers' diverse personalities, requirements and attitudes to change. Researchers advocate various educational leadership types, which often overlap. Three models of leadership, the transformational, contingent and strategic models, are considered the most relevant to the context of this study and are now considered in turn.

Transformational leadership

The transformational model views leaders as social architects (Bottery, 2004) who influence employees and create a culture of commitment by empowering and involving everyone in the planning and implementation process (Bush, 2011). This is the working definition that will be used in this thesis:

It is a leadership model where proactive school leaders achieve organisational change through engaging, inspiring and motivating their teachers to work collaboratively and for the common interest while focusing on meeting their personal and professional needs to achieve the best performance.

Transformational leaders 'develop trust [and] build loyalty, self-confidence and self-regard' (Bottery, 2004, p.17). They do so by stimulating, motivating and raising the awareness of their employees of the collective vision and mutual interests (Bryson, 2004; Bush & Coleman, 2000).

According to this model, it is vital for school heads to ensure that teachers have the opportunity to reflect on their practice and to encourage them to work collaboratively.

However, the realisation of transformational leadership in centralised educational systems seems very restricted and would depend to a great extent on the personal traits of the leader, including the extent to which s/he can readily and creatively overcome the restrictions of centralisation and lack of resources.

In Oman, head teachers receive training that supposedly prepares them to be transformational leaders. The expectation was that they would contribute to creating reflective teachers who are both committed to and involved in the change process (MOE, 2011), yet no external study has ever examined the fulfilment of this claim.

Contingent/situational leadership

The contingent or situational leadership model is a situation-oriented one according to which leaders vary their leadership style and responses based on the situation (Bush, 2011; Fiedler, 1978). This is the working definition adopted for the purposes of this thesis:

It is a leadership style where school leaders need to match their actions and behaviour to fit the environmental circumstances (both internal and external) of the school while keeping a balanced interplay between their relations with teachers, work structures and preserving their authority and power.

The school context and setting, as this definition envisages, play a vital role in this model and thus understanding, diagnosis and reflection are key capacities that school leaders need to acquire and employ (Fiedler, 1978). Schulz (2001) found a link between leaders' competences, skills and ability to diagnose and react appropriately to various changing situations and needs on one hand and their effectiveness in changing subordinates' practice on the other. He argued that the success or failure of an institution depends on how uncertainty is handled and on the consideration of the external and internal contexts.

In educational contexts, the fact that schools are located in various geographical locations, receive diverse levels of support and vary in their demographic characteristics, and that their performance might be influenced by countless contextual factors, make it unrealistic to assume that what works in one school will work in all others. It seems that educational reformers must inevitably consider *context* seriously when planning for educational reforms. Consequently, if it is to yield successful change in teachers' practice, the strategy that is adopted to enhance teachers' capacity should consider and reflect the context and environment of the school and its various members. It is evident that schools must respond differently and adapt to their particular settings and environment.

While the MOE in Oman has claimed that head teachers are trained to be flexible and to vary their leadership styles according to the situation in each school, the fact that the Omani educational system is centralised places tight limitations on realising this type of leadership and presents challenges for school heads. For example, although school leaders have some autonomy in managing aspects of finance such as each school's annual PD budget, the guidelines which the ministry imposes on how the money is spent narrowly restrict this autonomy. Moreover, restricting head teachers' evaluation of their teachers' performance to a checklist seems to disregard the potential contextual variations among schools and the specific professional needs that teachers might have. It may therefore limit the space available for school heads to authentically diagnose weaknesses in teachers' practice and contribute to improving it.

Strategic leadership

Ireland and Hitt (1999) defined strategic leadership as the 'ability to anticipate, envision, maintain flexibility, think strategically, and work with others to initiate changes that will create a viable future for the organisation' (p.43). This definition highlights the key features of a strategic leader: to create a common ground in which all teachers share

common vision and have roles; to diagnose the potential influences on the school performance in the near and mid-term future and to create an environment where development in learning and practice are 'shared, acknowledged and celebrated' (Bubb & Earley, 2009, p.35). This implies that school leaders need to have adequate awareness of the internal and external influences on their school (Mayer & Lloyd, 2011). However, understanding and analysing teachers' attitudes and their willingness and commitment to the change process might be one of the greatest challenges for school leaders (Brezicha et al., 2015).

From another perspective, the role of strategic leaders is divided by Leithwood et al. (2004) into three tasks: 'setting directions; redesigning the organisation; and developing people' (p.61). These correspond to three possible solutions that head teachers can use to increase commitment to change: involving teachers in decision making, especially in regard to setting plans; ensuring that their practices improve by diversifying their learning opportunities; and creating conditions for a 'collective' learning environment for all in the school.

A review of the above three leadership models suggests that the similarities between them are much stronger than the differences. Furthermore, leading a school in an ever-changing environment might require the integration of all three models, so that the head teacher's role is transformative, context-responsive and future-envisioned.

In Oman, the expectation is that head teachers will contribute to the improvement of teachers' practice (MOE, 2011). This study will help in examining the extent to which school heads are aware of their role and influence in enhancing teachers' quality and whether they practise any of the characteristics of transformational, contingent or strategic leadership in their daily work.

The focus now shifts to examining how and where teachers are positioned in educational reforms.

3.2.3 Teacher's role in leading and managing change

Fullan (1993) argued that change occurs only through people who are involved in and affected by the change, yet teachers seem to be treated as “passengers” in the vehicle of educational reform, being required to implement various externally planned reforms in their classrooms while having little or no say in their design or understanding of their rationale (Moeini, 2008). This has led to confusion and frustration among them (Beswick, 2014; Terhart, 2013).

Teachers may clearly react differently to reforms by adopting them, ignoring them or adapting them to their context. Research suggests that their reactions to reform reflect their experience, contextual factors and self-efficacy regarding their role in the change process as reactors or initiators (e.g., Moore, Edwards, Halpin, & George, 2002; Wheatley, 2005). Carnall (2007) contended that teachers go through five stages in the cycle of change: denial, defence, discarding, adaptation and internalisation. The denial stage is when teachers are first introduced to the change but deny that they need it. Next, the defence stage occurs when they try to stick to their old ideas and become frustrated with the changes. At the discarding stage, teachers begin experimenting with the new ways and letting go their long-held ideas. The fourth stage is when they adapt to the change and adapt the change to suit their context. Finally, internalisation happens when the changes are incorporated and teachers make sense of them.

Many studies have suggested a link between the ownership of change and increased motivation and commitment to it (e.g. Levitt, 2008; Maughan, Teeman, & Wilson, 2012).

Other studies have found that a positive or negative school culture, including school

leaders' and colleagues' support or lack thereof, will affect teachers' engagement in the change process and how they cope with it (Jones, Youngs, & Frank, 2013). The wider education system infrastructure of support was also viewed as a key element that affects teacher reactions and engagement in the change process (Peurach & Neumerski, 2015; Zembylas & Barker, 2007). Accordingly, it is of particular importance for policy makers and education planners to view and treat teachers as change agents, being able and motivated to engage in change, which is still an under-examined area (Damşa, Kirschner, Andriessen, Erkens, & Sins, 2010).

However, many reforms have been criticised as reflecting policy makers' expectations while ignoring teachers' realities, aspirations and purposes (Fullan, 2007). Nevertheless, research has shown that achieving successful educational change requires a comprehensive transformation in the principles and processes of education (Gerver, 2010) which empowers teachers by improving their capabilities and skills, changing their beliefs, widening their knowledge and making them critical thinkers (Fullan, 1993). The difficulty is that this empowerment cannot be realised when teachers are objects of the change rather than subjects and real contributors. There is therefore a need for teachers to be genuinely involved in planning and designing educational reforms and for more consideration of their views. Although empowering teachers and increasing their capacities was a declared strategic aim of the MOE in Oman through its various reforms and change initiatives (MOE, 2011), fulfilling this aim might be more challenging and complex than it may sound.

It is apparent that seeing planning as the business of policy makers conflicts with the complex nature of educational institutions and schools and that it downplays the importance of involving people in matters that relate to and target them directly, such as determining their professional needs. Furthermore, empowering people necessitates

obtaining various perspectives, wider consultation, continuous constructive feedback and coordination between all levels in the educational system, which in turn could help in creating harmony and meeting diverse needs during the implementation phase and in deepening the understanding of the many factors that influence performance (Mason, 2011).

Besides, schools need to be seen and treated as 'learning organisations' (Fullan, 2007), not only for students but for teachers as well, which requires teachers' attitudes, beliefs, preferences and understanding to be treated as significant in achieving the desired goals.

Realising this perspective in teachers' learning is considered one of the greatest obstacles to educational policy reforms and teacher development efforts, because while it is important to identify what makes educational change effective, implementing it effectively in practice is much more challenging, especially in a complex and dynamic environment and in schools with diverse contextual differences. The most difficult element may be putting what is planned into practice and managing it.

The focus will now be directed to the second key concept in this chapter, as the following section discusses teachers' professional learning and highlights its key aspects.

3.3 Teacher's professional learning

3.3.1 Definition of PL

The author's working definition of PL is:

Any planned or spontaneous social interaction, formal or informal, where teachers engage with and change their knowledge, skills and practices (individually and collectively) and where they challenge and alter their attitudes, beliefs and

dispositions positively in an attempt to meet the particular needs of their students while acquiring and adopting sound educational theories and best practices.

This study pays particular attention to the term 'professional learning' for three reasons: its precise focus on learning rather than development, the connection it offers between acquiring new knowledge and using it in the classroom, and the active role it envisions for teachers in shaping their own learning (professional responsibility). The concept of PL is underpinned by a belief that teacher learning is a complex process that needs not to be imposed, but rather allowed to happen naturally as a result of teachers feeling the need to engage and change. From this perspective, PL designs should offer a dynamic, interactive and ongoing learning experience which integrates learned knowledge with its use in context and which leads teachers to increase their capacity, challenge their beliefs about their teaching and change their teaching practice in their classrooms accordingly. PL offers a new perspective from which to understand teachers' learning; however, it is still an under-researched area (Beswick, 2014; C. Watson & Michael, 2016; Webster-Wright, 2009).

3.3.2 Informal and formal approaches to PL

Teacher professional learning can be classified as informal or formal based on its forms, purposes or contexts in which it occurs (McKinney et al., 2005).

3.3.2.1 Informal PL

Many implicit learning experiences take place in informal ways that are not directed from policy-derived practice, often referred to as informal learning. These include self-directed learning activities, like reading subject-related publications, browsing the internet, experimenting with new teaching techniques and reflecting on one's own practice and others' work, as well as collective learning modes like mentoring, sharing and discussing school-related issues through collegial dialogues and networking, reflecting on practice

with others or researching to find solutions to daily teaching challenges. In the literature, however, informal professional learning has acquired a wide range of meanings in a variety of settings and diverse contexts, e.g. lifelong learning, workplace learning and learning by doing, experimenting or interacting. In this study, informal learning is contrasted with formal learning and is defined thus:

Non-systematic, self-directed learning, sometimes planned and often spontaneous, which derives from personal and interpersonal activities external to a structured learning context, initiated and controlled primarily by the individual teacher in order to improve his/her own teaching skills and subject knowledge and to cope with the demands of teaching practice.

Based on this definition, informal PL takes different forms and is influenced by various factors.

A. Forms of informal PL

Informal learning is often described as workplace learning or learning by experience. Its forms are often classified by the intentionality and awareness of the learning process. For instance, Eraut (2000, p.133) categorised them by the various forms of knowledge acquired, as follows:

- 1) Knowledge acquired by implicit learning of which the knower is unaware;
 - 2) Knowledge constructed from the aggregation of episodes in long-term memory;
 - 3) Knowledge inferred by observers to be capable of representation as implicit theories of action, personal constructs, schemas, etc;
 - 4) Knowledge which enables rapid, intuitive understanding or response;
 - 5) Knowledge entailed in transferring knowledge from one situation to another;
- and
- 6) Knowledge embedded in taken-for-granted activities, perceptions and norms.

The alternative classification of Meirink, Meijer, and Verloop (2007) recognises four main categories of informal learning activities: experimenting, reflecting, learning from others

without interaction (e.g. by reading or observing others) and learning from others with interaction. Taken together, these two classifications can be combined under three main informal learning categories:

Self-directed learning: a deliberate learning experience where the teacher intends to learn and is aware that s/he is learning, such as when reading books. In research, a link was found between engaging in self-directed learning and enhanced teacher performance in classrooms (Grenier, 2010; Robertson & Murrihy, 2005).

Experiential learning: planned or unplanned learning experience which results from reflecting on practice; originally linked to the work of David Kolb (as discussed in more detail in Section 3.3.4.3).

Social interaction: spontaneous tacit learning experience that results from daily interactions with others, including colleagues and students, but where the teacher is not aware that s/he has learned something. This kind of informal learning is often associated with daily social activities that contribute to changing teachers' practice. For instance, Hoekstra, Brekelmans, Beijaard, and Korthagen (2009) found that the direct and indirect feedback teachers received from others and the existence of feedback and a collaborative atmosphere in the school were crucial to improving teachers' learning. This role of social interaction in improving teachers' PL is evident and led to enhanced teacher learning through their engagement in social networks and social media (Goodyear, Casey, & Kirk, 2014; Robson, 2016).

B. Factors that influence teacher engagement in informal PL

Evidence of what influences teachers' engagement in informal learning seem to be contradictory. Thus, Livingstone (1999) found out that older professionals were more likely to engage in informal learning activities, whereas Kremer's (2005) study showed

just the opposite. Nevertheless, Berg and Chyung's (2008, p.237) findings suggest that there are ten main factors that influence teachers' engagement in informal learning:

- i. Interest in current field
- ii. Computer access
- iii. Personality
- iv. Professional capability
- v. Relationship with colleagues
- vi. Job satisfaction
- vii. The job itself
- viii. Work environment
- ix. Physical proximity
- x. Monetary rewards

Although all these factors might be important, the first six ones show that teachers' own interest, experience and attitudes are significant in driving them towards more engagement in PL activities. By contrast, Eraut (2004) provided much more detailed pictures of various interrelated factors that influence teacher engagement in informal PL and linked them to either learning or contextual influences, as shown in Fig 3.3.

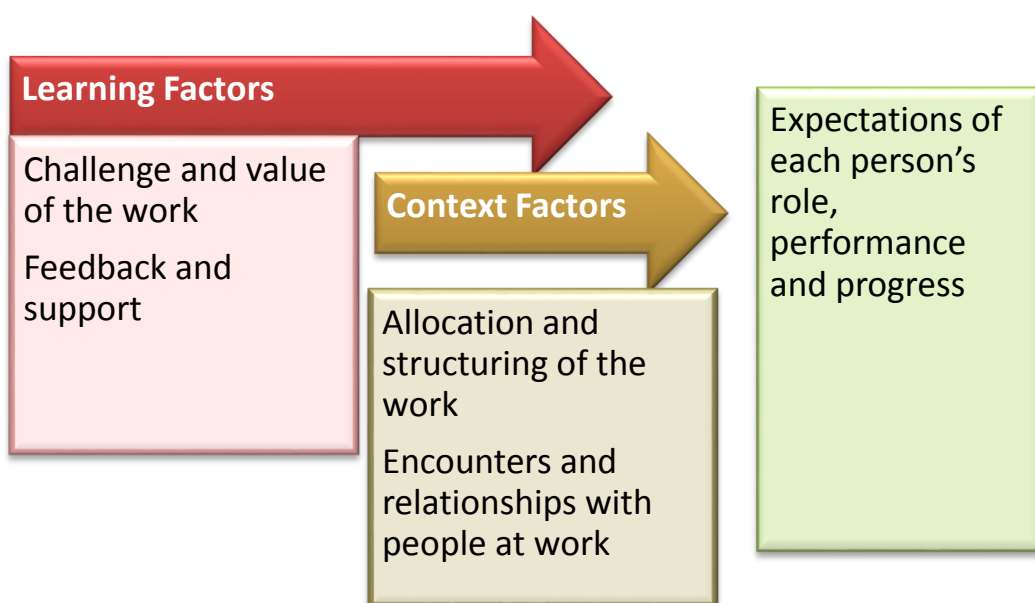


Figure 3.3 Factors affecting learning in the workplace (Eraut, 2004)

The significance of informal learning opportunities in enhancing teachers' practice is widely acknowledged. For instance, Burns (2008, p.21) argued that 'competencies learned informally are perceived to be used more often'. Similarly, Jones and Dexter (2014) found that informal interactions between teachers helped them to integrate technology in their teaching. Melber and Cox-Petersen (2005) found that teachers who had informal learning experiences such as museum visits increased their subject content knowledge and changed their instructional methods. However, Hoekstra and Korthagen (2011) warned that supporting teachers and providing the infrastructure and climate that facilitate their informal PL is crucial for genuine learning to take place.

Nevertheless, many educational reformers seem to underestimate the significance of the role of informal learning in enhancing teachers' practice; accordingly they often do not facilitate such opportunities for teachers within and outside their schools. For instance, McNally, Boreham, Cope, Gray, and Stronach (2004, p.4) argued that 'there is now a weight of research evidence and practitioner opinion supporting a strong informal, social dimension in the experience of becoming a teacher, which is neglected in policy'. This is supported by Eraut (2004, p.271), who argued that 'public discourse about training not only neglects informal learning but denies complexity by over-simplifying the processes and outcomes of learning and the factors that give rise to it'. To the best of the author's knowledge, this claim also applies to the Omani context, in which teacher PL takes the form of formal learning opportunities often provided by the MOE, the training centre in the Educational Office or the school. What is more, having examined previous studies that addressed teacher PL in Oman, the author found that all such previous research had focused on formal PL and that none of the studies had examined the influence of informal PL in enhancing teachers' practice.

3.3.2.2 Formal PL

Formal professional learning is defined in this study as follows:

Instructor-led planned learning, typically provided by education or training institutions, which derives from activities within a structured learning setting in terms of learning objectives, duration, content, method and assessment and usually leads to certification (e.g. enrolling on a programme of study, attending lectures, preparing coursework, engaging in seminar/tutorial discussions).

Lieberman (2001) suggested that formal PL activities could take two forms. The first type follows a structured approach and usually takes place outside school at scheduled times, like courses, workshops and conferences. Such PD, as Lieberman argued, is useful in increasing teachers' capacity for practice, offering them multiple perspectives and raising their awareness of the best practices and research findings. However, Garet et al. (2001) described this 'traditional' and 'most common' form of PD as having been criticized 'as being ineffective in providing teachers with sufficient time, activities, and content necessary for increasing teacher's knowledge and fostering meaningful changes in their classroom practice' (p, 920).

Lieberman (2001) referred to the second form of PD as school-based, while Garet et al. described it as comprising 'reform' types, such as peer coaching, mentoring, action research, planning teams, study groups and collaborative activities. These often take place in the classroom or in another room in the school during the school day and are argued to offer job-embedded learning experiences that help teachers to reflect on their practice and adapt to their own context. Garet et al. (2001) stated that these types were 'more likely than traditional forms to make connections with classroom teaching, and they may be easier to sustain over time ... more responsive to how teachers learn and may have more influence on changing teaching practice' (p, 921).

In contrast, Kelly (2006) referred to in-school, inter-school and national training programmes and postgraduate study, while Sparks and Loucks-Horsley (1989) listed five PD models that contribute to increasing teacher engagement in the learning process and enhancing their teaching practice: individually-guided staff learning, observation/assessment, involvement in the learning-improvement process, training and inquiry. Guskey (2000) suggested seven professional development modes, each having its own advantages and shortcomings: training, observation, improvement processes, study groups, action research, individually-directed activities and mentoring. Alternatively, Kennedy (2005) proposed nine categories of CPD based on the form of knowledge they aim to develop: 'training; award-bearing [university study]; deficit (what teachers lack); cascade; standards-based; coaching/mentoring, community of practice; action research; and transformative' (p, 236-237). Finally, Sachs (2007) presented three models: retooling (teachers apply what they learn in their classroom as received), remodelling (teachers remodel what they learn) and revitalising (teachers learn by engaging and sharing knowledge with other teachers and by linking their learning to their students' needs). The first two of these view teachers as uncritical consumers of knowledge, whereas the third sees them as reflective practitioners (see Section 3.3.4.3).

However, several studies have shown that the outcomes of reform initiatives which adopted various formal PD models and which focused only on the cognitive ability of teachers were rather disappointing, as they have rarely impacted teachers' practice and hardly ever had any influence on students' outcomes (Kelly, 2006; Timperley, 2011). Many of these, especially those which preferred formal and traditional training forms, were often characterised as meaningless and unsuccessful, being pre-packaged, traditional, top-down approaches to mandated change that understood teacher change as a linear, sequential process and failed to consider the school context (Darling-Hammond

& McLaughlin, 2011; Loughran, 2010). How PD affects teacher development and whether changes in teaching practice lead to changed beliefs and attitudes (Guskey, 2002) or vice versa (Desimone, 2009) are areas of research that need further investigation (Evans, 2002). Kelly (2006, p.506) argued that the main pitfall was that these linear approaches were 'inadequate for understanding the complexity of teacher learning'.

Such criticism can be detailed in six different ways. Firstly, Melville and Yaxley (2009) highlighted the 'passive knowledge' (theoretically sound but unfeasible) that PD offers and its disconnectedness from classroom practice. In other words, it offers technical, tacit knowledge rather than know-how and practical knowledge (Eraut, 1994). Therefore, traditional forms of PD are often accused of importing external ideas, practices and experiences and trying to apply them to educational contexts (Melville & Yaxley, 2009) while failing to link them directly to their use in classrooms.

The second criticism is of a mismatch between PD events, such as traditional training sessions, and the teacher's wider context and real needs; teachers attend PD events to listen rather than to express their real anxieties and needs, and more importantly the needs of students. This is what Timperley (2011, p.7) described as 'divorced from immediate demands'.

Thirdly, teachers are rarely involved or have a voice in determining the type or shape of their PD (Fenwick, 2003; Grace & Gravestock, 2009). Timperley (2011) refers to this as a 'sit and get' approach which involves no real engagement of teachers and no consideration of their voice.

Next, Shulman (1987) criticised the focus on basic skills, knowledge and pedagogical competence while ignoring the more complex relationship that entails working in a school

and the uniqueness of the teaching profession. Teachers' attitudes, beliefs and daily interactions are often overlooked, which hinders any effective learning or change process.

The fifth criticism of traditional PD practices is that they do not offer a mechanism for continuous learning and reflection based on context (Barber & Mourshed, 2007). They simplify teacher knowledge and often link it to individuals while failing to consider what goes on in actual practice or the kind of knowledge that teachers acquire when interacting with others (Kelly, 2006).

Finally, Opfer, Pedder and Lavicza (2011) challenged the idea of understanding teacher learning as a linear process, arguing that it is 'influenced by structural, cultural and political aspects of a teacher's experiential context [and] driven by personal beliefs, interest, motivations and social/historical contexts and processes rather than solely through rational and logical accumulation of knowledge and skills via participation in a learning activity' (p. 446).

These limitations of formal PD are summed up by Sparks (2002), who claimed that most of the PD experienced by teachers was: 'unfocused, insufficient, and irrelevant to the day-to-day problems faced by front line educators' (p.7). The gap between theory and practice seems clear. Gunter (2005) argued that presenting teachers with the 'best practice' and the latest, updated kinds of information and theories will be meaningless when they try to apply these in their own classrooms while lacking a real understanding of these practices, a belief in them, a positive attitude towards them or an appreciation of how to adapt them to their students' needs. *Learning* seems to be the missing element.

3.3.3 The shift from PD to PL

Hargreaves identified four historical phases in the changing nature of professional development, arguing that they apply to many educational systems around the world but

not necessarily in the same order: the pre-professional age, the age of the autonomous professional, the age of the collegial professional and the post-professional or postmodern age (Hargreaves, 2000). It seems that in many developed and developing countries the first age is over, while many educational systems seem to be at the second or third age. It could also be argued that the many limitations of the currently adopted PD models have prompted the emergence, as least in the developed world, of the fourth age, where 'The fate of teacher professionalism ... struggled over and pulled in different directions in different places at different times' (Hargreaves, 2000, p.167).

This is evident from the many calls to revise PD events and assess them based on 'principles of learning ... and effectiveness in changing teaching practice' (Bransford et al, 2000, p.265). Such revision necessitates that *learning* in PD is not seen as limited to adding more information and skills but should involve a change in how teachers think, in how they learn, in what they believe to be true and in their willingness to learn. It requires an understanding of the dynamic process involved in teacher learning and the contingent, two-way relationship between learning, beliefs and changes in practice (Opfer et al., 2011). Consideration for teachers' preferences should also form an essential part of this revision, which requires teachers to be engaged by being given a voice in designing their PD (Fenwick, 2003; Grace & Gravestock, 2009).

For educational systems to respond appropriately to the changing nature of PD, five key features seem important in any capacity-building programme for teachers that they adopt. First, particular attention needs to be paid to the context of the learning process – the classroom – and the need to explicitly link training content to teachers' practice (Turner, 2006). Although many studies have focused on understanding teachers' perspectives and concerns, there were criticisms that many of these have ignored the broader social, cultural and political contexts in which PD experiences occur (Day, 1999).

The second feature is that learning is a social phenomenon which consequently needs to take place, individually and collectively, in natural settings rather than via artificial, experimental experiences (Barber & Mourshed, 2007). Practical pedagogical skills were argued to be essential in changing practices and a source of creativity and reflection contributing significantly to teachers' learning (Eraut, 1994; Sparks, 2002).

Third, the significance of targeting teachers' beliefs, attitudes and disposition is something PD providers should seriously consider (Beswick, 2014), as beliefs were found to affect practice (Talbot & Campbell, 2014). Changes in practice are more successful and sustainable when teachers have a feeling for the need to change than when it is imposed on them.

The fourth point is that improving teachers' practice involves more than enhancing their curriculum and pedagogical knowledge. Other types of knowledge should also be at the core of these programmes (e.g. using new educational technology and changes in students' thinking) (Ball et al, 2008). For instance, Doran (2014) found that middle school teachers identified four important areas in their PD that helped them to meet their diverse students' needs: 'classroom management; curriculum and content; building relationships with students by understanding their backgrounds, prior experiences, and previous schooling; and linguistic accessibility of instruction' (p. 67). Finally, having a broader understanding of teachers' reflection and giving more consideration to it would help in changing their negative attitudes towards PD and in persuading them of the need to change (Eraut, 1994; McLoughlin, Lee, & Chan, 2006). It would also allow them to benefit from potential learning opportunities in their schools.

There is a clear need to redefine the understanding of PD and to shift it into a more effective conceptualisation of what and how teachers learn in PD activities. The new

understanding should be based on 'more positive and principled postmodern ways that are flexible, wide-ranging and inclusive in nature' (Hargreaves, 2000, p.153). This shift can be accomplished, according to Timperley (2011, p.5), by replacing PD with PL, which focuses more on engaging with knowledge, altering attitudes and producing new meanings. This argument seems to be supported by several other studies, mainly calling for the adoption of a wider perspective in conceptualising teachers' PL; one that focuses both on what teachers need to learn and on the extent to which their teaching practice actually changes (Admiraal et al., 2016; Lebak, 2015; Stewart, 2014; Timperley, 2011). Specifically, these studies gave more significance to the suitability and type of knowledge and skills that teachers' receive in PL events and to changes in their thinking, attitudes, beliefs and dispositions, rather than focusing on how much information they absorb. This suggested new perspective is also based on being attentive to the contextual differences and complexity of improving teachers' learning during the initiation and implementation phases of teachers' enhancement plans (Stewart, 2014).

Consequently, this shift should focus equally on three areas: the acquisition of knowledge (of various types); understanding it and having a positive attitude towards change; and the ability and willingness to apply it in context. PL designs should also be responsive to the institutional, social and individual dynamics and the contextual factors that might affect teachers' engagement and learning in PL events like organizational structures, school climate and teachers' attitudes (Kekang, 2014). In brief, the focus should be on both the process and context of *teachers' professional learning*, which is still a relatively under-examined topic in educational research (Bransford et al., 2000; L. Evans, 2014).

3.3.4 Purposes that underpin PL

Developing teachers professionally is regarded as a core element in school improvement strategies and a cornerstone in improving teachers' practice (Day, 1999; Melville &

Yaxley, 2009). It involves both enhancing teachers' knowledge and skills to enable them to face new teaching requirements and targeting their beliefs, values and attitudes to facilitate the change process. It is also linked to creating reflective practitioners and promoting more collaborative learning between teachers. These four core aspects underpin the proposed shift in conceptualizing, designing and implementing teachers' professional learning, which will now be discussed consecutively.

3.3.4.1 Improving teachers' professional knowledge, understanding and skills

The goal of designing PL experiences should go beyond developing teachers' capacity (updating content, pedagogical knowledge and skills, and knowing about curriculum changes), which is a key factor in improving students' outcomes (Barber & Mourshed, 2007), to ensuring that they use this capacity to inform changes in the way they work in their schools. Put differently, teachers' quality enhancement programmes should not be designed only to ensure that teachers attend as many PL events as possible and learn something new, but rather to help them to learn how to learn and change their practice so that they suit their students' changing needs.

Accordingly, teachers' learning must go beyond acquiring knowledge to engaging in knowledge construction. Kelly (2006) argued that teachers' professional knowledge base is constructed through two main processes: their own practice-based experience and reflection of problem solving and their knowledge of research-based evidence. According to McGlynn-Stewart and Bezaire (2014), it also includes 'relationship building, rethinking practice, sharing knowledge/specialization, and re-establishing roles' (p,15). This perspective on learning suggests that it is equally important for teachers to acquire certain kinds of knowledge and develop new ways of thinking.

Research has shown that teachers' capacity building programmes are more effective when done collectively and linked to what goes on in classrooms. For instance, Kelchtermans (2004) maintained that meaningful interaction with the work context is a prerequisite to achieving changes in teachers' beliefs and teaching. In the same vein, Duncombe and Armour (2004) found that engaging in collaborative problem solving, enquiries and dialogues helped teachers to increase their knowledge. It has also been argued that such engagement has led teachers to question their assumptions about their teaching and develop new perspectives (Wells, 2000). However, some teacher quality enhancement programmes have been accused of offering a 'passive' learning experience (see Section 3.4.4), in which teachers' roles and motivations were overlooked or simplified.

PL is an alternative, learner-centred approach (Bransford et al., 2000; Timperley, 2011). The term 'learner-centred', which applies to both teachers and students, entails a focus not only on updating various kinds of knowledge, but also on providing active and collaborative learning experiences (Stewart, 2014) while considering that teachers learn differently and for different purposes (Guskey, 2002). However, individually situated and socially constructed knowledge has not often received adequate attention, according to Eraut (2009), who argued that previous research 'focuses selectively on common rather than differentiated features of people's knowledge' (p.56). In contrast, PL offers a process of 'sense-making' and 'knowledge use' in practice (Barnes et al., 2010), where learning is linked to an understanding of the learners' settings and associated with the ability and willingness to use it in the classroom (Bransford et al., 2000; Hodgson & Spours, 2006).

Consequently, teachers' role and motivation in developing their practice is a crucial element (Melville & Yaxley, 2009; Rudduck, 1988). It is argued that they have a substantial stake and responsibility in developing their teaching and meeting their students' needs

(Shulman, 1987). However, part of their commitment towards their students and their profession's values might lead them to resist the change (Zimmerman, 2006), especially if they cannot see a positive side to it. This further emphasises the attention that needs to be given to teachers' understanding of the rationale for educational reforms. In the author's opinion, this is an important point and something that seems to have been overlooked in some educational reforms. It is necessary now to scrutinise teachers' involvement in shaping their PL to determine whether it has contributed to the theory-practice mismatch.

Teachers' involvement in determining their professional learning needs is widely stressed (Beswick, 2014). Darling-Hammond and McLaughlin (2011) highlighted the mismatch that might occur in cases where teachers' voices are neglected when initiating and implementing educational reforms. Such neglect might lead PL providers to ignore or misinterpret the goal of educational changes and teachers to resist change, cling to their existing beliefs and have negative attitudes towards new learning initiatives (Townsend, Tan, Yung, & Cohen, 2010).

A body of the literature (e.g. Al-Awidi & Aldhafeeri, 2017; Voogt et al., 2015) shows that involving teachers in shaping their PL programmes – their goals, delivery mechanism and contents – has helped to strengthen their commitment to the change process and led them to react positively to new learning experiences, thereby helping to change their instruction (Grace & Gravestock, 2009; Loughran, 2010). Teachers who were involved and engaged in the formation of the change process and treated as partners in the implementation felt that they owned the change and were part of it (Melville & Yaxley, 2009; Rudduck, 1988). McGlynn-Stewart and Bezaire (2014, p.21) found that 'creating positive, trusting working relationships' strengthened teachers' engagement. This climate of collaboration and involvement and the positive feeling of change ownership have

facilitated the creation of active professional agents in schools (Pyhältö, Pietarinen, & Soini, 2011) in which teachers were active participants in their own learning. Voogt et al. (2015) found that teachers shared transformative agency when they worked collectively and were engaged in defining and finding solutions for the daily issues that faced them (p, 275). This invites the inference that the more actively engaged and involved teachers are in their PL, the better are the chances of change in their teaching practice.

3.3.4.2 Changing teachers' beliefs and attitudes

Teachers' beliefs and perceptions are rarely at the core of educational reforms (Talbot & Campbell, 2014), despite substantial evidence that the effectiveness of their instruction is influenced by their beliefs (Gill & Hoffman, 2009; Palak & Walls, 2009; Speer, 2008). Effective PL experiences have been shown to promote changes in teachers' beliefs about their teaching (Loucks-Horsley, Stiles, Mundry, Love, & Hewson, 2009; Westbrook et al., 2013). Borg (2011) argued that beliefs are indicators of teachers' professional growth and described them as 'a key element in teacher learning' (p.371).

In Finland, Pyhältö et al. (2014) for instance, found that teachers' professional agency, or the way they perceived themselves as active subjects or objects in their PL, was a key element in shaping their reactions and commitment to educational reforms. Their study also revealed that being a professional agent could be affected by contextual conditions and school climate, such as the existence of peer collaboration, as well as by personal factors including teachers' motivation and self-efficacy.

However, the role of teachers in the implementation of top-down reforms is often viewed simplistically (Talbot & Campbell, 2014, p.418); this simplistic belief that formal training will automatically help teachers to apply and enact the 'mandated' reform in their classrooms fails to consider 'the impact of teachers' beliefs' (p. 419). Yet implementing a

reform where teachers are required to change their practice while ignoring their beliefs and attitudes seems illogical, because 'beliefs are more influential than knowledge in determining how people, and more specifically teachers, act and behave' (Talbot & Campbell, 2014, p.421). Mokhele and Jita (2010) found that teachers were dissatisfied with their quality improvement initiatives because these did not pay much attention to what motivated them to engage in such activities.

Some authors have argued that this ignorance has rendered attempted reforms unsuccessful (e.g. Loucks-Horsley et al., 2009) and led many teachers to resist change. In contrast, a study by Lotter et al. (2013), which focused on how teachers' beliefs influenced their use of inquiry in a designed PD programme, found that those who attended the programme with the positive belief that they would learn something new and were committed and willing to experiment with new strategies showed better implementation of inquiry practices. Hence, it is vitally important for educational reforms to ensure that teachers have positive views regarding change (Kin, Abdull Kareem, Nordin, & Wai Bing, 2015). The provision of ongoing professional support, time and resources was also found to affect teachers' attitudes positively (Keys, 2005).

Nonetheless, understanding teachers' beliefs can be very difficult. Keys (2005), for instance, found that teachers' expressed opinions might differ from their entrenched convictions or the ones that actually guided their practice. He argued that acknowledging these differences in beliefs and understanding teachers' expressed views would help in evaluating the change that had occurred and critically reflecting on the progress being made. Such understanding, according to Keys, might also help to provide effective mentoring and support for teachers in the change process and could help them to match their beliefs to the expectations and critically reflect on their teaching.

However, the literature seems to focus on changes either in teachers' convictions or in their practices but gives insufficient consideration to understanding the interactions between them or the internal and external factors that affect these (Capps, Crawford, & Constan, 2012). Whether changes in practice lead to changes in convictions or rather that beliefs inform changes in practice is still an area of debate (Guskey, 2002). What is apparent is that unveiling and understanding these beliefs and attitudes may well prove central to evaluating the effectiveness of any educational reform. As this is the aim of the present study, getting teachers to reflect on and evaluate their PL experiences is considered significant in revealing their perspectives and how they position themselves in the change process.

3.3.4.3 Linking teachers' learning to being reflective practitioners

PL has been described as involving the internal non-stop development of teachers' practice in their classrooms (Eraut, 1994). If this is so, then their learning is underpinned by their own practical experience in their classrooms. Melville and Yaxley (2009) emphasized the effectiveness of this practice-based learning in developing teachers professionally, while Loughran (2010) attributed its effectiveness to teachers' personal continuous reflection on and exploration of their professional practice. A variety of literature has also demonstrated improvement in teachers' learning and critical thinking as result of their engagement in reflective practice (Korthagen, 2010; Luttenberg & Bergen, 2008). Reflection was found to be more effective when linked to classroom practice. For instance, a study by Camburn and Han (2015), which involved 887 teachers who taught reading/language arts or English in 52 schools in an urban district in the US, found that they

... were more likely to reflect on their practice and change their literacy instruction when their learning experiences focused directly on classroom teaching [and that

teachers] who engaged in reflective practice more regularly were more likely to report changing their literacy teaching. (p.511)

In the same vein, Camburn (2010) found that 'embedded learning opportunities for teachers are more supportive of reflective practice than traditional professional development' (p. 463).

Based on this, it can be argued that teachers' daily reflection in their schools and classrooms provides potential learning opportunities. This reflection was found to depend strongly on the type of reactions teachers had towards their experience and their feeling of the need for change (Boud & Miller, 1996), which would consequently affect their actual learning from their experience positively as motives or negatively as barriers (Boud et al., 1985). However, the extent to which teachers reflect on their practice, the ways in which they do so and the kind of reflection they apply to these daily experiences may determine the actual changes in their practice. Teachers' reflection in solving their daily dilemmas might be intuitive; however, it could lack clear understanding of its rationale (Shulman, 1987). Thus, the reflection process by teachers needs further examination.

The reflection process

Teachers draw upon their own and their colleagues' experience to resolve problems that face them in their teaching and to improve their practice. This is what is often referred to as reflection, which Hegarty (2011) defined as follows:

A process associated with professional learning, which includes effective reflection and the development of metacognition, and leads to decisions for action, learning, achievement of goals and changes to immediate and future practice. (p.20)

This definition implies that the reflection process involves bringing ideas from the subconscious to the conscious mind in order to understand how and why actions happen as they do and to improve them (Eraut, 1994). Hence, it is a cognitive learning process that aims at increasing the self-awareness of the teacher and the ability to observe, re-examine, critique and adjust his/her own thinking, thus achieving an enhanced practice (McLoughlin et al., 2006). Consequently, reflection involves three basic phases: going through the real experience and remembering its details; linking it to the feeling that accompanied it; and re-evaluating the whole experience based on the teacher's intent and the desired outcome (Boud et al., 1985).

From another angle, Schon's work on reflective practice provides much deeper understanding of the mechanism of reflection, stressing the role of inquiry in problem solving (Schon, 1987, 1992). It is often seen as an individual effort that leads to developing teachers' knowledge and teaching (Doecke & Parr, 2011). Schon distinguished three kinds of reflective practice (based on Dewey's theory of inquiry, which Schon considered similar to reflection): knowing-in-action, reflection-in-action and reflection-on-action.

Knowing-in-action is the kind of tacit knowledge based on daily routines and inquiry employed in solving everyday problems. However, teachers and experts often find it difficult to explain this kind of knowledge when they have to convey it to someone else.

Reflection-in-action is a kind of reactive, on-the-spot learning, where unconscious reflection occurs continuously during the performance but with no need to stop the action to think about something that might not appear right or might not be going very well (Eraut, 2000). It is a hidden internal conversation that takes place in the teacher's mind in the midst of the teaching.

Finally, reflection-on-action involves a break between the performance and the reflection process. It is a conscious cognitive performance evaluation that might be applied to one's own actions or to others' (Schon, 1987; Vygotsky, 1978). Ng (2012) found that collective reflection-on-action helped teachers to gain understanding of alternative perspectives and led to practice renewal. Reed et al. (2010) argued that reflection that leads to change in practice goes beyond the individual and involves social interactions. Therefore, it can be inferred that reflection-on-action is a form of knowledge construction that involves and evolves through daily social interaction.

3.3.4.4 Collaborative teacher learning

This section covers four aspects: social construction of knowledge; collective learning, professional learning communities and online professional learning communities

- ***Social construction of knowledge***

Learning is argued to be socially constructed and subjected to the surrounding environment (Eraut, 2007). It is influenced by the content presented, how it is presented, the kind of interaction that accompanies it and the context in which it occurs (Eraut, 2009). This role of social interaction in developing cognitive thinking of learners was emphasized by Vygotsky (1978). He argued that the actual knowledge of the learner differs from potential knowledge and that its development is more likely to occur where the person or system is more 'knowledgeable', which emphasises the need for collective learning. He devised two theories to represent two levels of development: 'More Knowledgeable Other' (MKO) and the 'Zone of Proximal Development' (ZPD). MKO relates the learning process to someone who has more knowledge, whereas ZPD argues that acquiring knowledge precedes developing it. In practice, ZPD advocates starting with scaffolding, where the learner is supervised by an instructor and gradually enabled to perform more independently. Although Vygotsky's theories targeted children, they can be

applied to adult learners including teachers, where interactions with more experienced professionals such as expert teachers, school heads or inspectors might improve their knowledge.

Understanding the impact of social interaction on learners' cognitive development requires, according to Vygotsky, an understanding of their beliefs and assumptions which originate from cultural influences. It can be argued that the significance this theory allocates to understanding each learner's potential, preferences and context is what makes it consonant to the purposes of the present study.

Nevertheless, the working environment, the demands of the job and the school's characteristics have been recognised as strongly influencing how teachers learn collectively (Leinhardt, 1988). The workplace might either restrict or expand learning (Fuller & Unwin, 2004). In a restricted-learning environment, the conditions and practices used in the workplace hinder developmental learning but promote reproductive learning, whereas in an expansive-learning environment, both kinds of learning are fostered. More specifically, an expansive-learning environment provides the conditions for collaborative working that focuses on teachers' learning and links it to daily practices. There are also out-of-school opportunities that facilitate the sharing of experience with teachers from other schools and various learning opportunities that suit teachers' nature (Hodkinson & Hodkinson, 2005). The opposite is true in a restricted-learning environment.

Providing the conditions and interventions that support teachers' learning in the school was argued to significantly enhance teachers' practice (Admiraal et al., 2016; Eraut, 2011). The role of school leaders in this regard has been emphasised (Hodkinson & Hodkinson, 2005); however, the availability of funding, time and materials that facilitate knowledge sharing among teachers and the alteration of any guidelines that might restrict

learning were seen as prerequisites (Hodkinson & Hodkinson, 2005; Lohman & Woolf, 2001). For instance, Admiraal et al. (2016) found that the external funding that schools received in the form of a PD budget was crucial in promoting teachers' learning, but they warned that such funds might also be a barrier to enhancing teachers' practices if funders tried to control or interfere in what schools should focus on or how money should be spent.

Crediting such explicit value to being responsive to the context and conditions of the school is what will foster real change in teachers' practice. Thus, it is vital that the design of PL opportunities reflects the workplace situation and responds to its diverse requirements (Day & Gu, 2007). Parker, Patton, and O'Sullivan (2016) argued that in order to bridge the theory-practice gap, it is important that this design provides the conditions and opportunities for teachers to share knowledge, reflect on their own and others' expertise and engage in critical dialogue (communicative interactions) and collective learning activities.

It can be inferred from the above argument that the effectiveness of PL experiences relies on attention being paid to three fundamental components: teachers' experience and how it is shared and developed; teachers' self-efficacy and their attitudes and beliefs about the need for learning; and the existence of a collaborative learning environment. The next subsection will focus on the third component: collective learning.

- ***Collective learning***

PL represents a call for more collaborative learning (Stewart, 2014). It is a 'move beyond the dominant modes' (Melville & Yaxley, 2009, p.359) of learning delivery towards methods that are more 'active, consistent, based in the teaching environment, and

supported by peers' (Stewart, 2014, p.28). Hence, teachers are learning from each other while at the same time reflecting on their own practice and adapting what they learn to suit their context (Eraut, 1994). Such collaborative learning is strengthened in a school climate that encourages social interaction (Porcaro, 2014).

Collaboration between teachers in enhancing their teaching and facing daily teaching challenges was shown to be a crucial element in improving both teachers' practice and students' performance. For instance, in a case study in Australia, primary science teachers showed improvement in their teaching practice as a result of implementing a model tailored to provide collaboration and reflection among teachers in three areas: content, pedagogy and students' learning (Loughland & Nguyen, 2016). Meijer et al. (2016) also found that in-depth group discussion with peers enhanced the transformative learning of teachers. Similarly, Thibodeau (2008) demonstrated positive benefits in subject knowledge and teachers' self-efficacy as a result of participating in a small learning community, while noting that 'collaboration with colleagues is not often part of the professional development experience for many teachers at the high school level' (p.56).

Two main factors were found to be behind the little attention given to collaborative learning between teachers: structures and cultural barriers on one hand and on the other, policymakers' belief that teachers can only enhance their teaching and their students' achievements when they are in their classrooms, which has led to less investment in time and resources towards this end (Little, 2003).

Attention now turns to teachers' engagement in professional learning communities (PLCs), which are extensively highlighted in the literature as providing an effective form of collaborative learning among teachers.

- *Professional learning communities*

It has been widely contended that PLCs have a positive impact on teachers' practice and on enabling them to develop and adapt to the requirements of changing situations in education (Stoll, 2004). Stoll defined PLCs as

... a group of people sharing and critically interrogating their practice in an ongoing, reflective, collaborative, inclusive, learning-oriented, growth-promoting way, and operating as a collective enterprise. (p.34)

This definition stresses the social aspect of PLCs, whereby learning evolves particularly when it occurs collectively, and underpins the argument that 'system-level improvement can only be achieved by changing the way people connect, communicate and collaborate' (Harris & Jones, 2010, p.180). These collective social learning opportunities create a space for continuous dialogue that alters teachers' mental models, beliefs and assumptions and convinces them of their ability and the possibility of change (Sparks, 2002). In this sense, PLCs can be viewed as adding to the social capital of the school. Their successful establishment, according to Stoll, requires provision of the following:

- (i) a variety of formal and informal learning opportunities;
- (ii) support and resources including supportive leadership, experts and technology; and
- (iii) sympathetic structures that encourage co-ordination, collective planning, time and space.

Collective learning was also advocated as valuable to PLCs (Darling-Hammond & McLaughlin, 2011; Harris, 2010; Harris & Jones, 2010) and recognised to be useful in changing teachers' practice and driving broader improvement in the school as a whole: 'Professional learning communities offer one way of generating changed professional practice that can positively contribute to system-wide improvement' (Harris & Jones,

2010, p.172). This conclusion was drawn from an evaluation of a PLC model implemented in some schools as part of a pilot phase of educational reform in Wales, which showed improved teaching and learning outcomes. (Harris & Jones, 2010) described their model as: 'internally generated and externally supported [with a] focus on pedagogical improvement [and an] action inquiry approach' (p.176).

In an evaluation of the impact of Virtual Professional Learning and Development, an initiative implemented by the Swiss Ministry of Education in 2009, Owen (2014) found a positive relation between PLCs and enhanced PL of teachers. He argued that PLCs provide 'situated learning', which is often missing from formal PD practice that takes place outside the school. Al-Khayari and Al-Humaidi (2014) reported positive changes in English teachers' classroom practice and increasing levels of enthusiasm and commitment to enhancing students' achievements as a result of their involvement in teacher development groups in Oman.

The real benefit of creating such learning communities might be in encouraging and giving space for teachers to participate, discuss and benefit from each other and reflect on each other's practice. This would provide a convenient way of responding to teachers' real needs and of enabling them to reflect on their own classroom contexts and students' needs.

Stoll (2004, p.34) argued that there are five main features that characterise effective PLCs:

- shared values and vision that focus on improving learning and teaching
- collective responsibility for the learning of all pupils
- reflective professional inquiry to deepen practice
- collaboration and teamwork
- group and collective learning, as well as individual learning

Thessin (2015) suggested that the provision of additional school-based professional activities, the existence of a collaborative school culture, school leaders' readiness to engage and their actual engagement in professional activities at school are all crucial to the effectiveness of PLCs.

These four conditions, along with Stoll's five features, show that learning is both a collective activity and a social responsibility, which should not be imposed on teachers but sought by them (Burn, Mutton, & Hagger, 2010). Analysing these features leads to the identification of three main prerequisites for the success of collective learning communities: *learning experiences, human and social resources, and supportive leadership*. These are now discussed consecutively.

Learning experiences: PLCs contribute to changing teachers' practice by addressing issues of direct connection to improving their learning experiences and by developing collective ongoing learning which provides teachers with new perspectives, valuable feedback, skills and experiences that suit their particular settings and needs (Stoll, 2004). Barnes et al. (2010) contended that providing various learning experiences by creating learning communities helps in realising changes in both teachers' practice and their thinking. This should actually be an essential part of any educational change effort and a key feature of PL programmes. However, Harris and Jones (2010, p.175) argued that PLCs need to clearly focus on 'student learning, reflective dialogue and action enquiry'. This seems to link changes in teachers' practice to their ability to see things from a new perspective by observing, engaging and reflecting on others' actions, which is facilitated by participation in PLCs.

In the same vein, Wenger (1998) referred to the communities of practice theory, which was originally developed by Lave and Wenger, and situated experience theories, which

focus on daily interaction between people through activities or conversations and on how people learn from each other and construct new meanings, attitudes, knowledge or assumptions. Developing such situated learning, as argued by Wenger, enables teachers to use strategies that address specific students' learning needs in their context. Communities of practice theory views people's learning as entailing active social involvement and helping people to feel that they belong to a certain group, such as a school subject department. This active social involvement influences and shapes teachers' beliefs, identities and interpretation of their practices. These theories consist two out of four key components of the social theory of learning (see Fig. 3.4), which Wenger (1998) describes as emphasising the role of engagement and interaction in the evolution of learning (For the purposes of this research *Theories of Identity* and *Theories of Social Structure* are not discussed since they are not related to the focus of this study).

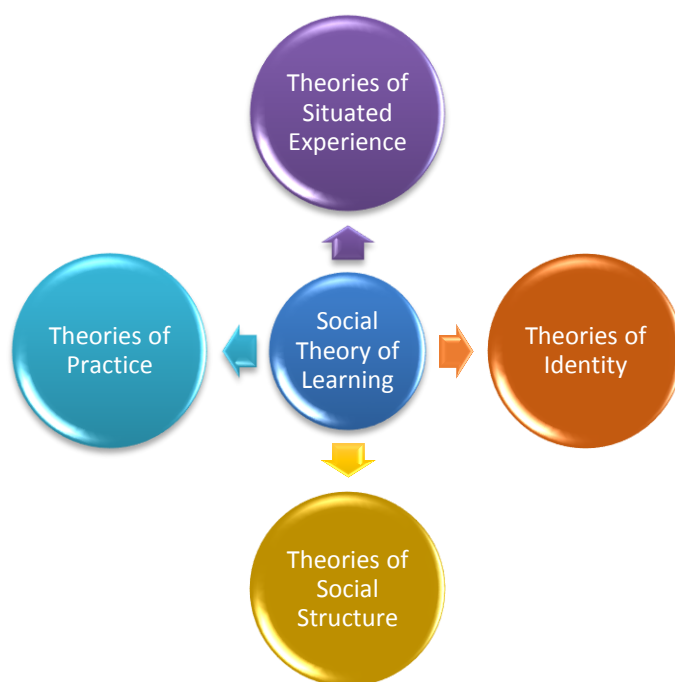


Figure 3.4 Social theory of learning (Wenger, 1998)

According to Fig. 3.4, the kind of learning that PLCs can provide goes beyond enriching teachers' knowledge and enhancing their pedagogical skills to the creation of a positive

image of professionalism; accordingly, professional improvement is a natural and ongoing process linked to daily interactions.

Human and social resources: The availability of human and social resources is the second prerequisite for the success of PLCs. This is based on the argument that teachers' opportunities to deal with an experienced inspector teacher are very important yet rare in reality (Spillane, Reiser, & Reimer, 2002). PLCs increase such possibilities in an atmosphere that is convenient, more flexible and less formal for teachers and makes them more open to learning and to exposing their real anxieties. The immediate and precise feedback teachers receive in these communities is regarded as much more beneficial than the traditional forms of PD, where there is hardly any feedback on the quality of the implementation in the classroom of the newly learned materials.

What is more, engagement with other people in PLCs also helps to alleviate the feeling of isolation that some teachers might have while working in their own classrooms with no real indicators of the quality of their performance compared to others (Owen, 2014). This offers 'a very powerful way of engaging teachers in reflecting upon and refining their practice' (Harris & Jones, 2010, p.174). Thus, developing teachers' practice is viewed as a common interest that contributes significantly to improving the whole school.

Supportive leadership: A supportive leadership is a cornerstone of any PLC. School leadership needs to facilitate and be directly involved in these communities. It should work to develop a collaborative school culture in which teachers and staff members in general are encouraged to learn from each other and skilled at doing so (Bransford et al., 2000). The kinds of leadership involvement can vary from attending PL activities, organising and providing structural conditions like time and suitable places for suggested activities to offering both the financial and logistic support needed (see Section 3.2.2).

Such support might indicate how seriously committed school heads are to school improvement and developing teachers' practice.

What is more, PLCs can be seen as opportunities to involve everyone and give them a voice in a collective learning environment and in deciding how they learn (Harris & Jones, 2010), which could create positive reactions towards new experiences. In this sense, PLCs are underpinned by the ideas that 'the sum is greater than the parts' (Harris & Jones, 2010) and that shared experience maximises learning capacity.

The lack of any of these three elements (learning experiences, human and social resources or supportive leadership) will be deleterious to the outcome of the PLC and to the improvement of the school. Similarly, a lack of appropriate organisational structures, teachers' resistance or unwillingness, excessive workload and other distressing demands will turn the PLC into 'just an extra activity' (Harris & Jones, 2010, p.179), instead of an essential part of the school day. More importantly, unless teachers feel the necessity and benefits of these collective learning opportunities and unless these explicitly focus on core daily issues related to teaching and learning, PLCs will be seen as another form of imposed PD (Burn et al., 2010). Therefore, the quality of the collective learning opportunities matters more than their quantity (Day & Gu, 2007), as does the conviction of teachers regarding their goals and their potential value in improving their practice.

- ***Online professional learning communities***

The internet is increasingly being used to enhance teachers' professional learning without limitations of time and place (Bransford et al., 2000; P. Evans, 2015). Indeed 'opportunities for creating learning environments' (Bransford et al., 2000, p.206) might be one of the strongest advantages for schools of the current technological and social

media revolution, especially when there is support and willingness (Mei-Hui & Kleinsasser, 2014). The potential of the internet to improve teacher learning and the flexibility it offers in terms of time and conditions is limitless. The kinds of social, participative and ongoing interaction that can be made available through the internet makes creating online professional learning communities (OPLCs) an unprecedented source of PL opportunities, appropriate for all teachers regardless of their level or location. Alhabahba and Mahfoodh (2016) observed that teachers' motivation to collaborate and change their teaching practice increased as a result of their participation in an online collective activity.

Participation in OPLCs such as online forums or Twitter, Facebook and WhatsApp groups may enhance teachers' learning and allows them to share experience and interact with other remotely located educational experts. For instance, Shohel and Banks (2012) found that the availability of school-based technology-enhanced support systems provided a supportive learning environment and valuable feedback, while exposing teachers to a wide range of experiences. Another advantage of OPLCs might be that by avoiding formal face-to-face interactions they help to minimise teachers' demotivation to disclose their areas of weakness (Mei-Hui & Kleinsasser, 2014).

A key recommendation of Bransford et al. (2000) to improve the learning of both students and school staff members is the development of interactive communications subject sites. The idea here is that internet forums can be developed as interactive learning courses where teachers can register and learn at a time and pace that suits them and sit for a test at the end to affirm their commitment, receiving a certificate as a form of recognition. A virtual mentor (an expert) should be available for any inquiry and participants can remain anonymous.

However, access to technologies, excessive workloads, building trust and a culture where various perspectives are respected represent real challenges to realising OPLCs (Mei-Hui & Kleinsasser, 2014). What is more, although it is generally acknowledged that online communities involve a lot of interaction, they do not necessarily lead to new knowledge or changed practices. This is because the kind of communication and discussion in these communities might be very basic and shallow (Brindley, Blaschke, & Walti, 2009).

These limitations can be alleviated, according to (Lock, 2006), by having a clear strategy that focuses on developing new images of online learning, by creating a dynamic learning environment where teachers are enthusiastic, committed and dedicated, and by ensuring the purposeful selection of digital technology in schools. Adopting such a strategy will allow teachers to appreciate their individual roles and responsibilities in developing their own learning and at the same time will help them to benefit from their engagement with other teachers and experts in transforming their teaching practice (Hou, 2015).

3.4 Critique of strategies used to promote professional learning

3.4.1 Overview

Educational reforms generally produce areas of possible tension between planning (initiation) and implementation (Lunenburg, 2011; Wedell, 2009). Such tension can be substantially attributed to the underestimation of the complexity and contextual differences within educational systems. The way by which many change programmes are currently conducted has contributed to a widening gap between planning and implementation, and thus between policy makers and planners on one side and schools and teachers on the other (Hargreaves, 2009). This is evident in both developed and developing countries. Yet, centrally led educational systems and the little autonomy

schools have in developing countries is another challenge that might contribute to the initiation-implementation gap.

In light of this and with various reforms sweeping educational institutions in their attempts to face inevitable change often driven by the demands of global competition, an ongoing debate has centred on the best ways in which to realise change that suits the nature and complexity of educational settings (Barber & Mourshed, 2007; Mebrahtu, Grossley, & Johnson, 2000).

While enhancing teachers' quality seems to be a cornerstone of most reforms, there is rather scarce evidence of the effectiveness of many PD models, as instruments of change, in achieving the desired impact on teachers' practice (Cole, 2004; Fullan, 2007; Joyce & Showers, 2002). This suggests a disjuncture between policy espousal (what is intended) and policy enactment (the outcomes), often referred to as 'policy fracture' (Davies & Hughes, 2009).

Two main factors seem to have contributed to this 'discrepancy between intention and outcome' as Hoyle and Wallace (2005, p.7) described it: not considering the deeper implications and realities of teachers and their workplace (Fullan, 2007) and the adoption of rigidly linear systems and plans for an unpredictable future (Kekang, 2014), which has oversimplified the task of improving the quality of teaching (Guskey, 2002) and overlooked the need for communication and consultation with schools (Fenwick, 2003; Grace & Gravestock, 2009).

The point is that improvement in teachers' practice cannot be realised when schools are given little room for autonomy and when negligible attention is paid to teachers' changing professional needs and to the impact of their PL experiences. Indeed, the discrepancy was caused by major tension between policy makers, who were imposing their 'panacea'

(reform agenda) on schools, and teachers, who were supposedly reflective practitioners, changing their practice to suit their context and students' needs.

More specifically, criticisms of the limited impact of PD can be attributed to the following five key factors: the passive learning experience teachers have during PD events; their mismatch with teachers' context and needs; teachers' lack of voice in designing these events and their delivery modes; a failure to consider teachers' attitudes, beliefs and dispositions (personalities); and the lack of a mechanism for continuous and collective learning and reflection based on context (see Section 3.4).

The weaknesses of various change models that have been adopted have redirected attention to evaluating three specific areas: the quality of PD activities, the kind of experience (knowledge, skills, beliefs, values, dispositions) they offer to teachers and the extent to which they meet the changing needs of teachers. There have also been calls to move 'towards a more personalised approach to staff development and learning' (Bubb & Earley, 2009).

This has triggered a need to broaden the understanding of what and how teachers learn in PD activities to include, in addition to the acquisition of various kinds of knowledge and skills, the involvement of changes in how they think, interact and reflect, in what they believe to be true and in their willingness to learn (Bransford et al, 2000). Other essential measures that need to be considered are addressing their preferences and engaging them more by giving them a voice in designing their PD and by bringing the learning experience closer to what happens in classrooms (Fenwick, 2003; Grace & Gravestock, 2009). The consequence of this shift is a redirection of the focus into three key areas: the acquisition of knowledge (of various types); understanding it and having a positive attitude towards change; and the ability and willingness to apply it in context.

These developments have reinforced the need to consider reconceptualising PD to include a broader understanding of both the content and process involved. Theoretically, it has led to a shift in terminology from ‘professional development’ to ‘professional learning’ (Opfer & Pedder, 2011; Stewart, 2014; Timperley, 2011), where teachers’ quality improvement is promoted as a dynamic and interactive ongoing process that integrates knowledge acquisition with context and where learning is crystallised into changes in three domains: the capacity, beliefs and practice of teachers.

The following subsections (Sections: 3.4.2, 3.4.3, 3.4.4, 3.4.5 and 3.4.6) summarise contrasting ideas highlighted in the literature review which have led to the decline of PD and the rise of PL, which reflect the complexity of the issue and which are seen as useful in investigating the theory-practice gap.

3.4.2 Is focusing on ‘how’ rather than ‘what’ teachers learn more effective in producing changes in their practice?

Analysis of the existing literature has shown that teacher improvement activities are of two main types: those which rely on ‘one-off’ events, focusing on what teachers should know and aiming at increasing their knowledge (Hendrick et al., 2010), and those which provide a diversified set of opportunities, focusing on how teachers need to change and aiming at altering their thinking, reflection and beliefs (Gunter, 2005). However, it seems that much of the literature has focused on the ‘what’ rather than the ‘how’ (Knapp, 2003). Mayer and Lloyd (2011, p.4) argued that the main difference is whether the focus is on changes in ‘one’s capacity for practice’ or ‘the actual practice’. The ‘one-off events’ type focuses on making sure teachers update their content knowledge and acquire new pedagogical skills, whereas the diversified type pays more attention to the outcomes of the learning process.

Although it has been shown that development in teachers' practices drive improvement in their students' learning (Hopkins, 2000), it might nevertheless be misleading to assume that students' learning would improve as a result of teachers simply increasing their capacity (knowledge and skills), if their beliefs and attitudes towards their own learning do not change. This seems to represent a limitation to the 'what-focus' or 'increased capacity' approach. In contrast, the 'how' approach, aimed at altering actual practice, seems more likely to achieve change in teachers' practice because of its wider responsiveness to the factors that might influence their learning (see Section 3.3.4).

Another limitation to the 'what-focus' perspective is that it focuses on increasing individual teachers' knowledge and skills but often fails to correspond to various learners' needs and settings (Kekang, 2014; Walby, 2007), making it likely to influence individual teachers' performance, rather than creating a culture of change in the school in the longer term (whole-school reform).

This may be seen as revealing a link between the way PL is conceptualised and the extent of change it is likely to produce in teachers' practice. What, how and why teachers learn should be the guiding principles to understanding PL, yet it seems that the 'what' receives greater attention than the other two components.

3.4.3 The Degree of Complexity involved in Teachers' Learning

Teachers' learning was also found to be perceived differently in regard to the level of complexity it involves. This ranged from considering that attending simple events (like one-off sessions) is adequate to achieve a change in teacher practice to seeing such change as a much more complex process associated with various contextual factors and involving other teachers and schools (Harris & Jones, 2010; Lunenburg, 2011).

This distinction entails adopting different PL designs. The 'simple event' perspective is a delivery-focused approach that gives great significance to the number of PL events teachers attend and requires specified time and resources (Earl, Watson, & Katz, 2003), whereas seeing it as a complex process requires the adoption of an implementation-focused approach that emphasises the kind of experience teachers go through, like their active engagement (Bransford et al., 2000; Hodgson & Spours, 2006) and the sort of support they need to adapt what they learn to their context (Eraut, 2011; Knight, 2011; Truesdale, 2003).

The mechanisms of feedback and follow-up also differ between the two perspectives, ranging from focusing on ensuring the implementation of what has been acquired (Ball et al, 2008) to paying attention to the impact of what has been learned and assessing changes in teachers' practice and students' outcomes in both the short and long term (Fullan, 2001; Grace & Gravestock, 2009; Mason, 2011). Yet it seems that a main cause of the theory-practice disjuncture is that too little attention is paid to the impact of PL.

3.4.4 PL: Centrally determined or contextually triggered?

While the issue of whether teacher quality improvement programmes should reflect external reform agendas or schools' contextual settings remains an area of tension between politicians and practitioners (Bolam, 2002), centrally initiated PL events, which are likely to be based on policy makers' conceptions, have often been shown to be detached from actual teachers' needs, leading 'to widespread teacher and head teacher dissatisfaction' (Hoyle & Wallace, 2005, p.4-5). The weakness of these centrally directed initiatives may be that they have often relied on imposing regulatory control to ensure that all schools took the same route and that all teachers were committed to the reform. This in turn will have hindered the making of adaptive arrangements (like modifying

some structures) and compatible organisational policies that were responsive to schools' context, the result being the promotion of 'reproductive learning' and thus the stagnation of teacher innovation (Bailey, 2000; Fuller & Unwin, 2004).

In contrast, PL activities that were need-triggered, felt-initiated and context linked were found to have given more space to school and teacher involvement in decision making regarding PL design and delivery mechanisms. Thus, they were likely to achieve genuine change in teachers' practice, because they paid more attention to convincing teachers of the need to change (Boud & Miller, 1996; Loughran, 2010; Melville & Yaxley, 2009).

Another criticism of centrally determined initiatives is that they were often based on the idea that 'one size fits all' and in many cases were found to have adopted a linear approach, forcing learners to follow a predetermined systematic path in their learning, thus proving incompatible with various school settings and teachers' contexts. PL initiatives that accounted for and gave more space to contingent responses and school autonomy were found to have been more dynamic in meeting the needs of both schools and teachers (Hopkins et al., 2014).

Although some might argue that providing central direction is necessary to ensuring consistency and the alignment of all schools to the desired standards, it was in fact found to have led to the 'top-down' imposition of rigid guidelines that were often not tailored to schools' contexts, creating superficial change and a passive learning experience (Darling-Hammond & McLaughlin, 2011; Fullan, 2007). Limited consultation with schools was also found to have created misunderstanding and divergence from schools' and teachers' aspirations, thus engendering negative attitudes towards change (see Section 3.3.4.2). This was evident, for instance, in many Arab educational systems (Akkary, 2014).

In contrast, allowing distributed participation in designing PL is likely to create a culture of facilitation and partnership between the components of the system, especially between schools and teachers envisaged as reflective practitioners. In felt-need initiatives, school leaders have more space to realize their contingent and strategic role, enabling them to react suitably to the changing conditions in their schools (Bush, 2011; Fiedler, 1978). If change is a felt need, then it should motivate and develop a culture of enquiry rather than of obedience.

However, this does not mean that schools should rely on themselves only in developing their teachers. Exposing teachers to external ideas and experience is also argued to be crucial in keeping them updated and at the same time testing their learning against the standards of best practice (Fullan, 2007). Building a strong professional learning culture in the school is likely to require both internal and external initiatives.

3.4.5 Is teachers' PL more effectively improved alone or in collaboration?

Examining what literature (e.g. Meijer et al., 2016; Meirink et al., 2007) revealed that teacher learning was advocated as either an individual or a collective effort. Whereas PL events which adopted the individual perspective focused on enhancing individual teachers' capacity (knowledge and skills), those which adopted the collective perspective focused on creating a culture of learning and forming learning communities in which teacher learning is enhanced when done collectively and linked to whole-school improvement.

Little (2002, 2003) has shown a link between working collectively and commitment to further learning. Existence of cooperative learning communities within schools was also suggested to have positive impact on practice (Borko, 2004), but how this happens is a relatively under-researched area (Hou, 2015).

There were also differences in regard to reflection. While the individual-change perspective assumes a limited view of reflection, often confined to the content of the PL activity, the collaborative-change perspective assumes a wider understanding involving reflection on others and with others, collective reflection and reflection based on context (Barber & Mourshed, 2007). This wider understanding of reflection has stimulated teachers to establish multidirectional communication, relationships and interactions with colleagues and school heads, which are viewed as part of the social learning that teachers can benefit from and which help to facilitate the creation of learning communities in and between schools.

It appears that although the role of the individual in the learning process is still crucial, individuals 'cannot reconceive their practice [and] while it may be possible for teachers to learn some things on their own, rethinking old norms requires a supportive community of practice' (Darling-Hammond & McLaughlin, 2011, p. 86-87). This suggests that improving the quality of teaching could be better supported by conceiving PL as both an individual and a collective change process. 'The interface between individual and collective meaning and action in everyday situations is where change stands or falls' (Fullan, 2007, p.9). In this sense, increasing teachers' chances of interacting with each other might facilitate a genuine change in teachers' practice.

3.4.6 Is changing the forms of PL adequate to enhance teachers' practice?

Opportunities for PL occur in formal and informal settings and both during and outside practice (Eraut, 2011; Knapp, 2003). Some research has focused on the characteristics of PD types that have proved most effective in improving teachers' performance (Kelani & Khourey-Bowers, 2012; S. Watson & Evans, 2012). Other studies have focused on the kind of experience (knowledge, skills, beliefs, values, dispositions) that PL offers to teachers

(Cole, 2012; Nicolaidou & Petridou, 2011). It was found that programmes aiming only to offer an enriching experience have often created passive learners who saw themselves as receivers of knowledge, whereas when teachers were engaged in the learning process, whether through interaction, practical activities or collective reflection, they have become consciously aware of their learning and able to question their mental models (interpretations) of it and to take informed decisions in new situations (Mezirow, 2000).

This suggests that it may be the characteristics of the PL event which affect teachers' role as passive or engaged learners and thus that the nature of the activity is more important than the type in driving a genuine change in practice. This emphasises that PL experiences should aim at achieving the greatest possible active engagement of teachers in the learning process.

3.5 Key theoretical ideas

This study is guided by three main theoretical models: complexity theory, contingency theory and social constructionism.

3.5.1 Complexity theory

The complexity theory of change focuses on how complex systems are and how this complexity can be addressed and managed (Cohen et al., 2011) by raising questions concerning aims, curricula, connectedness and pedagogy, rather than providing answers (Morrison, 2008) that claim to fundamentally redefine education. Its core theme is the complex relationships that exist within a single organisation or institution such as a school and the potentially diverse ideas and contradictions that might exist because of this complexity. It challenges the notion that the world can be perceived and researched as predictable and controllable, and rejects simple cause-effect inferences (Morrison, 2008); social behaviour cannot be isolated, controlled and predicted from its settings. The emphasis is on how systems can adapt, develop and learn to survive (Morrison, 2008) by keeping a balance between their multiple structures, functions and interactions (Fullan, 2007) and ensuring good connectedness and communication between these. That is to say that there is a need to maintain harmonious relationships between various components and levels of structures (Walby, 2007) and to follow nonlinear and holistic approaches that promote the distribution and sharing of knowledge rather than seeking to control it. Indeed, complexity theory 'suggests a movement towards bottom-up development and change' (Morrison, 2008, p.24). Thus, collaboration, connections and communication are essential for the survival of the system (Cilliers & Spurrett, 1999).

There is evident complexity in educational systems, whose various components differ in terms of perspectives (students, teachers, school leaders and parents), location (rural,

suburban or urban), funding, culture and experience (of both teachers and school leaders). Such variation requires adaptive strategies that are responsive to different needs and circumstances.

The importance of complexity theory for PL is that it recognises that variations in the system affect its overall effectiveness and that effective interventions are those that operate at every possible level and from every possible angle. Consequently, this study will try to understand the multiple factors that influence teachers' professional learning by investigating the issue from various perspectives, from different angles and at several levels, driven by a conviction that educational change is 'a case of generating momentum in a new direction by paying attention to as many factors as possible' (Mason, 2008, p.35). Furthermore, as complexity theory views learning as an attempt to survive in an ever-changing world, the author views teacher learning as a dynamic and transformative activity that involves and arises out of interaction and collaboration between individuals and requires space, freedom to explore, motivation and feedback, rather than control (Davis & Sumara, 2005). Complexity theory views transitive learning experiences as insufficient to promote genuine learning which leads to changes in practice, as they do not facilitate interaction and communication, dialogue and discussion, self-organization and consideration of variations in personalities and preferences (Morrison, 2008). These are key ideas that underpin this study.

Complexity theory is also relevant to the topic of this study because it asserts that 'knowledge must be contextual' (Haggis, 2008, p.169), regarding knowledge 'as a social construct created by the participant at a socio-historical-geographical conjunction' (Morrison, 2008, p.30), and because it creates challenges and has implications for both policy makers and practitioners. Kekang (2014) argued that 'a complex system is dynamic and unpredictable and does not follow a logical order or path' (p.3). This raises difficulties

for educational systems for two reasons. Firstly, good planning does not guarantee successful implementation, because managing the change becomes more difficult as it passes down from the planners to the diverse components including educational districts, schools and teachers. Secondly, due to the complexity of the educational system, implementation might have unintended outcomes that differ from what policy makers expected, because complex systems are unpredictable. This challenges 'linear' educational reforms which are based on policy makers' agendas and which lack an authentic contribution by implementers in shaping them. Besides, assuming that there is only one best direction to be followed by all schools is yet another controversial idea. Thus, this theory embodies a contradiction for the centrally directed educational system in Oman.

It also represents a major challenge for teachers, because changes in curricula and students' learning require teachers to adapt their teaching practice accordingly. This adaptation might involve changing some of the longstanding ideas and methods in their teaching and leaving their 'comfort zone' for new areas in which they lack competence and experience. Ironically, to do so, they must become learners themselves, which requires considering and experimenting with new forms of learning.

This theory has implications for researchers, planners and implementers. For instance, research has shown the need for policy makers in educational institutions to accept the uncertainty facing their institutions, to acknowledge the complexity and uniqueness of schools' contexts (Walby, 2007) and to consider the various contextual factors that might influence their performance. Morrison (2008) argued that complexity theory 'can be used to prescribe actions and situations that promote change and development' (p.29), by supporting the creation of nonlinear and dynamic educational systems and plans which nurture creativity, diversity and collaboration, and by reconsidering the suitability and

feasibility of school improvement initiatives for teachers and schools. Thus, it is crucial that policy makers and planners realize that changing teachers' practice and attitudes is not an event but a long, gradual and difficult process (Harwell, 2003) that requires risk taking and feedback. Besides, schools need to be seen and treated as 'learning organisations' (Fullan, 2007), not only for students but for teachers as well, which requires teachers' attitudes, beliefs, preferences and understanding to be treated as significant in achieving the desired goals.

For researchers, complexity theory urges for the use of networks as the unit of analysis, focusing on the symbiotic relations among individuals, schools and communities, and suggests a case study methodology that is premised on qualitative and interpretive accounts as the best approach to address the holism of the phenomenon (Lewin & Regine, 2000).

However, complexity theory is not without limitations. 'It does not speak to morals' (Morrison, 2008, p.30), as it helps to analyse a phenomenon but provides no clue as to whether the suggested actions are desirable or not and takes no account of the ethics or value of education. Moreover, the 'adapt or die' conviction on which the theory is based might not be true for those participants who prefer the certainty of a prescribed and controlled way of working. The unpredictability that it advocates also seems to conflict with holding people responsible for their actions. Finally, while complexity theory focuses on the holism of systems, the boundaries of these systems or of some of their elements might be difficult to identify, especially in the social sciences; for example, what is meant by the whole realm of 'a learner'? It is evident that defining the boundaries of a 'learner' in a school is difficult.

3.5.2 Contingency theory

Contingency theory advocates that 'there is no one best approach to leadership' (Dambe & Moorad, 2008, p.579) and that head teachers should respond differently to various contexts and situations (see Section 3.2.2), adapting their styles to fit the circumstances of their schools (Bush, 2011) and taking account of the readiness and willingness of their teachers (Dambe & Moorad, 2008). This seems problematic in that it contradicts the predetermined responses assumed by centrally led reforms, for three reasons.

Firstly, these reforms are often based on the assumption that 'one size fits all'. Contingency theory suggests that rigid top-down educational reforms are no longer effective in meeting the demands of an ever-changing world, especially if the implementation of these reforms takes place in different locations and is handled by people with diverse backgrounds, understandings and preferences.

Secondly, this context-based consideration seems to be disregarded in many PD experiences, although it is often claimed that these are based on analysing teachers' professional needs (Mbugua & Rarieya, 2014). Creating PD plans for teachers while ignoring their voices and not considering their circumstances or attitudes seems to be contradictory (Mintzberg, 1994), while designing these plans and programmes as models to fit all teachers regardless of their contexts, needs, beliefs and preferences is impracticable.

Thirdly, the type of leadership might vary from one situation to another and what might fit a specific circumstances might impede school improvement in another (Fullan, 2002; Jackson, 2000). Thus, rather than being controlled, schools should be able to respond differently to their changing situations and contexts; a school's actions should be contingent upon its internal and external contexts and changing environment.

This has a significant implication for school leaders. To lead effectively, they need to be flexible, adjusting to the changing situation and requirements in their schools' environment while being responsive to the external context as well (Fiedler, 1978). Hallinger (2003) argued that 'the context of the school is a source of constraints, resources, and opportunities that the principal must understand and address in order to lead' (p.346). However, their role as situational leaders might be affected by the space and autonomy they have in managing their schools. Thus, realizing situational leadership might require some organizational changes. For instance, Hopkins et al. (2014) argued that adopting a different leadership style requires some of the existing structures to be changed. It has also been argued that realizing this situational leadership role requires the delegation of responsibilities to others and active interaction among them (Paredes, Scribner, Sawyer, watson, & Myers, 2007).

Contingency theory also has implications for teachers, especially those faced with a new and unfamiliar situation (Sadler, 2003) like a new curriculum, which requires them to think about alternatives that suit their changed situation. Their ability and willingness to be proactive when faced with uncertainty, as well as the provision of the space for them to do so, seem to be essential conditions for realising genuine change.

This theory was used to guide the present study in the formulation of questions about the current practice of school heads, to see whether they were able and allowed to respond appropriately to their schools' contextual needs, and to analyse their space of freedom and actual contribution to improving their teachers' PL.

3.5.3 Social constructionism

Considering learning to be the ultimate goal of every PL experience emphasises both the consequent changes in teachers' beliefs and knowledge and their increased participation in knowledge sharing and building (Lave & Wenger, 1991; S. Watson & Evans, 2012). These two aspects are argued to be integrated in social constructionism, a theory of knowledge and a key epistemological perspective in sociology (Denscombe, 2014; Eraut, 1994). Knowledge in this perspective is constructed and changed through responding to the interpretations and meanings that individuals associate with events, not by responding to the events themselves (Eraut, 1994). People construct their meanings and build their knowledge through daily interactions in the culture, workplace and society (Vygotsky, 1978). The social and positional power of politicians, media or experts determines the influence individuals can have on others' construction of knowledge and what they take for granted; as a consequence it can influence their conceptions of what they know or believe themselves to know (Foucault, 1972). Based on Foucault's work, power is diffused and shaped through people's daily interactions. Thus, knowledge building is a social and collective activity where people justify their behaviours (choices) by reference to the models they have created of their social world.

In original research on this topic, Berger and Luckmann (1966) argued that people create knowledge through their daily routines, by repeating the same actions and building patterns which eventually guide and shape their understanding of what they know. This understanding is reaffirmed and reinforced through these people's interactions.

This shows clearly that there is a kind of consensus among Vygotsky (1978), Berger and Luckmann (1966) and Eraut (1994) that social interaction is a core factor in developing various kinds of knowledge – mainly explicit, tacit and embedded, and more specifically theoretical, methodological, practical, generic and general knowledge (Eraut, 2009) – and

in understanding people's behaviour and assumptions. Based on this consensus, it could be argued that teachers' practice in the classroom is the results of two processes: professional and organisational socialisation.

Professional socialisation means reflecting the roles and responsibilities of the subject area and its culture (Weidman et al.,2001). It is a subconscious process of building a sense of identity based on acquiring certain knowledge, values and norms shared in the culture of a specialisation. Thus, values are informed by specialised knowledge. This is similar to what is often referred to as the community of practice (Wenger, 1998).

Organisational socialisation means acquiring and interpreting the characteristics and role of a professional in the context of the workplace and adopting its goals, mandates, responsibilities and behaviour patterns (Chao et al.,1994). Thus, knowledge is informed by organisational values.

It follows that the best way to understand what people know and how they know it is by investigating their experience of social interaction. However, researchers need to have a clear stance on how to define what is 'knowable' (Guba, 1990b), how to interpret why people might or might not have certain beliefs that they know something and 'how they know what they know' (Crotty, 1998, p.8). The researcher's awareness of his or her own epistemological standpoint, that is how they believe knowledge is acquired and what they consider adequate knowledge, is crucial in avoiding any bias that might be inherent in that standpoint.

This study employs social constructionism because of its relevance to PL, using it to uncover the ways in which teachers participate in constructing what, why and how they learn and to understand the influence of their social interactions on their beliefs and practices related to improving their PL.

3.6 A provisional model of PL in the context of educational reform

Figure 3.5 shows a provisional working model constructed by the researcher, based on the concepts of change and professional learning and incorporating the various ideas highlighted and discussed throughout the literature review.

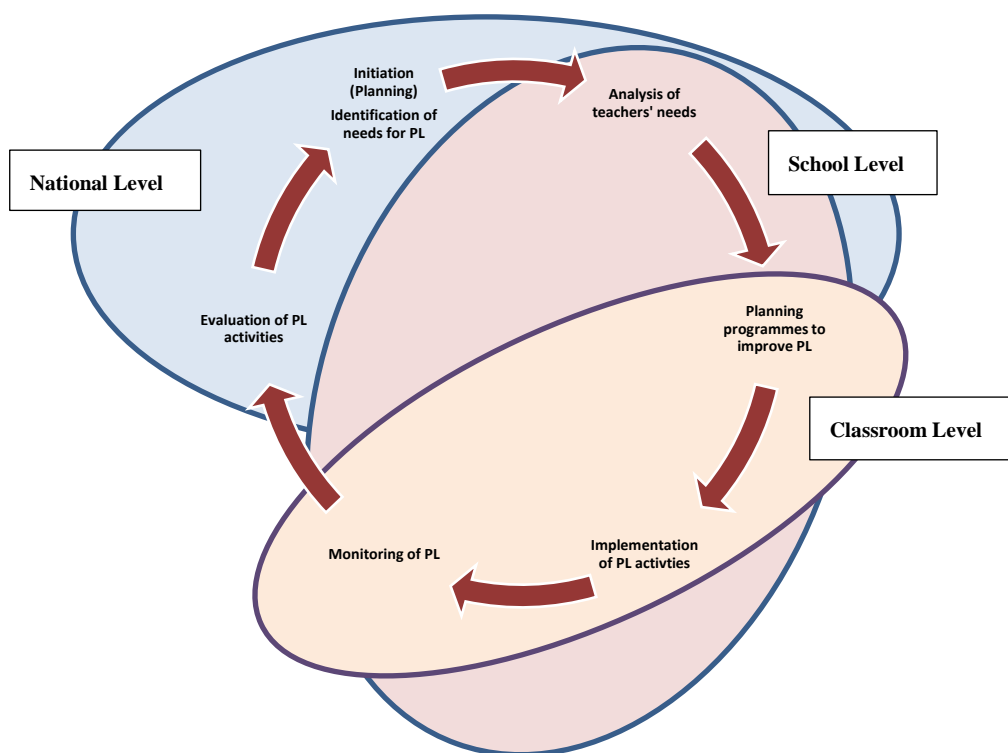


Figure 3.5 Provisional working model of PL adapted by the researcher from the literature

This model shows that designing teachers' PL is a complex ongoing process that consists of three phases: initiation (planning), implementation and evaluation. Each phase is associated with accomplishing certain key tasks. In the starting point of the initiation phase, teachers' needs are identified and analysed, PL goals and priorities are decided, PL plans are created and infrastructure, funds and time are allocated. The implementation phase is mainly concerned with introducing the designed programmes and

communicating the PL plan, providing system and school support and continuously monitoring (following through) the implementation in schools. In the evaluation phase, the main task is to elicit feedback on the effectiveness of the whole process. This includes collecting and analysing data and any evidence of change (the impact), measuring teachers' attitudes, identifying barriers to effectiveness, anticipating future directions based on challenges and opportunities, and revising PL plans.

The responsibility for these tasks varies from phase to phase and is associated with three levels: national, school and classroom, each depicted by a different colour in the figure. The initiation of the PL and the evaluation of its effectiveness occur at the national level, while schools are mainly responsible for implementation and partly involved in the analysis of teachers' needs. They also handle the design, implementation and monitoring of school-based PL. The classroom is where implementation occurs and is monitored, providing feedback to the system and teachers. The effective achievement of these tasks in each phase is affected by various internal and external factors (structures, conditions, context, reactions, beliefs and climate) that are mainly linked to the national, school and classroom levels of the system.

At the national level, what matters are the suitability and flexibility of regulations, coordination between various components and the responsiveness of structures. At the school level, the key influences are schools' autonomy and the extent of their involvement in PL design, the availability of infrastructure and resources, head teachers' readiness and willingness to improve teachers' PL and the existence of a collaborative learning culture. At the classroom level, the relevant factors are teachers' understanding, their motivation, their beliefs about the need to change and their openness and commitment to change.

3.7 Summary

This literature review has discussed the tension between planning and implementation in educational reforms through two conceptual lenses: educational change and teachers' PL. The following five conclusions may be drawn from the arguments around these two concepts.

- i. Engaging schools and teachers (Hodgson & Spours, 2006; Youngs & Bell, 2009) in policy making and specifically in shaping their PL experiences is likely to result in far-reaching consequences and desirable change. Such involvement will also help to create positive attitudes towards change and to build trust between policy makers and schools.
- ii. It may also be concluded that PL is in essence an attempt to create an impact. Put differently, deep knowledge and understanding, commitment to learning and reflection on practice are meaningless if they do not lead to better teacher practice and students' outcomes. The assumptions that what planners intend is what teachers actually implement and that what teachers implement is what students learn may be very misleading.
- iii. PL opportunities should develop contextualised learning rather than imposing certain knowledge and skills, and that they should develop a transformative learning experience for teachers rather than just enriching their experience (Grace & Gravestock, 2009). Such a consideration would provide the 'infrastructure' of real learning (Harris & Jones, 2010).
- iv. As to improving teachers' PL, this should flow from the assumption that the core goal in teachers' quality enhancement programmes is to ensure not simply that they attend many events and acquire new knowledge, but that they actually learn

how to learn and to be responsive to changes in their circumstances and students' needs. This is how PL should be understood and designed accordingly.

- v. Finally, successful change in teachers' practice requires consideration of a wide range of complex issues during the initiation and implementation of PL (see sections 3.4 and 3.6).

These five points will be used as lenses to guide the analysis and understand teachers' perceptions of the effectiveness of their PL in Oman.

In addition, Guskey (2002) argued that evaluating the effectiveness of teacher improvement programmes can be judged at five levels: participants' reactions, participants' learning, organizational support and change, participants' use of new knowledge and skills, and students' learning outcomes.

While change in students' outcomes is not directly investigated, this study will also reflect the first four levels in its investigation of the effectiveness of teachers' learning as follows: The first level, teachers' reactions, will be used to reveal the extent of their involvement in their PL and whether it was responsive to their needs. The level of teachers' learning will be used to reveal teachers' conceptualization of the PL and to understand what influenced it. The level of organization support and change will be used to reveal the extent and type of support teachers have received and the alignment of the organizational arrangements with changes in PL. Finally, the level of teachers' use of new knowledge and skills will be invoked to reveal the impact of PL on teachers' practice and the extent of the knowledge and skills they have actually conveyed to their workplace. All of these areas will be investigated via teachers' perceptions, while further understanding, justifications and explanations will be sought from head teachers and inspectors.

Chapter 4 Research Design and Methodology

4.1 Introduction

This chapter presents the methodology used in this study and clarifies the ontological, epistemological and methodological perspectives that the research has followed. It also justifies the selection of a case study approach as a way of addressing the research question. It deals successively with the sampling strategy, the data gathering, organization and analysis techniques, validity, reliability and ethical issues.

4.1.1 Background information

The aim of this empirical inquiry was to contribute to the debate about what makes teachers' professional learning (PL) effective. This was done by examining the topic from the teachers' own perspective, which is often neglected in the planning phase of many PD experiences. A case study in the Omani context was used to answer the research question in the light of the most recent reforms in the MOE. Teachers were the main participants in this study, since they were the core recipients of the professional services provided by the MOE. To determine the extent to which the most recent reforms have met the professional needs of teachers, the core of the research focused on teachers' perceptions of the effectiveness of these reforms in improving their teaching practices. Hence, it investigated the extent to which they saw the reforms as having contributed to improving their practice in terms of their ability to meet the changing needs of their students, e.g. in content and pedagogical knowledge.

4.1.2 Structure of this chapter

This chapter clarifies the focus and aims of the research (see Section 4.1.1). Section 4.2 presents the research methodology, clarifies the ontological (Section 4.2.3), epistemological (Section 4.2.4) and methodological positions (Section 4.2.5) and justifies

the use of a case study (Section 4.3) as the main method for answering the research questions. Section 4.4 summarizes the steps taken in the pilot study and the main study. The selection of the research sample and its rationale are explained in Section 4.5. Sections 4.6 and 4.7 clarify the resources, methods and instruments used in the data collection and the data analysis phases. Sections 4.8 and 4.9 deal in turn with the issues of ensuring research quality and ethical considerations that underpinned the study.

4.2 Rationale for the chosen research methodology

4.2.1 Introduction

Quantitative approaches including positivism (Section 4.2.2) have been pre-eminent in educational research despite their limitations (Ashcroft, 1996). Quantitative research follows a scientific approach where numerical data, questionnaires and surveys are the main data collection tools. A qualitative research approach (see Section 4.2.5), on the other hand, was seen as a solution to the lack of explanatory power in quantitative research, although the subjectivity of the qualitative approach is often seen as a limitation. To put it differently, the interpretation of the researcher reflects how s/he understands the data, which might differ if interpreted by another researcher or even by the same researcher in different circumstances. This weakness is minimised by the in-depth enquiry offered by qualitative research, which provides an interpretation of social phenomena, behaviours, assumptions and attitudes and helps in understanding the drivers and beliefs behind these phenomena, thus ultimately increasing the chance of creating a real change. Indeed, the researcher has a key role in this type of methodology, where his/her interpretations and knowledge serve as the main means of understanding the collected data. There is, however, a serious criticism of this approach, namely that there is no guarantee that such embedded involvement, through the researcher's

interpretation of the data, will be free of bias. Moreover, the inability to generalise from a comparatively small sample is yet another limitation.

The following subsections aim to clarify the methodological means by which the researcher has attempted to minimise these limitations, discussing the paradigm adopted and his ontological, epistemological and methodological positions.

4.2.2 Research paradigms

A research paradigm is a framework of worldview, traditions, beliefs or assumptions that a researcher draws upon in understanding and interpreting knowledge (Morrison, 2012) and which lead to the adoption of certain philosophical positions. It is argued that the paradigm a researcher selects will affect the selection of the focus of the study, the way the topic is investigated and the way the data are interpreted (Bryman, 2012). Thus, choosing the most suitable paradigm will determine to a great extent the significance of the study and the importance of its findings.

Paradigms are defined as: 'certain philosophical assumptions about the world' (Grogan & Simmons, 2007, p.37) that researchers use as ways of thinking and which guide their actions (Guba, 1990a). How people make sense of their experiences in the world reflects their views of their social reality (Cohen et al., 2011). These are based on implicit or explicit assumptions which inform the choice of a given paradigm. It is argued that there are three main conceptions of reality in research, which are the *ontological* (Section 4.2.3) (concerning reality as perceived by the researcher: external or internal as a result of self-consciousness (Cohen et al., 2011)), *epistemological* (Section 4.2.4) (regarding the researcher's position in advancing knowledge and the stance s/he takes) and *methodological* perspectives (Section 4.2.5) (Grogan & Simmons, 2007). Among theorists adopting this contention are Morgan and Smircich (1980), who added to the above three

dimensions that of *human nature*, where the focus is on the relations among people, who are seen as either 'reactors' (whose values and assumptions are shaped by the dominating culture and structures in the society) or 'initiators' (who shape their own values and perceptions) in their environment. Checklists used by inspectors to evaluate teachers' performance and 'best practice' pedagogies advocated in professional development programmes might contribute strongly to creating teachers' internal images of themselves as 'reactors' or 'initiators' and consequently in shaping their conceptions of reality. For researchers, understanding such conceptions will determine the approach taken (Crotty, 1998). This will be explained in more detail in Section 4.2.3.

Positivism, as a philosophical tradition, is seen to be useful in revealing such conceptions. It values observed and measurable behaviour and relies on predictability and controllability (Cohen et al., 2011) as the most appropriate approaches to the study of social phenomena. It holds that knowledge can be gained only through the senses and that the material world and findings are trustworthy and reliable if they can be repeatedly verified (Bryman, 2012).

However, investigating social phenomena in a way similar to what happens in laboratory experiments (valuing physically measurable objects), which is what positivists call for, attracts much criticism, because the social behaviour of humans cannot be fully controlled and the factors that might impact social phenomena can never be isolated. In addition, many social phenomena are influenced by abstract causes, which makes measuring and more importantly understanding them scientifically impossible. In consequence, whenever a phenomenon is richly described, there is no real explanation or understanding of its causes. This leaves any findings of the model open to debate.

Since this study targets teachers' perceptions, which according to positivists is abstract and cannot be observed or measured and thus unknowable, and since no large amounts of numerical data were gathered, positivism was considered an unsuitable model. Another fact which necessitated the rejection of positivism as a suitable paradigm for this research is that its focus is on the contributions of the subjects in constructing meaning and the significance they allocate to their daily interactions, rather than on observing their behaviour or trying to prove uniformities and regularities.

The alternative of the interpretivist paradigm seemed both to avoid the disadvantages of positivism and to be consonant with the purposes and aims of this study, as clarified in Section 4.2.5.

4.2.3 Ontology

The ontological perspective refers to a researcher's view of what can be claimed to exist (Guba, 1990b) and to his/her sense of reality (Morrison, 2012), either as externally imposed assumptions which people have no choice in adopting (objectivism), or internally influenced assumptions as products of conscious social interaction (constructionism) (Bryman, 2012). These two ontological perspectives are the starting point of all research. The working definition of ontology to be used in this research is:

The way a researcher views the world via her/his understanding of reality and beliefs as to what shapes it.

Consequently, the core ideas in ontology are the nature of existence, what can be claimed to exist, what constitutes it and how its various forms interact with each other. Ontological debates are at least as old as Plato's definition of what is real and his differentiation between true reality and illusion or, in other words, between *being* (what one can claim to exist) and *not-being* (what one can claim not to exist) (Bourdieu, 1990; Cornford, 2014).

The debate is between social ontological structuralism (the social patterned arrangements that influence people's behaviour) and constructionism (see Section 4.2.4); the main distinction between the two is in how social reality can best be understood and explained. The first relies on facts; people's behaviour is seen to be dictated by certain patterns of arrangements and structures – *habitus* (mental structures like society's values) (Bourdieu, 1977) set by the culture, workplace or society. The second emphasises the conceptions of social actors; people are seen to behave freely and make their own choices (agency) (Giddens, 1984). However, Bourdieu (1990) seems to adopt quite a balanced stance where both perspectives can exist at the same time. Based on this, structures do exist in reality and they influence people's behaviour; however, people can modify and adjust these structures so that they suit their choices and preferences.

This study adopts this balanced perspective, viewing work and cultural structures as factors which influence people's perspectives of reality, but also viewing people as having the ability to alter these structures and construct their own meanings through their social relationships. It is underpinned by the assumption that teachers' practice in the classroom is based on the meanings they construct through their interactions in their work environment. The interpretations of their PL reflect the meanings they associate with their classroom practice. Therefore, reality is a result of both external factors (e.g. structures) and internal interacting ones (e.g. daily interactions) that lead to teachers having certain beliefs and assumptions, as shown by Fig. 4.1.

Fig. 4.1 illustrates the importance of understanding teachers' need to develop their PL for the soundness of their interpretations and the meanings they construct, which directly affect their classroom practice. However, since reality in the social world is ontologically speaking not absolute, the assumptions that teachers make might not be the ones that others expect and assume, even though the structures might be the same.

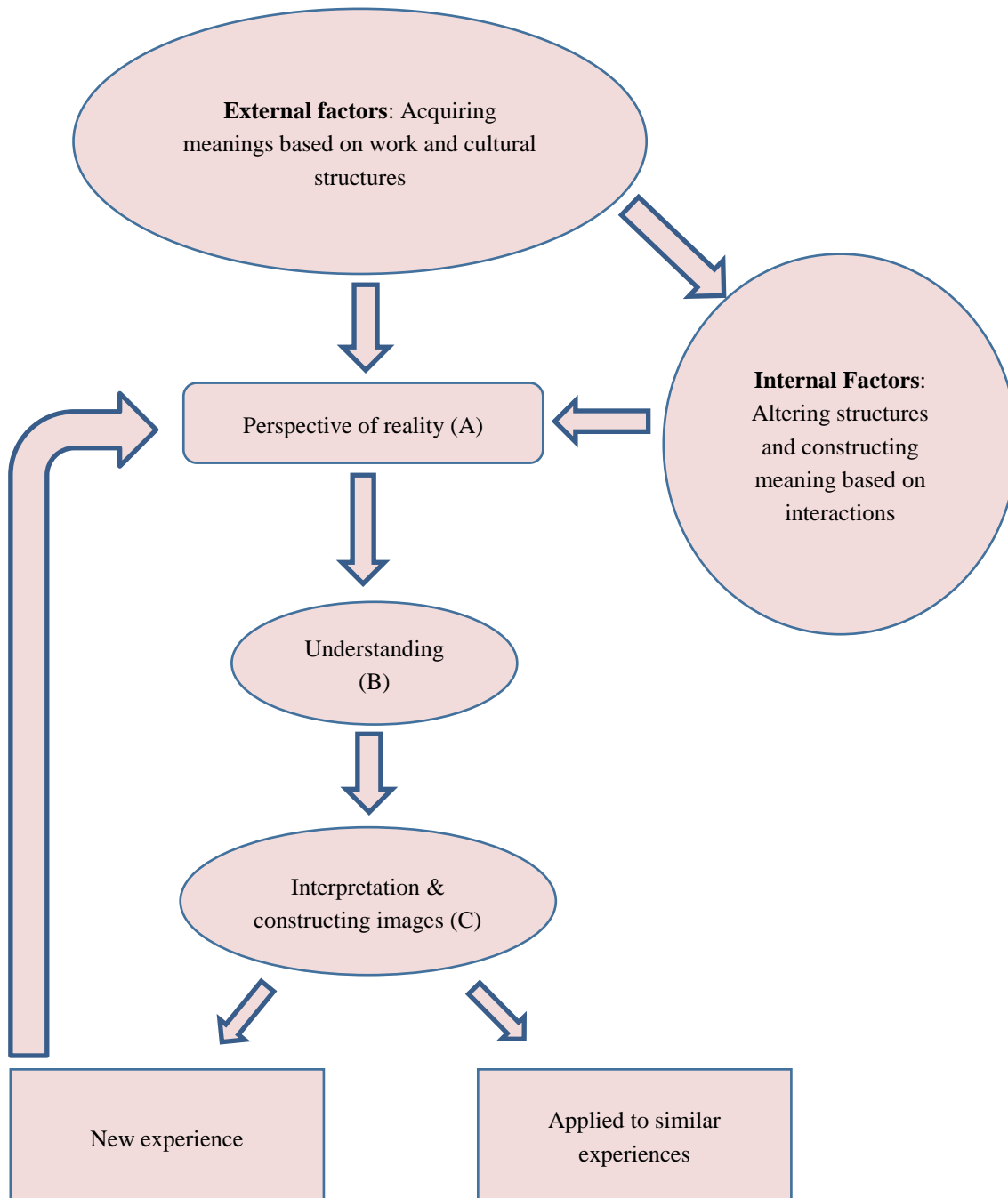


Figure 4.1 The learning-interpretation process

Fig 4.1 shows that people’s perspectives of reality (A) are a result of the meanings they create (whether acquired or constructed) in their daily activities, which shape their understanding (B) and influence their practice. This understanding determines how they see and interpret (C) any similar experience; whenever they come across a new learning

experience their reinterpretation is reflected upon their perspective of reality. Therefore, perspectives of reality work like filters that determine how people understand new situations.

According to Fig 4.1, the meaning associated with how PL is understood is that it is not a separate independent reality that follows its own rules; it is both dictated by external factors and constructed by the teachers in their daily interactions with reality. Based on this, the researcher believes that perceptions about PL will reveal an interpretation of teachers' worlds from their perspectives (Berger & Luckmann, 1966). The researcher's role was to analyse teachers' interpretations of their PL by understanding how they construct their own reality. However, being clear about the ontological perceptions that drive the researcher enabled him to adopt the most suitable approach to reveal the social truths behind teachers' interpretations and to be aware of any sort of bias that he may have had.

Based on Bryman's (2012) argument that researchers construct their own assumptions about their research, the ontological position of the researcher was closer to the social constructionism approach, where social phenomena are internally constructed by the actors. This assumption has accumulated through the meanings he has constructed through his daily interactions, experience and understanding and are informed by his cultural and work background. The researcher's role was limited to analysing and trying to understand the data he collected and constructing some meaning as to the nature of PL. This was based on his belief that the best way to understand social phenomena is by listening to what people say and how they view their experience, and more importantly listening to what they are not saying but what is implied through the way they express themselves, their body language, reactions, dilemmas or expression of emotions. The collected data can, however, be misinterpreted, whether due to different understandings

of concepts or because of lack of understanding of the context. Such misinterpretation might lead to totally misguided and false findings. However, being an insider helped in minimising this limitation.

The aim of the researcher in this study was to try to understand a social phenomenon (how teachers perceived their PL) from the teachers' subjective experience and thus to contribute to narrowing the gap between planning and implementation in the MOE. At the same time, he had a desire to contribute to the understanding of the PL of social actors – both PL providers and receivers – with results that might improve practice. In brief, the researcher's ontological stance was that reality is externally influenced but internally constructed by teachers, whose classroom practice is driven by their interpretations of their assumptions about PL and their daily interactions. Thus, the researcher was aware that he might face multiple realities throughout the study.

4.2.4 Epistemology

An epistemological standpoint refers to the way the researcher comes to acquire knowledge (Bryman, 2012; Crotty, 1998), or the researcher's theories of knowledge (Morrison, 2012). It is defined in this research as:

What shapes knowledge or can be identified as knowable through different forms of interactions.

Epistemological standpoints differ as to the relation of knowledge to assumptions, beliefs and values. It is a cognitive process that underpins what people believe to be true and accordingly, how they consciously or unconsciously behave and interpret their social interactions; what they think they know or do not know. Thus, 'the method ... best suited to clarify the foundations of knowledge ... is ... phenomenological analysis' (Berger & Luckmann, 1966, p.34) (see Section 4.2.5). This means that attention needs to be given to

uncovering and understanding the various meanings involved in and related to a particular experience and how these meanings are socially constructed through daily interactions. Social constructionism (see Section 3.5.3) views learning as a social collaborative activity that is created through people's social interactions.

The researcher's epistemological standpoint in this study was that meaning and truth about people's experience is created, indeed constructed, by the individuals themselves through their daily interactions. However, these meanings do change as people live through new experiences where they need to understand and make sense of them based on their cultural and historical perspectives. In view of that, social actors are active players in the construction of meaning about their own world.

This epistemological standpoint is in line with Paul's (2005) constructivist definition of knowledge as a 'dynamic product of the interactive work of the mind made manifest in social practices and institutions' (p.47). In other words, learning is an interactive process which does not happen in isolation. This interaction allows teachers to comprehend and reflect on what they acquire and to link it to their daily practice. However, the beliefs teachers hold regarding best practice will either foster or hinder their learning of new knowledge. It is an interconnected process of knowledge acquisition (holding a proposition) and belief revision (associating a truth-value with a proposition).

Therefore, how teachers perceive their PL determines how they understand it; the author's consequent belief was that teachers' *perceptions* will reveal how they understand the learning of new knowledge or skills. For that reason, teachers' perceptions (what they believe to be true) served as the core theme that this study tried to reveal and explain and which helped to reveal their attitudes towards their PL, as well as helping in interpreting the significance they allocated to it.

This stance might be criticised for its total reliance on cultural influence to understand behaviours and its ignorance of other more concrete factors that might contribute to shaping people's actions (e.g. motives, incentives, physical settings). It is also sometimes criticised for not contributing anything new to knowledge, since it depends on only one account, the researcher's interpretation. However, these limitations seem exaggerated to the author, who believes that language can reveal much better than scientific methods the data that help in understanding people's behaviour. Moreover, the 'one account' criticism is refuted by the fact the researcher shared his interpretations with those being researched (see Section 4.8).

4.2.5 Methodological perspectives

Various paradigms are driven by ontological and epistemological standpoints based on the purpose of the research and what it is trying to do: describe, understand, interpret, evaluate or even change a certain social phenomenon (Bryman, 2012). Scholars' ontological and epistemological assumptions and their research background usually determine the approach they take to investigating particular phenomena (Guba, 1990b).

Apart from positivism (see Section 4.2.2), there are three main paradigms in educational research settings: critical theory, post-modernism and interpretivism (Morrison, 2012):

- I. Critical theory focuses on understanding the values that drive social phenomena and on trying to change them (Morrison, 2012) to promote social equity and democracy (Cohen et al., 2011).
- II. Post-modernism perceives knowledge in its unique context; thus in-depth investigation of a particular element in a specified time provides data to understand and interpret social phenomena based on their settings. This model focuses on the individual, so different values are likely to exist (Morrison, 2012).

III. Interpretivism: focuses on interpreting the way people behave and perceive their world. Thus, the researcher builds his/her understanding and interpretation of social phenomena through his/her understanding of how people view their world (Bryman, 2012).

These various methodological perspectives actually show how an understanding of social phenomena may differ from one researcher to another. The evolution of these perspectives can be aligned with the changing understanding of knowledge over time, from a position where only physical things could be measured and were 'knowable' to a claim that even abstract ideas can be 'knowable' and understood. This was a change from a one-answer possibility to a more open, multi-answer probability, based on how the social phenomenon is viewed and understood by the researcher.

Critical theory, although seemingly more robust against the criticisms levelled against positivism, might be affected by personal interests or bias driven by the hidden agenda of the researcher. In addition, this study does not seek to change how the MOE in Oman does things (Cohen et al., 2011), but to understand and interpret conceptions of PL. Adopting this perspective might reduce participation, especially by educational officials who might feel insecure in participating in something that could lead directly to criticism of the policy of the ministry. For these reasons, critical theory was not deemed suitable for this study.

Post-modernism, which might be criticised by positivists for being meaningless, in that such research does not often provide real evidence, seems to be a methodological model that offers consideration of the uniqueness of human behaviour and the factors that might influence it in its natural context and settings. However, the fact that experience is rarely regarded in this methodological tradition makes it also unsuitable for this study. This is because teachers' reflection on their past experience is a vital element in understanding their current perceptions regarding PL. Moreover, since the context of this study, Oman,

is culturally less diverse than places like the UK or the USA, post-modernism was considered unsuitable, because the focus was on understanding the current situation of the sample in general, rather than individual experiences.

Finally, **interpretivism**, which is also referred to as anti-positivism, opposes the idea that social phenomena can be studied in the same way as natural sciences. Whilst valuing the experience of practitioners, it seeks shared understanding and knowledge with social actors and aims at uncovering their interpretations of their own actions. Participants in interpretivist research are seen as subjects whose perspectives are used to explore meanings (Morrison, 2012). Thus, the aim of interpretivists is to understand and interpret certain behaviours, attitudes, opinions, beliefs or justifications among people and to find out what drives these. This suits what this study seeks to reveal and understand; therefore, interpretivism seemed a suitable methodological approach to answering the research questions. It actually suited the ontological position of the researcher, who sees the world as a place where meaning is internally constructed by social actors whose actions are guided by their assumptions and interpretations.

The selection of the interpretivist approach was based on the potential it can offer for understanding the experience of teachers, as practitioners, in constructing knowledge and their interpretations and assumptions, through seeking to 'understand the subjective world of human experiences' (Cohen et al., 2011, p.17). Layder (2006) argued that meaning 'arises from the world of daily experiences as it is lived by the different individuals who try to make sense of it and come to terms with it' (p.93). This justifies the importance that is allocated to the daily experience of teachers and how they make sense of their PL in their teaching practice. Understanding experience, as argued by Gunter (2005), is one of the essential areas in evaluating change.

Methodologically, interpretivism is understood through two research traditions:

- a) **Phenomenology** is a philosophical position based on ways of seeing things from the point of view of the participant and on trying to interpret how people understand their experiences and why (Morrison, 2012). Here, the focus is on experience rather than what can be seen or heard and what can only be measured (Denscombe, 2014). The focus is the significance that social actors allocate to various things in their lives, including other people, events, feelings and attitudes. Researchers aim to find out how aware people are of what drives their behaviour, what images social actors have of certain social phenomena and what sorts of ideas and concepts they create in their minds that make their experience meaningful. This is in line with what this study seeks to reveal. Teachers' perceptions of their PL reflect the kind of images they have in their minds (Marshal & Rossman, 2011) about the suitability of the current PL opportunities for their needs. It also reveals how conscious teachers are of the idea that their teaching practice is influenced by the kind of meanings they associate with their PL.

By adopting the phenomenology paradigm, the researcher has sought to reveal the ideas that teachers have about their PL, to discover whether these ideas influence their practice in the classroom and whether they realised their importance in their PD. This paradigm reflects the idea of understanding a phenomenon from the point of view of participants, 'giving them a voice' while taking their context into consideration and trying to interpret what drives their behaviour, assumptions and beliefs. This study was conducted in schools but outside the classroom, where the researcher asked teachers to reflect on their experiences of PL and practice.

b) **Symbolic interactionism** holds that people create meanings and assumptions internally through their daily dynamic social interactions and change these as their social context changes (Cohen et al., 2011). Moreover, they align their behaviour to others and justify it according to their perceptions of how others would have behaved or are likely to act in similar situations. Since the researcher was not involved in direct observation and did not attend any lessons to observe teacher-student interactions, but asked teachers to complete a questionnaire outside their classrooms, the symbolic interactionist perspective seemed unsuitable for this study.

Overall, positivism and interpretivism represent the two main debates among social world researchers: the *quantitative perspective*, which lies within the positivist paradigm, and the *qualitative perspective*, consistent with interpretivism. Each of these has its limitations (see Sections 4.2.1 and 4.2.2). In order to overcome many of these limitations, or what Cohen et al. (2011, p.34) referred to as ‘incomplete accounts of social behaviour’, this research has adopted what is referred to as a mixed methods approach, combining the two perspectives. However, this approach is itself criticised for bringing together epistemological assumptions of different paradigms that might be incompatible (Bryman, 2012). The role of the researcher and the extent of her/his involvement, as a data collector or as an interpreter, is an example of this incompatibility.

Nevertheless, this incompatibility at the epistemological level does not exist when it comes to the use of different methods. The two approaches can be combined. A questionnaire, for example, can be used both quantitatively and qualitatively. Combining the two approaches helped the author to avoid their weaknesses and play to their strengths. The wide-ranging data which this combination allowed to be gathered and the reliability it offered to this study constitute yet another justification of its adoption (Denscombe, 2014). Moreover, the mixed methods approach allowed the researcher to

uncover the overall awareness and expectations of teachers' PL, along with explanations of the factors behind their assumptions and beliefs; the findings were triangulated (Section 4.3), understood and explained better. Teachers' attitudes towards PL opportunities were understood more easily through the combined use of both approaches.

This research thus took a mixed methods approach to understanding and interpreting the views, assumptions and experiences behind certain perceptions and behaviours 'from the inside'(Morrison, 2012, p.23), through the eyes of the participants. The focus was on the degree of understanding, involvement, suitability and effectiveness, rather than the number of PL events that teachers attended, for example.

This study has adopted an interpretative perspective in order to uncover and explain factors lying below the surface (Bryman, 2012). Therefore, rich and detailed data were gathered to facilitate such an understanding. The use of the mixed methods approach provided a flexibility that allowed the researcher to go beyond the general indicators and given responses to discover and interpret what was behind them. The thorough explanations and interpretations that the qualitative approach provided would have been more difficult to achieve if a purely quantitative methodology had been used.

It would have proved impractical and even impossible to investigate PL throughout the whole of Oman, due to the limitations on time and resources available to this study. It was more manageable and rational to focus on specific schools as case studies, a focus which is explained in Section 4.3. Moreover, the interpretivist stance adopted by the study required an in-depth investigation which had an appropriate resonance with the use of the case study approach (Cohen et al., 2011).

4.3 The use of case studies

Yin (2014) defined a case study as ‘an empirical inquiry that investigates a contemporary phenomenon (the “case”) in depth and within its real-world context, especially when the boundaries between phenomenon and context may not be clearly evident’ (p.16).

A case study approach was adopted in this research for the following reasons:

- I. The uniqueness of individuals and institutions are significant variables (Bassegy, 1999; Yin, 2014).
- II. The data this method can provide and the depth to which the selected case study schools can be investigated might provide valuable data (Bryman, 2012) and the results can be more easily understood by both education officials and teachers (Yin, 2014).
- III. It presents a phenomenon in its context, in all its complexity. It presents what is ‘real’ and ‘closer to reality’ (Thomas, 2011).
- IV. The ‘drilling down’ of details it provides suits the boundaries of time and space available for the researcher to answer the research question (Thomas, 2011; Yin, 2014).

However, it is recognised that the use of this approach does have certain disadvantages. Some examples of the limitations of case studies are the inability to generalise the findings to other cases and structures, the possibility of bias arising from the treatment of data by one person only (Cohen et al., 2011) and the doubts that might accompany any cause-effect relation that is found.

Triangulation helped to minimise these disadvantages and make the findings more robust. This was achieved by adopting a mix of quantitative and qualitative methods, by using more than one instrument for gathering data (survey and semi-structured interviews), by collecting data from multiple sources (teachers, head teachers, inspectors

and documents) and by paying attention to variations within the same category (e.g. teachers of different subjects).

The discussions in the interviews were based on the data and themes emerging from the survey, which revealed similarities and contrasts between items of data obtained through the two instruments. Moreover, the availability and suitability of PL opportunities were revealed from the standpoints of various people and in different schools. In brief, triangulation helped to ensure the findings are more robust.

Triangulation also helped in comparing and thus explaining the contextual differences in expectations and perceptions between three levels (ministerial, district and school level) and accordingly, any differences between planning at the top administrative level and implementation at the operational level. In other words, it explained differences between the planned strategies and the real outcome in practice in the classroom.

Moreover, variations were highlighted in the perceptions of teachers in the four schools studied, of males and females and between the categories of teachers (subject areas and experience groups) (see Section 4.5). Routio (2007) contended that one of the best tools for explaining perceptions and attitudes is comparison. Using this normative comparative approach enabled the researcher to gain greater awareness and a deeper understanding of the effectiveness of PL while reflecting on international research findings (Bryson, 2004; Davies & Ellison, 2003).

A multi-site case study was considered appropriate to the complex nature of the context of the study (Scholz & Tietje, 2002). According to Thomas (2011), a case study helps to understand the complexity of phenomena in a variety of situations. The ultimate goal of the present study was to inform the judgments and decisions of policy makers and practitioners. This was done by gathering sufficient data from every component of the

study with all its geographical diversity and its affiliated educational districts and schools; enough to answer the research question and to make it possible to understand and interpret teachers' assumptions regarding their PL (Bassey, 2007).

4.4 The pilot study and main study

A **pilot study** was conducted before the main study to assess whether the instruments used provided data on the topic intended and to increase their validity. The following steps were taken:

Step 1: Surveys were distributed to 10 teachers and four head teachers from four schools. Interviews were conducted with four teachers, two head teachers and one inspector.

Step 2: The responses were analysed carefully to determine whether they provided the data to help answer the main research question and whether any other possible responses should be added to the given options in each question. The time needed to complete the survey was also measured and found not to have exceeded 25 minutes. Participants' understanding of the questions and their comments on their suitability (in regard to the wording and their ability to answer them), any additional information that they needed to ask about and any areas of ambiguity were also revealed through the participants' feedback. Consequently, ambiguous and difficult questions were discarded and any questions that were not answered as expected were reworded. Eventually, the questionnaire was revised and finalised. The questions used in the interviews were also piloted, refined and modified, based on the analysis of the pilot study (see Section 5.1 for more details).

Step 3: For the **main study**, the modified questionnaires (see Appendices 9 & 10) were sent to a third of the study population (12 of the 37 post-basic schools remaining in one

education office district after excluding the four schools where the pilot study took place) and they were asked if they wished to be involved in the research. All twelve schools showed an interest in volunteering to join the study, but only ten eventually showed full commitment, which required replacing the two uncommitted schools with similar ones (see Section 4.5.1). Four of the twelve schools which returned completed questionnaires showed an interest in the subsequent interview phase of the study (these were the case study schools).

Step 4: The interviews were conducted with the head teacher of each of the case study schools (see Appendix 12), with three teachers from each selected school (based on their agreement) (see Appendix 11) and three inspectors (in maths, Arabic language and English language) (after they had consented) (see Appendix 13).

Step 5: For the data analysis (see Section 4.7), the quantitative results were based on descriptive analysis, mainly percentages and frequencies (see Appendices 14 & 15), using the SPSS quantitative analysis programme and the non-parametric Mann Whitney and Kruskal-Wallis statistical tests (see Appendix 23), which were used to check whether variations between groups were statistically significant. Qualitative data were organised and coded using the NVivo qualitative analysis software (see Appendix 22). After transcription, the interviews were sent back to the participants for a dependability check and to allow them to add any information they regarded as important. They were then translated by the researcher from Arabic to English and sent to a bilingual academic PhD holder to check the accuracy of the translation. Both quantitative and qualitative data were triangulated (see Section 4.3) to provide more robust results.

4.5 Research sample

4.5.1 Sampling strategy

The selection of units of analysis can be done either by probability sampling, which suits quantitative methods, or by purpose-driven sampling, which suits qualitative methods, or by a mixture of both when appropriate, as in the mixed methods approach (Cohen et al., 2011; Teddlie & Tashakkori, 2009). Probability sampling (e.g. simple random sample and systematic sample) entails a random selection of units from a population, all of which have an equal chance of being selected (Berg, 2016). What it is hoped will emerge from this process is referred to as a representative sample. One advantage of this strategy is that sampling error is kept to a minimum. In purposive sampling, by contrast, units of analysis are not randomly selected; thus some units are more likely to be selected than others (Yin, 2014). This type of sampling was vital for this study because it allowed identification of potential participants who met certain criteria related to the focus of the study.

4.5.1.1 Sampling of the schools to be used

At the national level in Oman, there are eleven Educational District Offices, which vary in size, the smallest overseeing 17 schools and the largest 175. However, the provision of educational services and PD is unified across the country, with no real differences in the achievements of the schools; this evenness is attributable to the relative socio-economic homogeneity of Oman. Therefore, this study was conducted in only one educational district. The selection was justified by two factors. First, this district contained 85 schools and was thus of average size (purposive sampling). Second, the researcher was more familiar with this office, had better access to participants and had wider relations, which facilitated the granting of permission for the study and increased the response rate (convenience sampling). Within the selected district, the 37 post-basic education schools

(PBESs), catering for students aged 16-17 (grades 11 and 12) (MOE, 2012/2013) were chosen purposefully as the study population. The 37 schools were then divided into three categories: rural, urban and suburban (purposive sampling). Next, they were categorised by gender (purposive sampling). Twelve schools were finally randomly selected, as Table 4.1 shows.

Table 4.1 The process of selecting the sample of schools

Total education offices	Selected educational offices	Population: urban, suburban, rural school	The sample selected
11	One	15 urban schools Boys: 9 Girls: 6	5 urban schools 3 boys: S, M, L 2 girls: M, L
		13 suburban schools Boys: 7 Girls: 6	4 suburban schools 2 boys: S, M 2 girls: M, L
		9 rural schools Boys: 3 Girls: 6	3 rural schools 1 boy: M 2 girls: M, M

The aim of using a purposive sampling strategy was to achieve the maximum possible variation between schools in regard to size and gender while applying random sampling to select the 12 schools out of the 37 was to ensure that the selection of the schools was not biased or influenced by the researcher's assumptions.

4.5.1.2 Sampling of participants

Survey

Teachers: The criterion for sorting teachers into categories (purposive sampling) was their subject areas, i.e. the five core subjects of English, Arabic, mathematics, science and social studies, to obtain a wide range of data and identify any similarities or differences between subject areas that might help in comparing, clarifying and explaining any variations. In each core subject area, questionnaires were purposefully distributed to three teachers: the one with the longest experience, one with average experience and the newest teacher in the school; thus 15 teacher questionnaires were distributed in each school. This strategy helped to cover a wide range of experience and eliminated bias from the selection process. The teachers were selected by the head teachers of each school using the above criteria provided by the researcher. One hundred and eighty questionnaires were distributed across 12 schools.

School heads: The heads of all 12 sample schools were included in the survey, with their consent.

Interviews

Teachers: Teachers were selected for their willingness to be involved in the second phase of the study (volunteer sampling)(Cohen et al., 2011). The aim was to get at least three teachers from different subject areas in each participating school; however, in two schools the researcher had to adopt a snowball sampling strategy, asking the willing teachers to recommend other teachers who might be easily convinced to join this study, because fewer than three teachers consented to be involved in the second phase (two in one school and one in the other). This strategy helped to identify other teachers who agreed to participate.

Head teachers: Head teachers were also selected for their consent to participate in the second phase.

Inspectors: All eleven inspectors working at the case study schools were invited to join the study, but only four consented to do so and only three of these showed full commitment; the fourth offered to provide written answers only and was therefore excluded.

Thus, the selection of twelve schools with various characteristics as the sample for the quantitative part of the study gave it a 'multi-faceted view' (Scholz & Tietje, 2002; Thomas, 2011; Yin, 2014); its multidimensional nature improved its reliability (see Section 4.8). What emerged was a clearer picture of the features, context and nature of PL, along with the multiple sources of evidence that the study utilised and triangulated. The studying of four schools facilitated a deeper understanding and better explanation of the main issues that emerged from the quantitative phase, further strengthening the internal validity and dependability of the study (Yin, 2014) (see Section 4.8).

4.5.2 Study population and sample

The **population** of this study is defined at three levels:

- I. **The educational institutional level:** This was represented by the eleven educational districts in the Sultanate affiliated to the MOE.
- II. **The schooling system level:** This was represented by the PBESs affiliated to the eleven districts.
- III. **The subject area level:** This was represented by the core subject areas (English, Arabic, mathematics, science, and social studies) in the PBESs in Oman. The other subject areas were excluded because of the importance of these core subjects in determining the overall grades of students in Grade 12, which is the criterion for competing for places in public higher education institutions. The focus on PBESs was justified by the fact that there have been more reforms targeting this level than at the primary and elementary levels (especially in regard to the curriculum) and

by the noticeably weaker achievement of students at this level than at the other two.

The **sample** represented participants at the four levels of the study population as follows:

- I. **At the education district level:** One education district and three inspectors were involved.
- II. **At the school level:** 12 post-basic education schools and their head teachers were included in the quantitative part of the study. Four of these schools (two boys' and two girls') and their head teachers were selected for the qualitative part.
- III. **At the subject area level:** For the quantitative phase, 180 teachers were selected: three from each core subject department in each school. For the qualitative phase, 12 teachers (six male and six female) were selected: three from each of the four participating schools.

Table 4.2 details the research population, sample, data sources and instruments.

Table 4.2 The research sample and data collection sources/methods used in this study

Level	Population	Sample/Data collection sources	Data collection instrument used
Educational district	<ul style="list-style-type: none"> • Eleven education districts/ offices • All inspectors who inspected the case study schools 	<ul style="list-style-type: none"> • One education district with: • Three educational inspectors 	<ul style="list-style-type: none"> • Semi-structured interviews with three inspectors (upon consent)
School	<ul style="list-style-type: none"> • All 37 post-basic education schools 	<ul style="list-style-type: none"> • Survey: 12 PBESs and their heads • In-depth interviews: four case study schools and their heads 	<ul style="list-style-type: none"> • Questionnaire for all 12 head teachers • Semi-structured interviews with four head teachers
Subject area	<ul style="list-style-type: none"> • All core subject teachers (English language, Arabic language, mathematics, science, social studies) 	<ul style="list-style-type: none"> • Three teachers in each subject area department: total 180 • 12 teachers for interview 	<ul style="list-style-type: none"> • Questionnaire for all 180 teachers • Semi-structured interviews with 12 teachers

4.6 Data collection

The data were collected in three phases, comprising a pilot study, survey and semi-structured interviews, between August and November 2015. The process of obtaining

permission to conduct the study from the MOE in Oman started much earlier because of the expectation that it might take more than four weeks and because when the researcher first sought permission, schools in Oman were on summer holiday and the MOE had orders not to permit any research involving teachers before August.

4.6.1 Data collection instruments

Due to the complexity of the topic and the geographical breadth of the context of this study, two distinct quantitative and qualitative data collection instruments (detailed in Table 4.2) were used to draw a comprehensive picture of the effectiveness of teachers' PL: questionnaires and semi-structured interviews.

4.6.1.1 Questionnaires

Separate questionnaires, designed on the basis of the literature review were distributed to teachers (see Appendix 9) and head teachers (see Appendix 10), to explore their conceptualisation and perceptions of PL and the extent to which these had influenced teachers' teaching practice (Cohen et al., 2011). The aims were to discover teachers' perceptions of the appropriateness and effectiveness of the PL opportunities offered to them, to determine the degree of involvement, flexibility, support and adaptation, and to elicit head teachers' perspectives on these matters. Using a questionnaire has its own advantages and disadvantages.

Advantages: The teachers' questionnaire constituted a relatively quick and cost-effective data collection instrument, providing a broad-based view of their perceptions and understandings (Cohen et al., 2011). The participants were within the reach of the researcher, who could contact them easily. It was also an instrument that could be administered individually, which suited the limited time the researcher had and helped

to address many areas related to the study within a relatively short time. Finally, it helped to avoid researcher bias (Oppenheim, 2005).

Disadvantages: Beside the potential weaknesses of any questionnaire, such as poor or confusing question design and low response rates (Cohen et al., 2011), there was no guarantee that respondents would provide accurate and honest answers, that they would understand the questions as intended by the researcher, or that they would concur with one of the given options in the closed questions (Oppenheim, 2005). Such possible confusion might be a result of poor questionnaire structure. Oppenheim also stressed that while questionnaires are considered quick data-gathering instruments, data analysis this can be challenging. Validity might be an issue, especially when using closed questions, which are criticised for lacking depth and originality. In this research, many of these limitations were minimised by piloting the questionnaire and by taking certain of the measures explained in Section 4.8. As to low response rates, a relatively small number of responses was considered to be enough to achieve the purposes of this study, since gathering a large body of data was not the aim.

Questionnaires take various forms, e.g. dichotomous (yes/no) questions, multiple choice questions, rank order, rating scale (e.g. Likert scales), constant sum questions, ratio data questions and open-ended questions (Cohen et al., 2011). The questionnaire used in this study included both closed and open-ended questions. The former, using four-point and five-point Likert scales, aimed to produce a general picture of how PL was perceived, to identify the key issues and to identify any differences within and between the individuals or groups of participants, while the latter aimed to give the teachers a chance to express any ideas that they would like to add, to make comments, to add explanations, give examples or describe any incidents that they wished to share with the researcher.

4.6.1.2 Interviews

The aim of the semi-structured interviews was to gain a deeper understanding and explanation of the main issues that emerged from the questionnaires by trying to uncover the drivers behind teachers' perceptions and what had led to their attitudes. This, however, was applied only to those participants who showed an interest and provided their consent to be interviewed. It was also used to reveal school heads' and inspectors' perceptions and assumptions in relation to the issues raised and to verify the survey data gathered from teachers and head teachers. Conducting several visits to the case study schools helped in familiarising the researcher with the schools and establishing a rapport with the participants (Marshall & Rossman, 2011).

Advantages: Semi-structured interviews are considered more flexible than structured ones, which are often used in quantitative research and which usually seek yes/no answers. They are, however, more restricted than fully unstructured interviews, in which the researcher asks more general questions and gives the participant the freedom to choose the direction of the exchange (Bryman, 2012). Hence, neither structured nor unstructured interviews would have served the purpose of this study, since the first would have restricted the participants' answers and the second might have led to areas outside the scope of the research. Semi-structured interviews were considered the most appropriate type, as they would provide the required focus and depth to answer the research question.

They allowed the researcher to seek justifications and interpretations of the drivers of any assumptions identified, thus allowing 'depth to be achieved by providing the opportunity on the part of the interviewer to probe and expand the interviewee's responses' (Hitchcock & Hughes, 1995, p.83). This relatively loose structure of the instrument allowed the researcher to gain further data and to ask for deeper explanations

and clarification of any points that were ambiguous or had been misunderstood. It also enabled him to discuss new areas of interest that arose during the interviews. Conversely, the use of the same questions with all participants in the same category ensured that the questions were understood by the respondents, with the minimum of ambiguity.

The main advantage of using this instrument was that it allowed the gathering of a large body of detailed data in a flexible way that suited both the researcher and the participants. Such details were important because they resulted from a direct interaction with the respondents and were given in their own voices. Moreover, the researcher paid attention to any aspects of interviewees' body language, hesitations and changes in tone of voice that could have carried certain meanings, which were used later on to understand and interpret respondents' perceptions.

These interviews focused on gaining an in-depth understanding of the following key areas related to PL: conceptualization, provision, awareness, suitability, effects, involvement in PL formation and obstacles to PL improvement.

Disadvantages: Although semi-structured interviews allow for focused two-way communication between the researcher and the participant, conducting, transcribing and analyzing interviews can be time consuming (Bryman, 2012). Arranging for the interviews may take longer time than expected because the researcher may have to reschedule agreed interview times to suit the changing circumstances of those being interviewed (Gray, 2013). Interviews are also more costly compared to other data collection methods because they often require travel expenses (Kvale, 2008). Open-ended questions are also difficult to analyse and comparing the answers of participants can be challenging and complex (Hitchcock & Hughes, 1995). Another limitation is that the honesty of participants in answering the questions cannot be guaranteed (Hesse-Biber &

Leavy, 2010). Moreover, while it is difficult to have a large sample due to the constraints of time, researchers may be biased in their analysis of small size samples (Gray, 2013). In addition, the questions researchers ask might also, directly or indirectly, lead interviewees to provide answers that might not necessarily reflect their views (Berg, 2016). In addition, since interview involve a kind of interaction, misunderstanding may occur during the interview between the researcher and the participants who might feel anxious and uncomfortable (Kvale, 2008). Most importantly, the inability to generalise the findings is seen by positivists as a limitation as well (Brinkman & Kvale, 2015).

4.7 Data organization and analysis

It is worth mentioning that while this study used mixed methods of data collection, it was essentially qualitative in nature. Most of the data to be analysed were qualitative, while a relatively small body of questionnaire data was subjected to quantitative analysis. The aim of the questionnaire was to delineate the broad picture by identifying the main issues.

4.7.1 Questionnaire Data

The questionnaire, which focused on teachers' experience of their PL activities over the preceding one to five years, generated both quantitative and qualitative data (see Appendices 9 & 10), since it comprised both closed and open-ended questions. The aim was to investigate teachers' thoughts, ideas and concerns related to their PL experience. Of the 180 questionnaires distributed to teachers, 159 were returned, giving an 88% response rate, while all twelve head teachers returned their completed questionnaires (100%).

The researcher visited each school personally to introduce himself and the research and to distribute the questionnaire papers himself where possible. One aim of the personal distribution of the questionnaire papers was to convey the importance of the study to the participants and to persuade as many schools as possible to participate in the interview phase.

The questionnaire papers (colour coded for females, males and head teachers) were distributed to 12 schools, two of which showed little commitment and had to be replaced by schools which were similar in terms of size, location and gender. The first school returned none of the questionnaires, perhaps because the researcher was seen as an MOE employee. The head teacher expressed the feelings of his staff in these words: 'I will do my best but actually my teachers have negative attitudes towards anything that comes from the MOE'. It could also be that the position of the researcher in the educational district office affected the school's cooperation. The second school returned most of the questionnaire papers, but some of had been completed by teachers of non-core subjects such as PE and arts, which obliged the researcher to reject all of the questionnaires from this school and to find an alternative school.

The completed questionnaires were given identification numbers from 1 to 159, in preparation for data analysis.

Quantitative analysis

An SPSS file was opened for each completed questionnaire, then each statement in the questionnaire was given a code that reflected the number of the question and the order of the statement. For example, the first statement in question one was coded Q1a.a, because this question had two parts, 'a' and 'b'. Each option was then given a number from 1-4 or 1-5 as appropriate. For example, in Q1a.a, the answers were coded as 1=often,

2=sometimes, 3=rarely and 4=never. Missing data were coded '99', which was also used where more than one answer had been selected. Having finished with the coding of the variables, the researcher entered the data from each questionnaire, then revised the whole SPSS file to identify any mistakes in the entering process by rechecking the entered data and by producing tables of frequency, noting any values that were outside the coding range of each statement.

The descriptive analysis began by producing tables of frequency and percentages for both the background information and the responses to all questions. The aims were to produce a detailed picture of the trends in the responses and to identify the main issues. This was followed by comparing the responses across groups and applying some statistical tests (Mann Whitney and Kruskal-Wallis) to establish whether any differences were statistically significant. These tests were used for five reasons:

- The aim was to compare responses from two or more groups to identify any statistically significant differences.
- The distributional form of the outcome in the sample was assessed using a histogram and found not to be normally distributed.
- All the data were ordinal.
- Some groups compared within the sample were small (less than 30)
- Some data contained outliers.

Only significant differences are presented and discussed in Chapters 5 and 6, as only these were used to guide the next stage of the investigation, the interviews.

Qualitative analysis

A total of 82 respondents (51.5%) answered open-ended questions in the questionnaire and these data were analysed as follows. The responses, most of which were relatively short, were entered into an MS Word computer file. The researcher read through the responses and assigned initial codes. This was followed by another investigation of the responses and placing evidence under each code. These codes were then grouped under initial themes that were shared among the participants. Later, these were arranged in more meaningful ways using graphs and tables that drew useful and relevant connections among the data (Huberman & Miles, 2002) and helped in understanding the main themes.

4.7.2 Interview Data

While theorists (e.g. Brinkman & Kvale, 2015; Cohen et al., 2011) agree that qualitative analysis aims at understanding data and providing evidence for research, they differ on the recommended approaches. Nevertheless, this is strongly determined by the purpose of the investigation and the size and nature of the dataset obtained. In this study, the selection of a qualitative approach was driven by the focus of the third phase on gaining a deeper understanding and explanation of the key issues emerging from the quantitative phase. The analysis followed the three stages suggested by Huberman and Miles (2002): data reduction, data display and conclusion drawing.

On this basis, when the first three interviews were completed, they were transcribed (see Appendices 16, 17 & 18 for interview transcripts before being checked for the accuracy of the translation), checked by a bilingual professional for the accuracy of the translation (see Appendices 19, 20 & 21 for the translation checked transcripts) and sent back to the participants for a dependability check. In order to reduce the dataset to a more manageable size and exclude irrelevant data, the decision was to perform a less detailed (non-verbatim) transcription and broad thematic analysis, rather than a comprehensive

verbatim transcription that detailed exactly what was said, including nonverbal elements such as facial expressions, pauses and laughter (Gibbs, 2007). This decision was driven by a desire to focus exclusively on relevant evidence and rival interpretations that contributed to the primary message. For example, the analysis excluded interviewees' specific examples, such as mathematical concepts, and repetitions that were considered not to be directly related to the issues being discussed. To make meanings clearer, some grammatical mistakes were corrected and words were occasionally added or deleted, such as to clarify interviewees' use of the short form *Almudiriah* to refer to the education district office. The researcher performed all of the transcription and translation work, thus making the analysis more efficient and less time consuming.

The researcher then conducted and transcribed the remaining interviews (see Appendices 19, 20 & 21), paying closer attention to the focus of the study and making notes of the emerging themes. The next step was to display the transcribed data by organising and coding it using NVivo and developing initial codes while being totally open to the data. These codes were then regrouped under certain categories by closely examining the connections and relationships between them (Bryman, 2012; Cohen et al., 2011). These were next unified under general themes that reflected the main issues that emerged from the survey and were then pursued in depth in the interviews, both in addition to new themes emerging from the interview data (see Appendix 22), which facilitated the drawing of conclusions and understanding of the findings.

4.8 Research quality

4.8.1 Ensuring data quality and verifiable conclusions

The validity of the data and the reliability of the findings are two essential indicators of the quality and soundness of any study (Cohen et al., 2011; Yin, 2014). However, validity and reliability are concepts more applicable to quantitative than qualitative research, whose trustworthiness (Hammersley, 2007) is more appropriately shown by its credibility, transferability and dependability (Lincoln & Guba, 1985). This distinction between quantitative and qualitative research is a continuation of the debate on philosophical differences regarding reality and how to define and assess it (Amaratunga et al., 2002). Nevertheless, the use of different concepts in each approach reflects the conviction of quantitatively and qualitatively oriented researchers on what can be genuine research that reveals something original to the literature of a subject, and how the soundness of research and the reliability of their findings can best be ensured (Marshall & Rossman, 2011).

In this case study research (see Section 4.3), however, these concepts (validity and reliability on one hand and credibility, transferability and dependability on the other) are viewed as two sides of the same coin and are used as evaluative criteria to assess the soundness of the data and the rigour of the findings and inferences. Internal validity in quantitative research is reflected in and corresponds to credibility in qualitative research; likewise, external validity is equivalent to transferability, as is reliability to dependability, since they assess the same criteria, ensuring the quality and soundness of the study, but are guided by different considerations and use different measures.

Several measures were taken to ensure the quality of the research design and to minimise the threats to its validity. Overall, it can be argued that the reliability of this study was

augmented and its trustworthiness increased (Berg, 2016) by using and triangulating data obtained via various collection instruments (questionnaire and semi-structured interviews) and multiple sources of evidence (teachers, head teachers, inspectors), which supplemented each other and showed the accuracy of the interpretations. Furthermore, steps were taken during data collection to ensure the construct validity of the questionnaire and the credibility of the qualitative part. For example, the researcher made sure that the participants were fully informed about the topic and aims of the study (Yin, 2014), by preparing an information sheet that clarified these elements (see Appendix 24). The research question was also clearly defined to ensure that it gave a clear indication of the purpose of the research. Moreover, the data collection instruments used were reviewed both by the researcher's supervisors and by fellow researchers, who provided feedback on the suitability of the survey and interview questions. Both sets of questions were sent to a number of teachers and educational experts to ensure the clarity of the questions. They were then piloted to validate them and to ensure that they measured what they were supposed to measure and were free of bias (Neuman, 2014). Necessary modifications were then made (see Chapter 5, Section A). The dependability of the findings was also increased by explicitly detailing and documenting all of the steps taken (Yin, 2014).

Certain measure were taken to ensure that the actual data collection and analysis generated accurate research findings (David & Sutton, 2011). The internal validity of the questionnaires was enhanced by using a mixture of closed and open-ended questions, which allowed respondents space to express and justify their opinions. The design of the questionnaire also received particular attention to ensure its reliability. For instance, some questions were effectively asked twice but phrased slightly differently. The questionnaires were then piloted (see Section 4.4) to check the clarity of statements and

any ambiguous wording was changed. Cronbach's alpha, a measure of internal consistency (Pallant, 2005), showed good reliability. The α coefficient for the entire teacher questionnaire was 0.877 and for the entire head teacher questionnaire it was 0.777, while the values for the items in the teachers' questionnaire ranged from 0.870 to 0.883 for each scale and in the head teachers' questionnaire it ranged from 0.761 to 0.803 for each scale. These reliability coefficients were determined to be sufficiently large.

For the qualitative part of this study, building a rapport with the participants through conducting several visits to the schools helped to achieve credibility in the interviews and facilitated more interaction and participation. Credibility was also enhanced by member checking (Lincoln & Guba, 1985), whereby the transcribed interviews were returned to the participants to allow them to record their agreement or disagreement and to add comments or concerns. In addition, the dependability of the study was augmented by detailing and describing all of the steps taken (Lodico, Spaulding, & Voegtle, 2010).

The external validity of the quantitative data and the transferability of the qualitative results were not an issue in this study, since the intention was not to generalise the findings to other contexts (Burns, 2003); nonetheless, these could still be valuable and possibly transferrable to cases with similar contexts, such as schools in other education districts in Oman. These, however, are judgements for other researchers to make.

4.9 Ethical considerations

In any study that deals with people, researchers have ethical obligations and responsibilities regarding the preservation and protection of the rights and interests of the participants (Denscombe, 2014; Yin, 2014). The present researcher has obtained the ethical approval of the Ethics Committee of the Institute of Education at Reading University to conduct this study (see Appendix 26) and been careful to follow the BERA (2011) guidelines. He was also granted the permission of the MOE, represented by the Technical Office for Studies and Developments, to conduct the study in the selected schools and to collect the required data (see Appendix 25).

Information sheets and consent forms: All participants received information sheets which explained the topic and objectives of the study, the data-collecting tools and what was expected from them as participants (Denscombe, 2014). They also received consent forms, which showed clearly that participation in this study was completely optional, and were asked to sign these and supply contact details if they were happy to participate. It was also made clear in the information sheets that they had the right to withdraw from the study at any time with no requirement to explain that decision.

Confidentiality: The participants were assured, through the information sheets they received, that the signed consent forms and all other data collected would be kept confidentially by the researcher (Cohen et al., 2011) and that all research records will be stored securely in a locked filing cabinet and on a password-protected computer and not be accessible by any other person other than the researcher until the research journey is completed, when they will be destroyed by the researcher himself.

Anonymity of participants: Realising that participants would be asked to express their opinions on events in their workplace, which might affect their relationships with their

superiors or superintendents if sources were revealed or identified, led the researcher to make every effort to ensure that participants would not be identified, by guaranteeing and obtaining the highest levels of confidentiality and anonymity (Berg, 2016). This included anonymising names by using pseudonyms for people and schools in this thesis and in any subsequent publications. All participants were assigned a pseudonym and are referred to by that pseudonym in all records.

Interruption to participants' daily routine: The researcher was also aware that answering the questionnaires and attending the interviews might interrupt the participants' daily routines and occupy some of their time. Thus, he tried to limit this time by making sure the questions were clearly and precisely written and by allowing participants to choose the times that suited them best. No work was required of the participants other than filling in the questionnaire (which was designed not to exceed 25 minutes) and/or attending the interview (for less than one hour).

Researcher's role: The researcher was further aware of the potential indirect influence of his role as an employee in the education office on the participants and on the kind of information they might reveal, as well as the potential bias arising from his sole treatment of the data. Any such influence was reduced by sharing the researcher's teaching and administrative experience with the participants, by conducting several visits to the schools, which facilitated both the participants' cooperation and the researcher's understanding of their beliefs, perspectives and perceptions. The risk of biased treatment was also minimised by the researcher being open to the data and adopting an inductive approach in the analysis phase, where codes for analysis emerged from the data itself. This was done with robust belief that people's actions, understanding and attitudes are driven by and revolve around the way they interpret and see things.

4.10 Summary

This chapter has offered the rationale and a detailed description of the methodology adopted for this predominantly qualitative case study, which employed questionnaires followed by semi-structured interviews within a social constructionist epistemological paradigm that aimed at understanding the participants' subjective reality. It also clarified the sampling, data collection and analysis strategies adopted and the measures taken to assure the quality of the data gathered and the conclusions drawn. Finally, it set out the key ethical considerations underpinning the study. The next chapter presents the results from the three phases (see Section 4.4): the pilot study, the quantitative survey and the qualitative phase.

Chapter 5 Results and Findings

5.1 Introduction

This chapter presents the results of both the quantitative and qualitative phases of the study. The quantitative data were collected using two questionnaires with teachers and head teachers, then analysed using SPSS, while the qualitative data were collected in semi-structured interviews with classroom teachers, head teachers and inspectors.

The chapter is divided into three sections representing the three phases of data collection. The first section presents the results of the pilot study, the second the results from the teachers' and head teachers' questionnaires (phase one of the main study) and the third the results of the interviews (phase two). The analysis of the quantitative results is based on descriptive analysis, mainly percentages and frequencies. The non-parametric Mann-Whitney and Kruskal-Wallis tests were also used to check whether variations between groups were statistically significant.

A. Results of the pilot study

A pilot study was conducted before the main study to assess whether the instruments used provided data on the topic intended and to increase their validity. First, the survey questionnaires were distributed to 10 teachers and four head teachers from four schools, then interviews were conducted with four teachers, two head teachers and one inspector.

Next, the responses were analysed carefully to determine whether they provided the data needed to answer the main research question and whether any other possible responses should be added to the options given in each question. The focus was also on measuring the time needed to complete the survey, which was found not to have exceeded 25 minutes. Participants' feedback revealed their understanding of the questions and their

comments on their suitability (with regard to the wording and their ability to answer them), any additional information that they needed to ask about, or areas of ambiguity. Subsequently, ambiguous and difficult questions were discarded and any questions that were not answered as expected were reworded. For instance, it was decided not to include definitions of the key terms in the study, such as PL, formal PL and informal PL (see Appendices 4 & 5), since some questions in the questionnaire aimed at identifying teachers' understanding of these terms. Nine of the 19 statements in question seven were reversed so that they presented a negative opinion, to test whether teachers' selection was genuine. Eventually, the questionnaires were revised and finalised (see Appendices 9 & 10).

The questions used in the interviews were also piloted, refined and modified, based on the analysis of the pilot study. For instance, it was indicated that the first question in the teachers' interview, 'What is the image that comes to your mind when speaking about teachers' professional learning?'(see Appendices 6, 7 & 8), could be ambiguous to teachers, so it was rephrased to read: "What does teachers' PL mean to you?" (see Appendices 11, 12 & 13). The piloting of the interviews also gave the researcher the opportunity to gain confidence and useful interviewing skills, such as using prompts (Edwards & Holland, 2013).

B. Results of phase one: the questionnaire

5.2 Findings from the teachers' survey

5.2.1 Background information

The first part of the teachers' questionnaire (see Appendix 9) asked participants to provide basic information about themselves including school name, gender, age group, experience, their most advanced qualification and the number of schools they had worked in. A total of 159 teachers from twelve schools (88.3%) responded to the questionnaire, of whom 72 (45.3%) were male and 87 (54.7%) female. Table 5.1 shows the number of participants and response rates for the different schools.

5.2.1.1 Participants in each school

Participants taught in twelve schools in differing locations: five urban, four suburban and three rural schools. Schools differed in size: two were small (less than 400 students), seven medium (400 to 700 students) and three large (more than 700 students) (see Section 4.5). Table 5.1 gives details about each school.

Table 5.1 Number of participants and response rate in each school

School	M/F	Number of participants	Response rate	Students/ Size	Location
1	M	8	53%	340 (small)	urban
2	M	15	100%	715 (large)	urban
3	M	10	66%	460 (medium)	urban
4	M	12	80%	252 (small)	suburban
5	M	15	100%	648 (medium)	rural
6	F	13	86%	520 (medium)	urban
7	F	15	100%	724 (large)	urban
8	F	15	100%	410 (medium)	suburban
9	F	14	93%	648 (medium)	rural
10	F	15	100%	430 (medium)	rural
11	F	15	100%	730 (large)	suburban
12	M	12	80%	584 (medium)	suburban

The response rates were noticeably high, for three possible reasons. Firstly, the researcher visited each school individually, met the head and as many teachers as

possible, making sure to gain the support and agreement of as many teachers as he could. This may have led to the build-up of a rapport where the participants felt that they were obliged to respond to show politeness and accordingly were more committed to completing the questionnaire. Alternatively, the high response rates could be attributed to the cultural fact that it is often considered improper in Omani society to let down anyone who asks personally for help; thus, the teachers may have felt that not completing the questionnaire would be considered rude, especially by someone whom they might deal with in future. There is also the possibility that some teachers considered that participation was compulsory, since the researcher worked in the education office.

5.2.1.2 Distribution of participants by experience

Table 5.2 Distribution of participants by experience

Experience in years	n	%
1-2	1	0.6
3-5	15	9.4
6-10	50	31.4
11-20	83	52.3
above 20	10	6.3
Total	159	100

Table 5.2 shows that the teachers had a variety of teaching experience and that a strong majority (90%) had taught for at least six years. This is important to this study, since these teachers were able to describe any developments in PL that they had experienced during the last five years and to refer to any impact that they had witnessed.

5.2.1.3 Distribution of participants by age group

Table 5.3: Distribution of participants by age range

Age range	n	%
22-25	1	0.6
26-30	45	28.5
31-35	53	33.6
36-40	44	27.8
41-45	14	8.9
above 45	1	0.6
Total	158	100
Missing data	1	
Total	159	

Table 5.3 shows that the participants were spread across a range from 22 to 45 years old and that most of them were aged between 26 and 40 years. The low percentage of younger teachers can be attributed to the fact that newly employed teachers were usually appointed to lower level schools before being transferred to post-basic schools (catering for ages 16 and 17).

5.2.1.4 Distribution of participants by most advanced qualification

Most of the participants were qualified at undergraduate level, which can be explained by the MOE's initiative introduced in the mid-1990s, aimed at raising all teachers' qualifications to degree level.

5.2.1.5 Distribution of participants by subject area

The sample represented teachers of the five core subjects. Table 5.4 shows that they were spread almost equally across these, with slightly lower numbers teaching science, Arabic language and social studies.

Table 5.4 Distribution of participants by subjects taught

Subject Area	n	%
English	33	21
Mathematics	33	21
Science	31	19.8
Arabic	30	19.1
Social studies	30	19.1
Total	157	100
Missing data	2	
Total	159	

5.2.2 Knowledge of recent education policy reform

Table 5.5 shows that teachers' responses to question 11 on their knowledge of the latest MOE initiatives were very short and that a substantial number (11) of those who answered this question (23 of the 159 participants) reported a lack of knowledge of any of the latest MOE initiatives in regard to improving teachers' quality. This was not surprising, taking into account that most of the communication that had taken place between the MOE and schools involved MOE officials and school heads only, which can be justified by the nature of the centralised education system in Oman, where the MOE rarely communicates directly with teachers in schools.

What is more, this could indicate that school heads had not often shared what they had received from the MOE with their teachers and it implies the possibility of poor internal communication. Alternatively, the low response rate to this question and the weak knowledge of the latest educational policies expressed by some teachers could be attributed to teachers' wish to show their dissatisfaction or discontent with the way policy-related decisions were made, where their opinions were rarely considered. This is suggested by the fact that one teacher responded that there was 'nothing worth

mentioning', which implies a passive attitude towards the MOE's programmes and projects that targeted schools and teachers, rather than unfamiliarity with them.

Table 5.5 Teachers' responses on knowledge of the latest MOE initiatives

Teachers' responses	Number of matches
Nothing – I don't know – I have no idea - Nothing worth mentioning	11
Technology	6
Active learning	2
Collaborative teaching	1
The Specialised Centre	1
Curriculum	1
Training	1

Of those teachers who did report knowledge of MOE initiatives, the largest number (six) stated that they were familiar with the introduction of new educational technology and two referred to the MOE advocating the use of active learning teaching techniques, while the remaining initiatives (advocating collaborative teaching techniques, changes in the curriculum, more training opportunities for teachers and the setting up of a specialised centre for teacher training) were all mentioned just once each.

During the interview phase, the researcher investigated whether this pattern of responses represented widespread ignorance of the latest initiatives, miscommunication between the ministry and teachers or between school heads and teachers, or passive attitudes towards the MOE's plans and programmes.

5.2.3 Conceptualising PL

5.2.3.1 General trends

Item eight in the survey was an open-ended question which generated 100 responses (63%). To identify a pattern among them, these responses were categorised using a word processor to determine their recurrence, then regrouped together to establish how the teachers conceptualised PL. What emerged was a wide range of definitions that reflected

the extent of differences in how the teachers viewed PL, visualised their engagement in PL activities and interpreted it.

A substantial number of those who answered this question confined their understanding of the term PL to an increase in subject and pedagogical content knowledge. For example, one teacher defined it as 'a planned way for the learner to acquire new information and experience in his subject'.

"هو عبارة عن طريقة مخطط لها تهدف لإكساب المتعلم معلومات جديدة وخبرات في المادة التي يدرسها"

A few other respondents viewed it as a change in thinking; for example, one teacher defined it as 'developing all aspects of the thinking of teachers and improving their teaching skills and practices'.

"تطوير تفكير المعلمين من جميع الجوانب وتحسين مهاراتهم وممارساتهم التدريسية"

A smaller number went further to include changes in attitudes and values, e.g. 'It means that teachers acquire a lot of knowledge, values, attitudes that enable them to develop their abilities and skills and use these in enhancing the educational processes'.

"يخني أن يكتسب المعلمون الكثير من المعرفة والقيم والإتجاهات التي تمكنهم من تطوير قدراتهم ومهاراتهم واستخدامها في تحسين العمليات التربوية"

PL was also viewed as a 'self-directed effort':

"الجهد المبذول في التعلم الذاتي"

Others viewed it as a result of engagement with other teachers: 'To discuss professional development issues between teachers on specific education issues'.

"مناقشة مواضيع تهتم الإنماء المهني بين المعلمين حول مواضيع تربوية محددة"

Teachers also differed in their views of the continuity of PL. More than half confined their understanding to one-off formal training events, e.g. 'Training teachers professionally':

The remainder had a wider, more comprehensive view of PL as a 'continuous process that can be formally conducted within schools, training centres ... or informally through the available media by the teacher himself'.

"عبارة عن عملية مستمرة قد تكون بشكل رسمي في المدارس ومراكز التدريب ... أو بشكل غير رسمي من خلال وسائل التواصل المتوفرة عن طريق المعلم بنفسه"

The focus was also occasionally on specific areas such as 'improving personality', 'accreditation' and keeping up to date with international developments in education, as shown by the following three extracts:

- 'To form confident personality in teaching and develop the teaching process through teaching styles and dealing with students'.

"تكوين شخصية واثقة في التدريس وتطوير عملية التدريس من خلال طرق التدريس والتعامل مع الطلبة"

- 'It means developing teachers through training and certificates, which leads to enhancing their subject knowledge and providing them with new teaching styles'.

"هو يعني تطوير المعلمين من خلال التدريب والشهادات والذي يؤدي إلى تحسين معارفهم المتعلقة بالمادة ويقدم لهم طرق تدريس جديدة"

- 'The learning that develops teachers' level and keeps pace with the latest international developments.'

"التعلم الذي ينمي من مستوى المعلم ويساير آخر التطورات العالمية"

These variations could be attributed to many factors including respondents' self-efficacy and whether they had genuinely chosen to be teachers rather than seizing the last available option upon leaving secondary school. They may also have been caused by other contextual factors such as the impact of the school leadership, the school organisational climate and colleagues' influence, personal inspiration, preschool training or other socio-cultural factors. These factors received particular attention in phase two of this research.

When eliciting eliciting teachers' opinions of the key aspects of improving their PL, 142 participants (89.9%) agreed or strongly agreed that that it involved identifying teaching weaknesses, improving teaching skills and adopting new teaching techniques (see Table 5.6). The majority of respondents mentioned increasing the subject/pedagogical knowledge base (140 respondents; 88.6%), acquiring positive attitudes towards new experiences (140 respondents; 88.1%) and improving relationships and communication between teachers (132 participants; 87%).

Table 5.6 Teachers' opinions of the key aspects of improving PL

Statement	Agree		Not sure		Disagree		Total (missing data)
	n	%	n	%	n	%	
1. Identifying teaching weaknesses and improving teachers' skills, abilities and interests.	142	89.9	14	8.9	2	1.2	159 (1)
2. Changing practice and adopting new teaching techniques	142	89.9	13	8.2	3	1.9	159 (1)
3. Increasing teachers' subject/pedagogical knowledge base	140	88.6	15	9.5	3	1.9	159 (1)
4. Acquiring positive attitudes towards new experience	140	88.1	16	10.1	3	1.9	159
5. Improving relationships and communication between teachers	136	85.5	16	10.1	7	4.4	159
6. Helping teachers to adapt to their students' learning needs and styles	130	81.8	24	15.1	5	3.1	159
7. Enhancing students' learning	127	79.9	26	16.4	6	3.7	159
8. Responding positively to challenges that teachers face today	125	79.6	23	14.6	9	5.7	159 (2)
9. Changes in how teachers think	122	78.2	24	15.4	10	6.4	159 (3)

In contrast, adapting to students' learning needs, enhancing their learning, responding positively to teaching-related challenges and changes in how teachers think, although still valued quite highly, were rated slightly less highly by most teachers (130/81.8%, 127/79.9%, 125/79.6% and 122/78.2% respectively).

This suggests agreement among teachers on the main purposes of improving PL, although there is no clear indication that it was genuinely valued. The weaker agreement on aspects related to students' learning or changes in thinking suggest that teachers might differ in

their priorities when attending PL events. It could also be attributed to a lower awareness among some respondents of the ultimate goal of most PL activities and of the direct or indirect impact these activities should have on their students' performance.

5.2.3.2 Differences between subject teachers

The Kruskal-Wallis test revealed only one statistically significant difference between groups in responding to this question, related to subject area: Table 5.7 shows that there was a significant variation between subject area teachers in rating 'change in thinking' as a key factor in improving their PL.

Table 5.7 Improving PL involves 'change in thinking': teachers' views by subject area (0.009, p <.05)

Subject		English	Mathematics	Science	Arabic	Social studies
Agree	n	21	25	25	27	22
	%	63.6	75.8	80.6	96.4	75.9
Not sure	n	8	7	4	0	5
	%	24.2	21.2	12.9	0	17.2
Disagree	n	4	1	2	1	2
	%	12.1	3	6.5	3.6	6.9
Total		33	33	31	28	29
Missing data					2	1

While there seems no obvious explanation of the noticeably stronger agreement of Arabic language teachers with this statement, it may be attributed to the role of their inspectors (trainers) or to their pre-service training. Involving inspectors in the next phase of in-depth investigation might help in understanding such variations.

5.2.4 Focus of PL on policy reform

Question nine was open-ended, eliciting views on what aspects of PL the reforms should focus on. More than half of the participants (85; 53.5%) did not answer this question, perhaps because of the limited time teachers had and the nature of the question, which required more thought than most others. It may also show that the teachers were rarely

involved in policy-making decisions and as a result were unable to decide what teacher quality improvement policies should focus on.

The responses are summarised in Table 5.8. The three areas most often cited were curriculum, IT skills and teaching strategies.

Table 5.8 Teachers' perception of what aspects of PL reforms should focus on

Future focus of PL	Number of matches
Curriculum	23
IT skills	18
Teaching strategies	12
Technology	9
Teaching aids	4
Consultation with teachers	3
Focus on self-learning	2
Intensive courses	2
Provide model lessons	2
Students' achievements	2
Improving teachers' status	1
Better evaluation techniques	1

While many respondents stated that there was an issue with the curriculum, they did not identify it precisely, nor did they state whether they considered that PL activities corresponded well to the current curriculum.

The data also showed an obvious focus on IT skills, but the nature of the responses did not allow the researcher to determine whether the problem was with the availability of IT courses, with their nature or with the way they were conducted. This required further investigation to provide a deeper understanding and a clearer picture.

In regard to teaching strategies, which were mentioned by 12 teachers, respondents stressed the need to introduce 'new teaching strategies' and to provide the 'teaching aids' that would enable teachers to use these new strategies in their classrooms. However, these phrases are open to interpretation and may indicate a desire for change.

As may be deduced from the data in Table 5.8, a minority of respondents made other suggestions, mainly related to three areas: teacher involvement and voice in the design of PL, evaluation and follow up, and self-directed PL. These received particular focus during the second phase of data collection.

5.2.5 Purposes of engaging in PL

5.2.5.1 General trends

Overall, the responses to question 2 (Table 5.9) reveal that teachers linked engaging in PL to being more effective teachers, which entailed improving various aspects of their teaching practice.

Table 5.9 Purposes of engaging in PL activities: teachers' overall views

Statement	Very important		Important		Little importance		Not important		Total (missing data)
	n	%	n	%	n	%	n	%	
1. It helps me to improve my teaching practice	95	59.7	42	26.4	19	11.9	3	1.9	159
2. It helps me to update my skills and knowledge	80	50.6	51	32.3	21	13.3	6	3.8	158 (1)
3. It increases my self-esteem and self-confidence	75	47.5	47	29.7	25	15.8	11	7	158 (1)
4. It helps me to understand how students learn	63	39.9	54	34.2	35	22.2	6	3.8	158 (1)
5. It helps me to manage students' behaviour	39	24.7	66	41.8	38	24.1	15	9.5	158 (1)
6. It is a ministry requirement	36	22.9	44	28	48	30.6	29	18.5	157 (2)
7. It helps me to be promoted	23	14.6	40	25.3	37	23.4	58	36.7	158 (1)

The responses showed that 'improving teaching practice' (137 teachers/86.1%), 'updating skills and knowledge of taught subjects' (131 /82.9%), 'increasing self-esteem' (122/77.2%) and 'understanding and meeting students' needs' (117/74.1%) were deemed to be the most important reasons for seeking PL. This suggests that overall, the respondents were aware that PL was fundamental to improving their teaching practice and their students' achievement. Moreover, it seems that with the relatively negative image attached to teachers, especially when students' achievements were not up to

expectations, PL was seen as a method of enhancing teachers' image of their profession and accordingly of their potential to make a difference in students' learning. However, this does not necessarily mean that they were involved in PL activities or that they had implemented in their classrooms what they had acquired in PL.

There was less agreement on seeking PL to 'help in managing students' behaviour' (105 teachers/66.5%). It may be that teachers envisaged controlling students' behaviour as a skill that should be acquired in the classroom rather than in training centres or PL events. Alternatively, unruly behaviour was perhaps not a significant issue for them, because most students in Omani schools are well behaved.

The other two reasons for pursuing PL offered, 'a MOE requirement' and 'to be promoted', were rated important by the fewest respondents: 80 (50.9%) and 63 (39.9%) respectively.

5.2.5.2 Differences between subject teachers

The Kruskal-Wallis test revealed some statistically significant variations in teachers' responses to statements 4 (.045, $p < .05$) and 7 (.007, $p < .05$) that were attributed to their subject area, as Tables 5.10 and 5.11 show.

Table 5.10 PL helps teachers to understand how students learn: teachers' views by subject area (0.045, $p < .05$)

Subject		English	Mathematics	Science	Arabic	Social studies
Important	n	26	30	23	22	16
	%	78.8	90.9	74.2	73.3	55.2
Little importance	n	6	3	6	6	12
	%	18.2	9.1	19.4	20	41.4
Not important	n	1	0	2	2	1
	%	3	0	6.5	6.7	3.4
Total		33	33	31	30	29
Missing data				0		1

Responses to statement 4 show that mathematics teachers were more aware of the link between improving their PL and enhancing their students' learning: 30 teachers (90.9%) saw this as a reason to seek PL (Table 5.10). While there is no clear explanation, this may be attributed to the extent to which their inspectors made this link clear in training events.

In response to statement 7, English teachers seemed the most concerned with pursuing PL for promotion purposes: 20 teachers (60.6%) rated this factor as important (Table 5.11). A possible explanation is that English teachers, being bilingual, had a stronger likelihood of promotion to administrative positions in the Education Office or the MOE than teachers of other subjects.

Table 5.11 PL helps teachers to get promotion: teachers' views by subject area (0.007, $p < .05$)

Subject		English	Mathematics	Science	Arabic	Social studies
Important	n	20	9	11	12	11
	%	60.6	27.3	36.7	40	36.7
Little importance	n	9	13	3	6	4
	%	27.3	39.4	10	20	13.3
Not important	n	4	11	16	12	15
	%	12.1	33.3	53.3	40	50
Total		33	33	30	30	30
Missing data				1		

These two findings revealed noticeable differences that prompted further investigation of teachers' beliefs and purposes for engaging in particular PL activities, to determine whether they were driven by personal factors, by a desire for promotion or simply to fulfil formal obligations.

5.2.6 Availability and importance of PL in various locations

5.2.6.1 General trends

Teachers' responses were not decisive in evaluating the overall availability of PL opportunities; their responses to the statement in question seven that PL was 'rare and

not available for all' (Table 5.12) ranged from agreeing (n=69; 44.5%) to disagreeing (n=50; 32.3%), with many selecting 'not sure' (n=36; 23.2%).

Table 5.12 Overall availability of PL opportunities: teachers' views

Statement	Agree		Not sure		Disagree		Missing data
	n	%	n	%	n	%	
PL opportunities are rare and not available for all.	69	44.5	36	23.2	50	32.3	4

However, responses to question 1 showed that teachers' opinions varied in regard to the frequency and value of PL in various locations (in the school, in another school, in the Training Centre of the Education Office, in other parts of Oman, or outside Oman).

Table 5.13 Availability of PL in various locations: teachers' overall views

Statement	Often		Sometimes		Rarely		Never		Total (missing data)
	n	%	n	%	n	%	n	%	
1. PL in the school	64	42.1	63	41.4	22	14.5	3	2	152 (7)
2. PL in another school	1	7	28	19.6	52	36.4	62	43.4	143 (16)
3. PL in the training centre	23	15.5	55	37.2	40	27	30	20.3	158 (11)
4. PL in other parts in Oman	3	2.1	15	10.5	32	22.4	93	65	143 (16)
5. PL outside Oman	6	4.2	4	2.8	10	7	122	85.9	142 (17)

As Table 5.13 shows, PL in the school was reported to occur very frequently and a substantial number of respondents (n=127) reported that they often or sometimes had easy access to PL in schools, as shown by Figure 5.1.

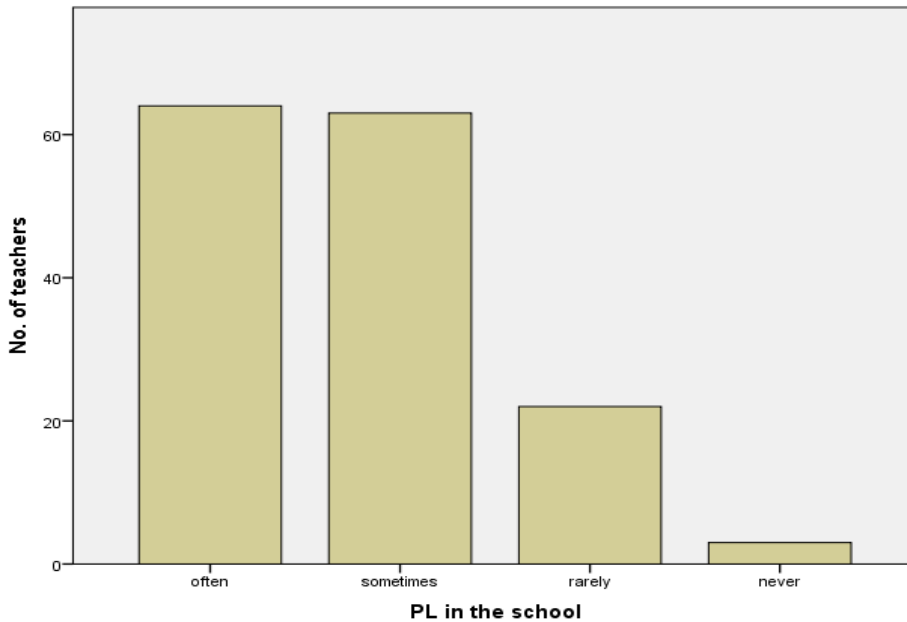


Figure 5.1 Availability of PL in the school: teachers' overall views (N=152)

In contrast, a substantial number of participants reported a lack or shortage of PL opportunities in similar post-basic schools and most of them rated it as rare or not available at all (n=114; 79.8%). Furthermore, although PL in the education office training centre was rated much higher, 30 teachers (20.3%) reported that they had never attended a PL event there. Two-thirds of teachers (n=93; 65%) also described PL opportunities in other parts of Oman as not available at all, while even more (n=122; 85.9%) perceived PL opportunities outside Oman to be entirely unavailable, as Figure 5.2 shows.

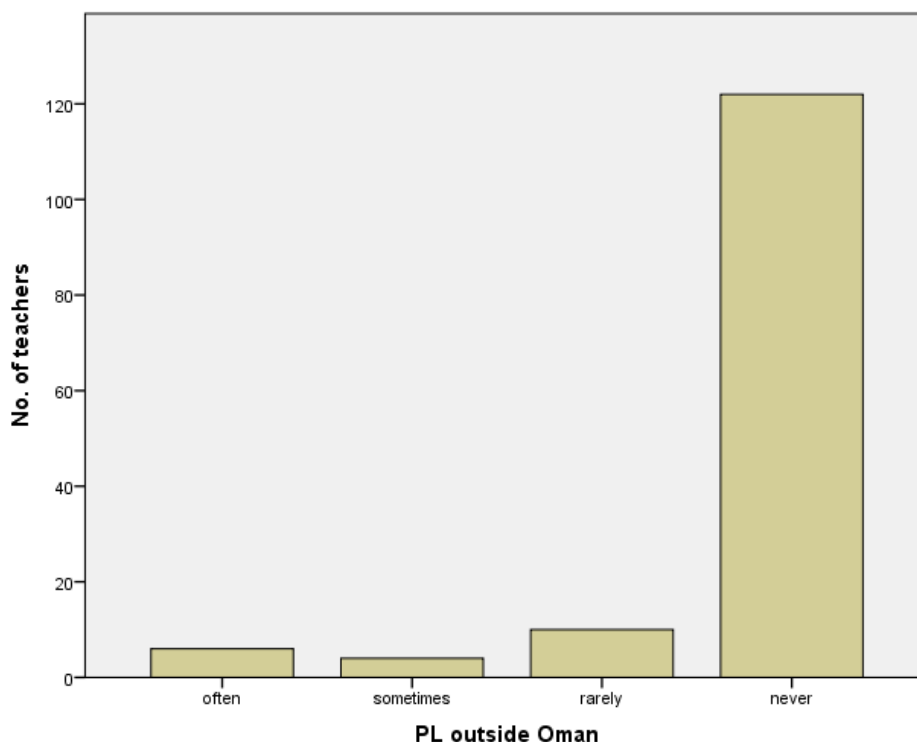


Figure 5.2 Availability of PL outside Oman: teachers' views (N=142)

This opinion reflects official statistics showing very few PL opportunities abroad for teachers, compared to their number, which is often justified by a shortage of financial resources (MOE, 2012/2013).

When the availability of PL in various locations was compared to its importance, there were areas of correspondence and variation, as shown by Table 5.14.

Table 5.14 Importance of PL in various locations: teachers' overall views

Statement	Very important		Important		Little importance		Not important		Total (missing data)
	n	%	n	%	n	%	n	%	
1. Usefulness of PL in the school	50	34.7	76	52.8	18	12.5			144 (15)
2. Usefulness of PL in another school	15	11.7	71	55.5	36	28.1	6	4.7	128 (31)
3. Usefulness of PL in the Training Centre	42	29.6	70	49.3	22	15.5	8	5.6	142 (17)
4. Usefulness of PL in other parts in Oman	45	33.8	60	45.1	21	15.8	7	5.3	133 (26)
5. Usefulness of PL outside Oman	49	38	52	40.3	17	13.2	11	8.5	129 (30)

On one hand, PL opportunities were most valued in the school and considered the most important in developing teachers' practice (87.5% agreed on their importance), which corresponds well with the findings of its availability. This was investigated further in phase two to see whether this rating was genuine or because the teachers had not experienced much training outside their schools.

In contrast, whereas responses indicated that PL outside the school was rarely available, most of the respondents rated its importance relatively highly. The same observation is applicable to the location and value of PL in the training centre, other parts of Oman and outside Oman.

Thus, with regard to access to and the importance of PL opportunities in various locations, it was noticeable that there was a gap between teachers' beliefs about the importance of these opportunities in various places and what was offered to them. The next phase of this investigation focused on the nature of PL opportunities in various places and tried to elicit teachers' opinions about the extent to which these fitted their needs and the reasons why they might consider a specific location or type more suitable than another.

5.2.6.2 Differences between subject teachers

Mann-Whitney and Kruskal-Wallis tests showed some statistically significant differences between groups in teachers' views of the availability and importance of PL in various locations. The Kruskal-Wallis test showed that the more experienced teachers attended less PL in other schools than did less experienced teachers, as can be seen in Table 5.15. It may be that younger teachers were more willing to attend PL outside their schools. It could also be that more experienced teachers thought they had enough experience and would gain nothing from such activities.

Table 5.15 Availability of PL in another school: teachers' views by experience (0.012, $p < .05$)

Experience (years)		1-2	3-5	6-10	11-20	> 20
Often	n	0	0	0	0	1
	%	0	0	0	0	10
Sometimes	n	1	4	12	8	3
	%	100	28.6	24.5	11.6	30
Rarely	n	0	5	18	24	5
	%	0	35.7	36.7	34.8	50
Never	n	0	5	19	37	1
	%	0	35.7	38.8	53.6	10
Total		1	14	49	69	10
Missing data			1	1	14	

Different subject teachers also perceived the availability of PL in the Training Centre differently, as shown by Table 5.16.

Table 5.16 Availability of PL in the Training Centre: teachers' views by subject (0.031, $p < .05$)

Subject Area		English	Mathematics	Science	Arabic	Social studies
Often	n	7	7	4	0	5
	%	21.2	22.6	13.4	0	18.5
Sometimes	n	14	13	10	8	9
	%	42.4	41.9	33.3	32	33.3
Rarely	n	10	5	10	9	6
	%	30.3	16.1	33.3	36	22.2
Never	n	2	6	6	8	7
	%	6.1	19.4	20	32	25.9
Total		33	31	30	25	27
Missing data			2	1	5	3

English language and mathematics teachers seem to have had more opportunities to attend PL in the Training Centre. This indicates that some subject areas may have been more privileged to receive centralised PL than others, which might be caused by variations in the number of trainers or training programmes and the budget available for each subject area.

Furthermore, a Mann-Whitney test showed that female teachers (Mdn = 78.46) had received significantly less PL in other parts of Oman than male teachers (Mdn = 64.67), $U = 2055.000$, $z = -2.353$, $p < .019$, as shown by Table 5.17.

Table 5.17 Availability of PL in other parts of Oman (0.019, p < .05): teachers' views by gender

Possible answerers	Male		Female	
	n	%	n	%
Often	1	1.5	2	2.6
Sometimes	11	16.4	4	5.3
Rarely	18	26.9	14	18.4
Never	37	55.2	56	73.7
Missing data	5		11	
Total	72		87	

Females' less frequent attendance at PL outside school may be due to female teachers' preferences, or may indicate that male teachers were offered more or better opportunities, suggesting a gender bias and preferential treatment.

It is also notable that teachers of different subjects viewed the availability and importance of PL opportunities outside Oman differently. Not surprisingly, English teachers seemed slightly more satisfied with the availability and value of the PL they had abroad compared to teachers of other subjects, as shown by Tables 5.18 and 5.19 respectively.

Table 5.18 Availability of PL outside Oman: teachers' views by subject area (0.021, p < .05)

Subject		English	Mathematics	Science	Arabic	Social studies
Often	n	5	0	0	0	1
	%	15.6	0	0	0	4
Sometimes	n	1	3	0	0	0
	%	3.1	9.4	0	0	0
Rarely	n	3	1	0	2	4
	%	9.4	3.1	0	8.3	16
Never	n	23	28	27	22	20
	%	71.9	87.5	100	91.7	80
Total		32	32	27	24	27
Missing data		1	1	4	6	3

Table 5.19 Importance of PL outside Oman: teachers' views by subject area (0.020, $p < .05$)

Subject		English	Mathematics	Science	Arabic	Social studies
Important	n	27	21	21	15	17
	%	93.1	75	84	68.2	73.9
Little importance	n	2	5	1	2	5
	%	6.9	17.9	4	9.1	21.7
Not important	n	0	2	3	5	1
	%	0	7.1	12	22.7	4.3
Total		29	28	25	22	23
Missing data		4	5	6	8	7

These variations may indicate that English teachers were more likely to attend PL abroad, given that they were more competent in English than the other subject area teachers and that some training programmes were offered only in English-speaking countries such as the UK and the USA. English and science teachers also valued PL abroad slightly more (93.1% and 84% respectively) than teachers of maths, Arabic and social studies (75%, 68.2% and 73.9% respectively). This may reflect the fact that the English and science teachers were more competent in English than Arabic, maths and social studies teachers, because most of their pre-service training modules were taught in English. It also suggests that teachers of Arabic, maths and social studies had experienced less PL abroad, which may explain the lower value they assigned to such opportunities. However, the clear variation among the English teachers themselves (as shown in Table 5.18), whereby five reported often attending such opportunities whereas 23 stated that they had never attended any PL abroad, might indicate that nomination for PL abroad was biased, potentially because of the lack of a database to show which teachers had previously attended such opportunities.

5.2.7 Involvement of others in PL

5.2.7.1 General trends

In response to question 4, the majority of participating teachers rated the contribution to PL of their senior teachers (see Figure 5.3) and subject colleagues as very important.

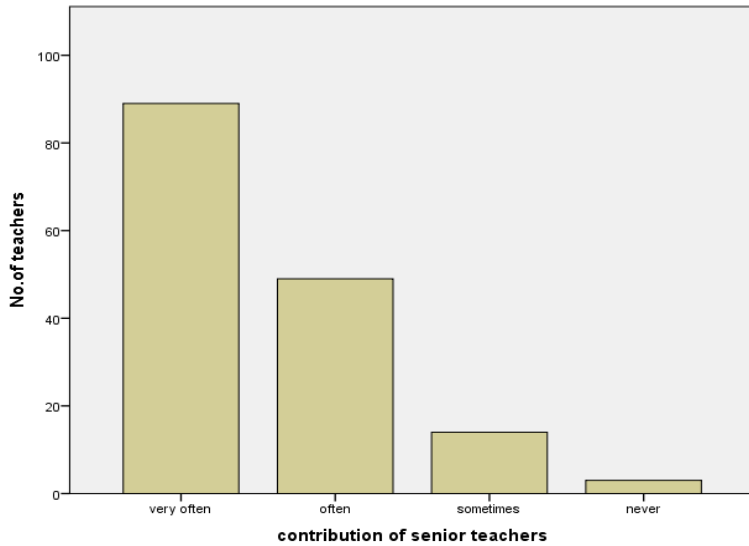


Figure 5.3 Involvement of senior teachers in teachers' PL: teachers' overall views (N=159)

Such positive responses to senior teachers' and colleagues' contributions might be a genuine rating, or it could be attributed to the social culture prevalent in Oman, whereby teachers tend to keep good relations with colleagues and avoid saying anything that might damage these relationships. Such interpersonal relations are even more obvious among females in Omani society. It is also worth mentioning here that teachers are usually assigned to a school as near to their home as possible, so a colleague might also be a relative, a neighbour or someone else whom one has to deal with outside school hours, which will tend to make teachers wary of criticising their colleagues (see Section 4.9 on ethical issues). Thus, the respondents might not have been completely frank in their responses, especially when they had to evaluate the contribution of their colleagues to their PL (see Section 7.5 on limitations).

Most respondents placed slightly less value on the contributions of school heads and inspectors (71% and 74% respectively), although evaluations were still relatively positive (Figure 5.4).

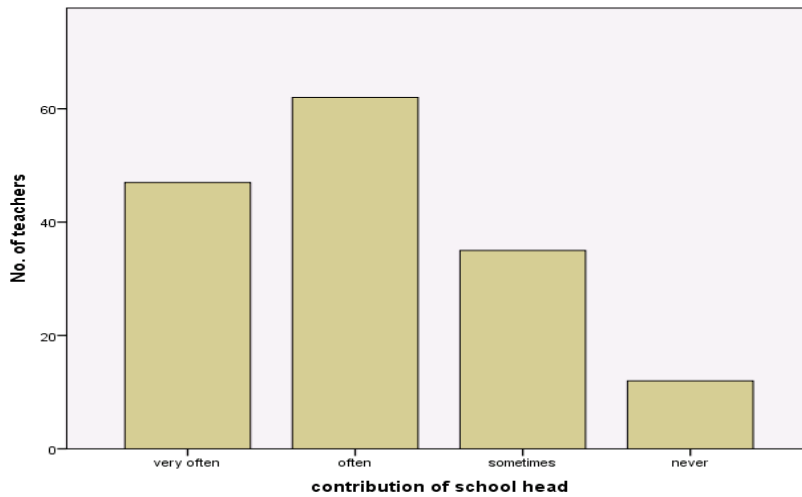


Figure 5.4 Involvement of head teachers in teachers' PL: teachers' overall views (N=159)

Furthermore, most teachers expressed a very negative opinion of the contributions of officials of the education office and the MOE to developing their PL (Figures 5.5 and 5.6).

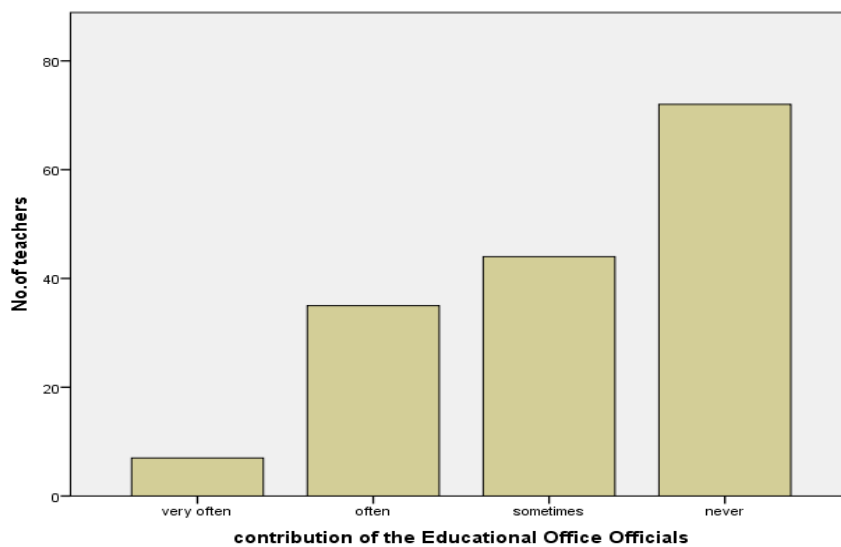


Figure 5.5 Involvement of education office officials in teachers' PL: teachers' overall views (N=159)

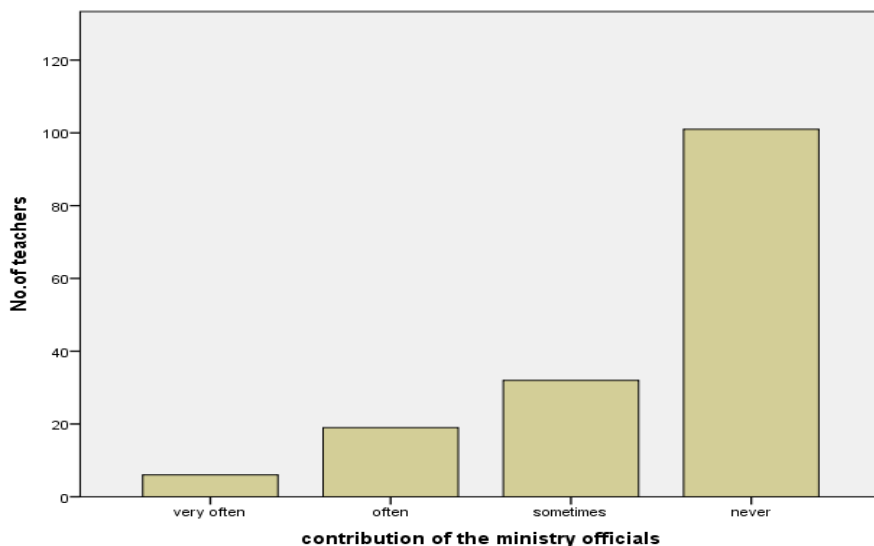


Figure 5.6 Involvement of MOE officials in PL: teachers’ overall views (N=159)

However, responses to a statement in question 7 (Table 5.20), which showed hesitation as to whether PL reflected the perceptions of the policymakers more than the teachers, suggests that teachers’ ratings in Figures 5.5 and 5.6 reflect their negative attitudes towards the education office and the MOE, rather than a genuine rating of their employees’ roles. It might also indicate miscommunication between the MOE and the education office on one hand and schools and teachers on the other.

Table 5.20 Teachers’ overall views on whether the design and content of PL reflect their perceptions

Statement	Agree		Not sure		Disagree		Missing data
	n	%	n	%	n	%	
1. Have reflected the perceptions of the policy makers more than the teachers.	72	46.5	53	34.2	30	19.3	4

Thus, teachers’ attitudes towards the MOE, the education office and their communication with schools and teachers received a particular focus in the next phase of this investigation.

5.2.7.2 Differences between subject teachers

The analysis revealed statistically significant differences among subject areas and schools in rating the contribution of others in improving teachers’ PL as a Kruskal-Wallis test

showed. For example, the English teachers were less likely to agree on the contribution of inspectors, as shown by Table 5.21.

Table 5.21 Contribution of inspectors to teachers' PL: teachers' views by subject area (0.007, $p < .05$)

Subject		English	Mathematics	Science	Arabic	Social studies
Useful	n	15	28	24	24	25
	%	45.5	84.8	77.4	80	86.3
Some useful	n	13	4	5	5	3
	%	39.4	12.2	16.1	16.7	10.3
Not useful	n	5	1	2	1	1
	%	15.1	3	6.5	3.3	3.4
Total		33	33	31	30	29
Missing data						1

Schools also varied in their evaluation of the contribution of senior teachers and subject colleagues, as shown by Tables 5.22 and 5.23 respectively.

Table 5.22 Contribution of senior teachers to teachers' PL: teachers' views by school (0.029, $p < .05$)

School		1	2	3	4	5	6	7	8	9	10	11	12
Often	n	8	8	7	12	15	12	13	12	11	11	13	12
	%	100	85.7	70	100	100	92.3	92.9	85.7	78.6	78.6	86.7	100
Sometimes	n	0	2	1	0	0	1	1	1	3	2	2	0
	%	0	14.3	10	0	0	7.7	7.1	14.3	21.4	14.3	13.3	0
Never	n	0	0	2	0	0	0	0	0	0	1	0	0
	%	0	0	20	0	0	0	0	0	0	7.1	0	0
Total		8	14	10	12	15	13	14	14	14	14	15	12
Missing data			1					1	1		1		

Table 5.23 Contribution of subject colleagues in teachers' PL: teachers' views by school (0.003, $p < .05$)

School		1	2	3	4	5	6	7	8	9	10	11	12
Often	n	7	11	8	11	14	13	13	15	9	13	15	11
	%	87.5	78.6	80	91.7	93.3	100	86.7	100	64.3	86.7	100	91.7
Sometimes	n	1	3	1	1	1	0	2	0	4	1	0	1
	%	12.5	21.4	10	8.3	6.7	0	13.3	0	28.6	6.7	0	8.3
Never	n	0	0	1	0	0	0	0	0	1	1	0	0
	%	0	0	10	0	0	0	0	0	7.1	6.7	0	0
Total		8	14	10	12	15	13	15	15	14	15	15	12
Missing data			1										

The Mann-Whitney test indicated that female teachers (Mdn = 73.55) valued the contribution of their colleagues significantly more than male teachers did (Mdn = 86.79), $U = 2571.000$, $z = -2.004$, $p < .045$ (Table 5.24).

Table 5.24 Contribution of subject colleagues to teachers' PL: teachers' views by gender (0.045, $p < .05$)

Possible answerers	Male		Female	
	n	%	n	%
Often	62	87.3	78	89.7
Sometimes	8	11.3	7	8
Never	1	1.4	2	2.3
Missing data	1			
Total	72		87	

These variations suggest that the context and organisational climate of the schools might have affected how teachers engaged and interacted in improving their PL. Inspectors' work might also have varied when working with different schools, which could be attributed to the variations among these schools in the experience of teachers, their willingness, school leadership role, or the competence of inspectors, for example.

5.2.8 Self-directed informal PL

5.2.8.1 General trends

The survey also investigated teachers' individual involvement in PL from another angle, that of self-directed PL (Q3; see Table 5.25), which also revealed a kind of incompatibility between their stated values (beliefs) and their real engagement (practices).

Table 5.25 Engagement in self-directed PL activities: teachers' overall views

Statement	Often		Sometimes		Rarely		Never		Total (missing data)
	n	%	n	%	n	%	n	%	
1. Discussion with colleagues	93	58.9	53	33.5	10	6.3	2	1.3	158 (1)
2. Using the internet	84	53.8	61	39.1	10	6.4	1	0.6	156 (3)
3. Self-reflection	68	43.9	70	45.2	17	11	0	0	155 (4)
4. Reading subject-related publications	50	32.3	76	49	22	14.2	7	4.5	155 (4)
5. Observing others	50	32.1	78	50	25	16	3	1.9	156 (3)

The teachers reported their engagement in various daily self-directed informal PL activities (discussion, observation, reflection, reading, using the internet). Discussion with colleagues and using the internet evoked the most responses (58.9% and 53.8%

respectively), while self-reflection was rated slightly less highly (48%). Such discussions, formal or informal, seem to have been a popular way for teachers to promote their PL, which may be explained by the friendly, secure and supportive climate that teachers might have felt, especially during the informal professional discussions that took place in staff rooms. Interestingly, only a third of respondents reported that they had often observed other teachers or read subject-related publications.

5.2.8.2 Differences between subject teachers

Comparing the responses from various schools revealed some statistically significant differences, as showed by the Kruskal-Wallis test, in teachers' reports of being involved in professional discussions with colleagues, as Table 5.26 shows.

Table 5.26 Teacher involvement in professional discussions: teachers' views by school (0.036, $p < .05$)

School		1	2	3	4	5	6	7	8	9	10	11	12
Often	n	2	7	6	4	7	12	7	13	7	9	10	9
	%	25	46.7	60	33.3	46.7	92.3	46.7	86.7	50	64.3	66.7	75
Sometimes	n	4	8	3	8	8	1	7	2	5	2	3	2
	%	50	53.3	30	66.7	53.3	7.7	46.7	13.3	35.7	14.3	20	16.7
Rarely	n	2	0	1	0	0	0	1	0	2	3	2	1
	%	25	0	10	0	0	0	6.6	0	14.3	21.4	13.3	8.3
Never	n	0	0	0	0	0	0	0	0	0	0	0	0
	%	0	0	0	0	0	0	0	0	0	0	0	0
Total		8	15	10	12	15	13	15	15	14	14	15	12
Missing data											1		

The Mann-Whitney test showed that female teachers (Mdn=73.77) were significantly more involved in professional discussions with colleagues than male teachers were (Mdn = 86.35), $U = 2603.000$, $z = -1.977$, $p < .48$ (Table 5.27).

Table 5.27 Teacher involvement in professional discussions: teachers' views by gender (0.048, p < .05)

Possible answerers	Males		Females	
	n	%	n	%
Often	35	48.6	58	67.4
Sometimes	33	45.8	20	23.3
Rarely	3	4.2	7	8.1
Never	1	1.4	1	1.2
Missing data			1	
Total	72		86	

This suggests that there was more interaction and discussion between the teachers at female schools than at male schools. The differences between schools might be due to the attention each school leadership team had paid to improving the quality of their staff teaching and the ways it had used to overcome weaknesses in teachers' abilities. It could also reflect colleagues' influence and whether the climate in the school encouraged various kinds of PL.

5.2.8.3 General trends in ratings the usefulness of involvement in self-directed PL

Compared with the ratings of actual involvement in self-directed PL activities, teachers' ratings of the value of these activities were much higher.

Table 5.28 Usefulness of some self-directed PL activities: teachers' overall views

Statement	Very useful		Useful		Some useful		Not useful		Total (missing data)
	n	%	n	%	n	%	n	%	
1. Usefulness of discussion with colleagues	85	60.3	50	35.5	6	4.3	0	0	141 (18)
2. Usefulness of using the internet	80	57.6	52	37.4	7	5.0	0	0	139 (20)
3. Usefulness of reading subject-related publications	69	48.9	58	41.1	14	9.9	0	0	141 (18)
4. Usefulness of observing others	66	47.1	64	45.7	7	5.0	3	2.1	140 (19)
5. Usefulness of self-reflection	65	45.8	64	45.1	11	7.7	2	1.4	142 (17)

For example, observing other teachers' teaching was rated very highly by teachers overall, as shown by Table 5.28, which indicates a general awareness among teachers of the potential benefits of reflecting on others' practice. There is, however, an apparent contradiction between teachers' beliefs and their actual practices, which could be attributed to the many justifications they might make for not engaging in peer observation, including lack of time, shyness, or not admitting their own teaching weaknesses. It may also indicate negative attitudes leading teachers to disengage from self-directed PL.

Likewise, it is notable that almost half of respondents stated that reading subject-related publications was very useful for their PL improvement, although only a third reported that they had often read such publications.

These findings show that while teachers varied in their engagement in self-directed PL (their actual practice), most of them agreed on the importance of these in developing their PL (their beliefs). The need to explain this discrepancy received particular attention in the second phase of the investigation.

5.2.8.4 Differences between subject teachers

The analysis revealed some statistically significant differences between schools in teachers' ratings of the value of observing others, as shown by Table 5.29.

Table 5.29 Usefulness of observing others: teachers' views by school (0.033, $p < .05$)

School		1	2	3	4	5	6	7	8	9	10	11	12
Useful	n	6	11	9	11	15	8	12	11	11	12	13	11
	%	85.7	91.7	90	100	100	66.7	92.3	100	91.7	100	100	91.7
Some useful	n	0	1	1	0	0	3	0	0	1	0	0	1
	%	0	8.3	10	0	0	25	0	0	8.3	0	0	8.3
Not useful	n	1	0	0	0	0	1	1	0	0	0	0	0
	%	14.3	0	0	0	0	8.3	7.7	0	0	0	0	0
Total		7	12	10	11	15	12	13	11	12	12	13	12
Missing data		1	3		1		1	2	4	2	3	2	

What seems to present itself strongly here is that teachers differed in their engagement in PL activities. The strength of their engagement might be influenced by many complex personal and contextual factors, including previous experience, colleagues' influence, school climate and school leadership support. Revealing and understanding such factors and what affect them might help to increase such engagement.

5.2.9 Methods used to promote PL

5.2.9.1 General trends

Teachers were also asked, in question five, to identify the most useful forms of PL – in other words, the PL types that had helped them to learn better. It was evident from their responses that they valued highly PL opportunities in their schools and those involving interaction with colleagues or someone who had similar interests or faced similar challenges.

Table 5.30 Methods used to promote teachers' PL: teachers' overall views

Statement	Very helpful		Helpful		Some help		No help at all		Total (missing data)
	n	%	n	%	n	%	n	%	
1. Mentoring and coaching	94	59.5	42	26.6	16	10.1	6	3.8	158 (1)
2. Training days in the school	45	28.8	79	50.6	27	17.3	5	3.2	156 (3)
3. Training days outside the school but within the district	50	31.6	72	45.6	24	15.2	12	7.6	158 (1)
4. Online training	54	34.2	62	39.2	30	19.0	12	7.6	158 (1)
5. Training abroad	70	45.2	33	21.3	17	11.0	35	22.6	155 (4)
6. Training days in Muscat	55	35.3	42	26.9	30	19.2	29	18.6	156 (3)

As can be seen in Table 5.30, mentoring and coaching received the highest ratings from most teachers: 86.1% described it as helpful or very helpful. A substantial number of teachers also rated training days in the school positively. This suggests that teachers may have felt more willing to expose their weaknesses to colleagues, perhaps because there would be less chance of being criticised by them, taking into account the strong social relations that exist in Omani society. More than two-thirds of respondents also rated

training days in another school and online training positively, indicating that teachers may have appreciated the experience gained from other teachers working in similar contexts and valued any chance to collaborate with others having similar interests. Teachers seemed less supportive of training abroad, perhaps as a result of less past experience or of a reluctance to try new experiences that might lead them out of their comfort zone.

In contrast, only half of the participants rated the value of training in the capital city, Muscat, which usually took place in the main training centre, the specialised centre, or at Sultan Qaboos University (SQU). Again, teachers' previous experience might be a factor explaining this lower value. It might also be because many of the PL activities in Muscat did not meet teachers' individual needs, having been designed to suit the needs of a wide range of teachers.

What might be presumed from Table 5.30 is that teachers preferred training that had taken place in their schools, where less school time was wasted and no travel arrangements were required. Teachers might also be more likely to participate in PL activities that they felt were more closely related to their professional needs or those which were more relevant to their daily teaching. Thus, examining these speculations required eliciting in phase two the teachers' justification of the kind of PL activities they would consider more effective and relevant to their needs.

5.2.9.2 Differences between subject teachers

Statistically significant variations were found between groups in responding to this question that were related to three methods of promoting teachers' PL: online training, training days in Muscat and training abroad. The value of training abroad was perceived

differently by subject area. Maths teachers rated it the least highly (n=14; 43.8%), while English teachers rated it most highly (n=29; 87.9%), as shown by Table 5.31.

Table 5.31 Usefulness of training abroad: teachers' views by subject area (0.001, p < .05)

Subject Area		English	Mathematics	Science	Arabic	Social studies
Helpful	n	29	14	22	21	15
	%	87.9	43.8	71	72.4	53.6
Some help	n	3	4	1	3	6
	%	9.1	12.4	3.2	10.3	21.4
No help at all	n	1	14	8	5	7
	%	3	43.8	25.8	17.2	25
Total		33	32	31	29	28
Missing data			1		1	2

This indicates that the English teachers may have been more likely to receive PL abroad. Different teachers with various experience also perceived training days in Muscat differently, as shown by Table 5.32.

Table 5.32 Usefulness of training days in Muscat: teachers' views by experience (0.022, p < .05)

Experience (years)		1-2	3-5	6-10	11-20	> 20
Helpful	n	1	11	36	47	2
	%	100	73.3	73.5	58	20
Some help	n	0	3	7	16	4
	%	0	20	14.3	19.8	40
No help at all	n	0	1	6	18	4
	%	0	6.7	12.2	22.2	40
Total		1	15	49	69	10
Missing data				1	14	

This suggests that younger teachers were more open to attending training opportunities that required traveling for long distance.

Overall, the above variations suggest that teachers differed in their preferences for the type of PL that suited their learning best. Understanding these differences might help in meeting the needs of various teachers, increasing their willingness to engage in formal PL and strengthening their commitment to it.

5.2.10 Benefits of engagement in PL

5.2.10.1 General trends

In question 7, teachers were asked to indicate their level of agreement with statements about the benefits of PL they had experienced on a range of MOE, school and teaching-related issues, including mission, priorities, self-efficacy, meeting students' needs, collaboration with other teachers and self-directed learning. The results were generally confusing rather than conclusive. The high percentage of 'not sure' responses to many statements suggest that teachers found it difficult to assess the extent of the effect of PL opportunities they had experienced.

For instance, teachers' responses to two statements in question 7 (see Table 5.33), which aimed at evaluating teachers' awareness of the link between their learning and improvements in the wider system (at national and school level), seem to add more confusion rather than explanation. They suggest that there was adequate communication inside schools and with the MOE, since more than half of the teachers thought they had become better aware of the MOE's mission and vision and that they better understood their schools' priorities. However, this seems to contradict the suggestion made in Section 5.2.2 that poor communication might have affected teachers' overall knowledge of what was happening in the MOE and in their schools.

Table 5.33 Effects of PL on awareness of the vision of the MOE and the priorities of the school: teachers' overall views

Statement	Agree		Not sure		Disagree		Missing data
	n	%	n	%	n	%	
1. Have helped me identify and articulate the core values, mission and vision of the ministry.	91	57.6	38	24.1	29	18.3	1
2. Have helped me understand my school's improvement priorities.	108	68.8	32	20.2	17	11	2

Furthermore, although more than the half of the respondents thought that the PL they had received was of good quality overall and had helped them to become effective teachers,

nearly half of them thought that it had not adequately met their professional needs (see Table 5.34). In addition, time seemed to be an issue for many teachers.

Table 5.34 Effects of PL at the personal level: teachers' overall views

Statement	Agree		Not sure		Disagree		Missing data
	n	%	n	%	n	%	
1. Have helped me become a more effective teacher.	113	73.9	29	19.0	11	7.1	6
2. Have been of good quality overall.	90	58.4	42	27.3	22	14.3	5
3. Have not been adequate for my professional development needs.	73	48	41	27	38	25	7
4. Have not provided me with time to develop my knowledge.	47	30.3	48	31	60	38.7	4

This indicates that teachers may have hesitated when they had to decide whether the current PL opportunities had met their needs, perhaps because they were not sure what their professional needs were and had relied on experts such as inspectors or senior teachers to decide these needs on their behalf. It may also indicate variation in the extent of teachers' ability to reflect on their practice and on other colleagues' teaching. Any such hesitation or variation in reflection would raise questions about the extent to which teachers are able to transfer to their own classrooms knowledge gained from attending PL activities, about whether improved subject knowledge had changed teachers' attitudes and about whether such improvements were adequate to cause a genuine change in classroom practice.

In contrast, it was noticeable that benefits were perceived more strongly at the school level, e.g. in regard to school leadership and colleagues' support and interaction with others (see Table 5.35), although with significant numbers of respondents being unsure.

Table 5.35 Effects of PL at school level: teachers' overall views

Statement	Agree		Not sure		Disagree		Missing data
	n	%	n	%	n	%	
1. Have offered me opportunities to discuss my experience with teachers from other schools.	103	66	28	17.9	15	16.1	3
2. Have not provided me with colleagues' support.	35	22.7	47	30.5	72	46.8	5
3. Have not offered me school leadership support.	35	23.2	43	28.5	73	48.3	8

It was interesting but predictable that although a substantial number of teachers reported using various resources in their self-directed learning, MOE-linked learning resources, despite being available and accessible, were not the first option for many, as shown by Table 5.36. Negative attitudes towards the MOE may underlie teachers' weak enthusiasm.

Table 5.36 Effects of PL on using some MOE-linked resources: teachers' overall views

Statement	Agree		Not sure		Disagree		Missing data
	n	%	n	%	n	%	
1. Have encouraged me to use different PL resources	111	71.2	32	20.5	13	8.3	3
2. Have encouraged me to use the MOE online subjects' forums to develop my knowledge and improve my teaching practice.	80	51.3	36	23.1	40	25.6	3
3. Have encouraged me to use the Training Centre Library to develop my knowledge and improve my teaching practice.	57	37	41	26.6	56	36.4	5

The findings also indicated that PL had a positive overall impact on improving students' achievements and meeting their needs, as shown by Table 5.37, although teachers seemed more divided in deciding the extent of enhancement in specific aspects, such as use of ICT.

Table 5.37 Effects of PL at the classroom level: teachers' overall views

Statement	Agree		Not sure		Disagree		Missing data
	n	%	n	%	n	%	
1. Have helped me see the link between an improvement in my teaching and the quality of pupils' achievements.	110	70.5	35	22.4	11	7.1	3
2. Have not enabled me to realise how my pupils learn best.	44	28	39	24.8	74	47.2	2
3. Have provided only theoretical knowledge and theories that cannot be implemented in practice in the classroom.	73	47.1	36	23.2	46	29.7	4
4. Have not helped me understand how to use ICT in my teaching more effectively	57	36.8	42	27.1	56	36.1	4
5. Have helped me understand how to develop pupils' literacy skills.	81	52.3	40	25.7	34	22	4

Involving head teachers and inspectors (as PL providers and deliverers) in the next stage of this investigation helped in validating and triangulating these findings and understanding some of the variations.

5.2.10.2 Differences between subject teachers

There were some statistically significant differences in responses to this question that could be linked to the gender of the teachers or to the subject area. Interestingly, the Mann-Whitney test showed that female teachers (Mdn=68.61) were in significantly less agreement with a statement that denied colleagues' support in PL than male teachers (Mdn = 88.16), $U = 2193.500$, $z = -2.841$, $p < .005$, as shown by Table 5.38.

Table 5.38 Formal PL has not provided teachers with colleagues' support: teachers' views by gender (0.005, $p < .05$)

Possible answers	Male		Female	
	n	%	n	%
Agree	23	32.9	12	14.3
Not sure	21	30	26	31
Disagree	26	37.1	46	54.7
Missing data	2		3	
Total	72		87	

The Mann-Whitney test also showed that females (Mdn=85.49) were in significantly less agreement than male teachers (Mdn = 68.90) with the statement that PL offered only theoretical ideas that were hard to implement; $U = 2338.000$, $z = -2.371$, $p < .018$ (Table 5.39).

Table 5.39 Formal PL offers only theoretical ideas: teachers' views by gender (0.018, $p < .05$)

Possible answers	Male		Female	
	n	%	n	%
Agree	37	52.9	36	42.4
Not sure	20	28.6	16	18.8
Disagree	13	18.5	33	38.8
Missing data	2		2	
Total	72		87	

Female teachers' noticeably more positive evaluation might indicate that they tended to engage with others more easily than male teachers, leading them to benefit more from colleagues in translating theoretical ideas into practice.

Various subject teachers also differed in their responses to a statement on the effect of PL in better use of an MOE-linked online forum (see Section 2.4.3.2), as shown by Table 5.40.

Table 5.40 PL encourages teachers to use the online forum of the ministry: teachers' views by subject area (0.035, $p < .05$)

Subject area		English	Mathematics	Science	Arabic	Social studies
Agree	n	17	13	12	20	17
	%	51.5	43.3	38.7	66.7	56.7
Not sure	n	7	6	7	7	8
	%	21.2	20	22.6	23.3	26.6
Disagree	n	9	11	12	3	5
	%	27.3	36.7	38.7	10	16.7
Total		33	30	31	30	30
Missing data			3			

It may be that these MOE-linked resources suited some subject areas, including social studies, more than others. Another factor may be the extent to which senior teachers and inspectors have promoted these sites as valuable resources for learning.

Various subject teachers also differed in their responses to a statement on the effect of PL in promoting using various PL resources, as shown by Table 5.41.

Table 5.41 PL encourages teachers to use various PL resources: teachers' views by subject area (0.009, $p < .05$)

Subject area		English	Mathematics	Science	Arabic	Social studies
Agree	n	21	19	22	21	26
	%	63.6	63.3	71	70	86.7
Not sure	n	9	8	6	8	1
	%	27.3	26.7	19.4	26.7	3.3
Disagree	n	3	3	3	1	3
	%	9.1	10	9.7	3.3	10
Total		33	30	31	30	30
Missing data			3			

This variation is difficult to explain, but may be related to variation in the supplementary resources available for different subject areas.

5.2.11 Future support for PL

Teachers' opinions were canvassed as to what future support was needed to make PL more effective. It produced 78 (49%) responses, summarised in Table 5.42.

Table 5.42 Future support needed to make PL more effective: teachers' overall views

Support needed	Number of matches
Facilities in schools (halls, technology, technical support, teaching materials)	15
Change in mechanisms of PL (intensive PL, focusing on teachers' needs, model lessons, new topics, presenting styles)	10
More PL opportunities outside schools	9
Financial support	8
Moral and psychological support	7
Better presenters and experts	6
More consultation and communication with teachers	5
More flexibility in PL	5
More group learning	4
Reducing teaching load	4
Foreign trainers	3
Reducing non-teaching load	3
Better internet connectivity	2
Certified courses	2
More support from inspectors	1

The largest number of respondents stressed the need to provide more PL facilities in schools. These included the provision of 'PL training halls' (well-equipped rooms for conducting PL activities that would accommodate large numbers of teachers), teaching materials and aids like charts, board markers, computers and photocopiers. The second most common demand was for changes in how PL is planned and delivered. Specifically, teachers asked for more interesting ways of delivering and presenting PL activities, better selected topics, longer and more intensive workshops and events, and more lesson-modelling by inspectors and experts.

A considerable number of respondents also advocated more PL opportunities outside school and better financial and non-financial support. Other suggested areas of improvement were in consultation with teachers, in PL providers' characteristics and in flexibility. Fewer teachers requested improvements in schools and teachers' conditions,

including reduced non-teaching loads and better internet connections. Finally, some argued for more assistance from inspectors and called for PL accreditation. Figure 5.7 displays the frequency of these suggestions graphically.

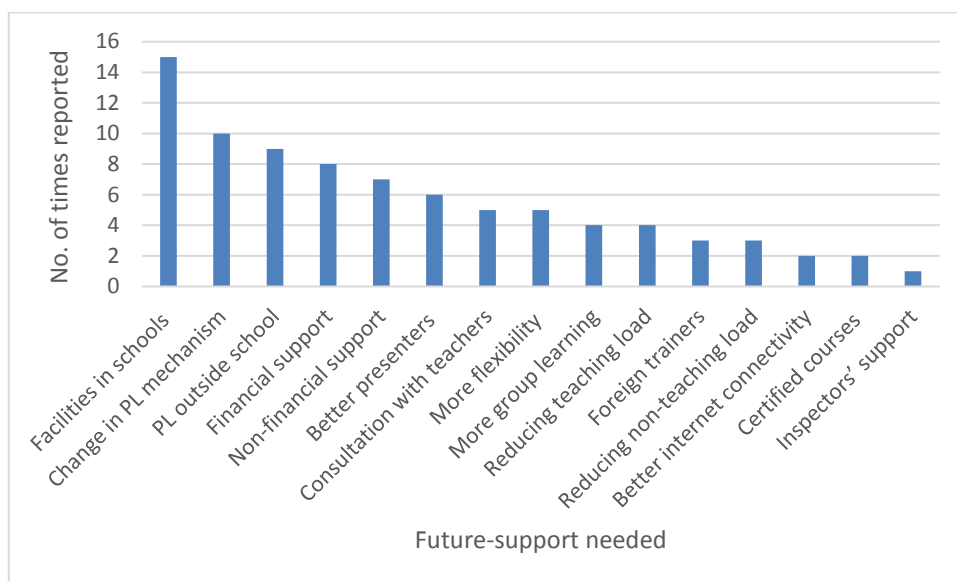


Figure 5.7 Future support needed to make PL more effective: teachers' overall views

5.3 Findings of head teachers' survey

5.3.1 Background information

The first part of the head teachers' questionnaire (see Appendix 10) asked participants for the following basic information: school name, gender, age group, overall experience in headship, service as head of their current school, previous teaching experience, their most advanced qualification, size of administrative and teaching workforce in their school and the number of students. The heads of all participating schools, six males and six females, responded to the questionnaire, as Table 5.43 shows.

Table 5.43 Background information on participating school heads

Respondents	School	Gender	Overall experience in headship (years)	Headship experience in current school	Teaching experience	Highest qualification	No. of Adm. staff	No. of teaching staff	No. of students
H1	A	M	11	6	4	BA	12	38	340
H2	B	M	12	6	15	BA	12	69	715
H3	C	M	14	3	8	BA	8	57	460
H4	D	M	4	3	6	BA	10	27	252
H5	E	M	7	3	8	BA	8	72	648
H6	F	F	14	12	4	BA	9	66	520
H7	G	F	17	9	4	BA	10	87	724
H8	H	F	14	5	5	BA	9	59	410
H9	I	F	4	**	9	**	14	70	648
H10	J	F	6	6	4	BA	4	59	430
H11	K	F	15	5	6	BA	15	85	730
H12	L	M	20	20	5	BA	12	64	584

(** Missing data)

5.3.1.1 Distribution of participants by age range

Table 5.44 shows that the majority of the participants were aged between 36 and 40 years, while two head teachers were younger and three were older. This shows a wide age range, which might be helpful in attaining a diversity of points of view.

Table 5.44 Participants' age range

Age range	n	%
31-35	2	18.2
36-40	6	54.5
41-45	1	9.1
Above 45	2	18.2
Total	11	100.0
Missing data	1	
Total	12	

5.3.1.2 Distribution of participants by spent time as head of current school

Table 5.43 shows that most of the respondents had spent at least three years as head of their current schools. Interestingly, two head teachers had been in post for more than eleven years. This appears to contradict the MOE guidelines that heads should not remain in one school for many years and should experience working in different schools over time to acquire more experience. This raises the issue of the apparently relatively narrow experience of these heads compared to others who had headed more than one school.

5.3.1.3 Distribution of participants by total leadership experience

Table 5.45 shows that the participants had a variety of headship experience and that more than half of them had more than eleven years as head of one or more schools.

Table 5.45 Total time spent as head teacher

Total years spent as school head	n	%
3-5	2	16.7
6-10	3	25
11-20	7	58.3
Total	12	100

5.3.1.4 Distribution of participants by teaching experience

As Table 5.46 shows, most of the head teachers had between three and ten years of teaching experience, which suggests that they had spent enough time in teaching to enable

them to appreciate why teachers might have reacted positively or negatively to proposed changes. This point was followed up in detail in the interviews.

Table 5.46 Time spent as a teacher

Teaching experience (years)	n	%
3-5	6	50
6-10	5	41.7
11-20	1	8.3
Total	12	100

5.3.2 Knowledge of educational policy reform

It was evident from the data reproduced in Table 5.47 that school leaders had better knowledge of educational reforms in the MOE than teachers, which supports the argument in Section 5.2.2 that they might have had regular communication with the MOE.

Table 5.47 Head teachers' knowledge of the latest MOE initiatives

Responses	Number of occurrences
The specialised centre for teacher training	4
Budget allocations for PL in schools	3
Curriculum revision and modification	3
Renovating science labs in schools	1
Revising and improving students' discipline regulations	1
Organisational restructuring of some MOE units	1
The online educational portal for educational services	1
Enhancing teachers' quality and qualifications	1
Modifying job specification	1
Introducing new subjects	1
Changing teachers' minimum teaching load	1
Taking part in international comparisons and competitions	1
Developing the assessment system	1

Three main initiatives were mentioned by at least three respondents: the setting up of a specialised centre for teacher training (mentioned by four heads), the decision of the MOE to allocate some money to schools for PL and ongoing curriculum modifications and developments (three respondents each). However, this does not necessarily mean that

the other participants, who did not mention these initiatives, were not familiar with them; it might be a matter of what they considered the most important. Thus, it seems that the respondents differed in focus when answering this question; this may reflect specific areas of interest of individual school heads. Others referred to physical changes that took place in schools (like renovation of science laboratories), changes in teaching conditions and job specifications (e.g. teaching load), new online educational services systems (e.g. the educational portal), modification of rules or regulations (e.g. on student discipline) and implementation of international educational standards (e.g. joining international comparisons and competitions).

This indicates not only that school leaders had fuller knowledge of recent developments, but that they might have better understood the aims of reforms and initiatives. However, it also suggests that many ambitious policies and plans for improving teaching quality in Oman might have been implemented in schools with limited or inadequate effort to ensure that they were well communicated to classroom teachers, especially in relation to appreciating their goals. If this is true, the implementation of the plans in schools may thus have been carried out with minimum belief in their usefulness in improving students' achievements, which puts in question their success in achieving real change.

5.3.3 Conceptualising PL

School heads exhibited a wide range of interpretations, orientations and expectations about PL, within which the definitions most often offered suggest that PL was linked to increasing teachers' efficiency and keeping abreast of international developments in education. This is evident in the following quote: 'It means strengthening teachers' professional abilities through enhancing their teaching capabilities and skills in accordance with the needs and goals of the teaching career' (H10). Developing teachers' skills and increasing their subject knowledge appeared also to be stressed by many

respondents, as one participant (H7) defined it as: 'A way to increase teachers' knowledge, skills and experience'. On one hand, however, many heads (n=5; 41.6%) seemed to have a broader conceptual understanding of PL that included both formal and informal opportunities to learn, as was evident in their use of phrases such as 'any kind of learning', 'any activity', 'whatever helps teachers'. On the other hand, fewer responses seemed to stress the formal side of PL by referring to training programmes, workshops, seminars, lectures etc. Perhaps these were not perceived to be of a very standard.

Hence, how heads understood PL may have influenced how they visualised their roles in improving teachers' learning. For those who limited their definitions to formal types of PL, it is more likely that their involvement in improving teachers' learning will have been very limited, whereas those whose vision was much wider might be expected to have had much more involvement in PL. How the respondents envisioned their role in teachers' PL and how they translated this vision into practice is the focus of further discussion in Section 5.3.9.

5.3.4 Focus of PL on policy reform

Eleven of the head teachers (95%) offered a response on the place of PL in relation to education reform. However, it seems that most limited their answers to areas related to the three examples given in the questionnaire: curriculum, ICT and classroom management. It is possible that the heads genuinely thought that these three areas were those in most need of focus, but it is also possible that they did not spend adequate time in reflecting on whether the formal PL was at the core of education policy. Another possibility, that some heads may have misinterpreted the question, is suggested by the response of H12: 'Teachers need to focus on all the examples given [in the questionnaire] to improve students' performance'. This answer refers to what teachers, rather than the

education policy, should focus on, which also indicates that some school heads may have blamed teachers for ineffective PL.

With regard to the curriculum, the respondents stressed several issues. They emphasised the need for it to be in line with the latest updates in subject area specialisations (H6, H7), to be presented in a way that better suits changes in students' learning (H10), to better prepare teachers on how to teach it (H4, H8) and to be flexible so that teachers do not stick to all its contents (H2).

In respect of ICT, the school leaders mentioned the need to train teachers on using new technology in teaching (H2, H9, H10), to demonstrate it to teachers so that they know how to use it in classroom (H4, H8, H11) and to increase online training (H7). This, however, suggests a passive form of PL that relies only on what is offered by the MOE.

With regard to classroom management, participants asserted that the focus should be on developing teachers' ability to ask students different types of questions (H2), evaluating students' performance (H4), handling students' behaviour (H5, H10), dealing with gifted and poor performing students (H7, H10) and motivating students (H8).

Other areas that some respondents considered important indicate an interest in the bigger picture; for example, H3 suggested that: 'training should be practical and there should be a congruence between what teachers take in PL and what they actually use in their classrooms'. This indicates that not all content introduced in PL events may always be implemented in classrooms; it might be implemented only when there is a visitor from the education office. There may be many reasons for such incongruity, but it seems that teachers are more likely to implement what they learn if they can see a link to their daily work-related context and better outcomes for their pupils. This also suggests that it is

important for head teachers to be aware of what happens in the classroom and that they need to pay attention to observing changes in teachers' practice.

This leads to another area of focus suggested by H5, who called for 'prioritising the development needs'. This indicates that some school heads may have disagreed with the MOE on what their teachers' professional needs were and which ones of these were more important. H5 also identified an important technique for improving teaching quality, rarely adopted in Omani schools, when he suggested that the focus should be on 'improving teachers' inquiry and research abilities'. This points to a need to encourage teachers to engage in more self-directed PL, where they can work individually and in groups to find solutions to their daily problems in schools using research techniques including surveys, observations and discussions with each other and with the students.

H7 argued that more attention could be given to motivating teachers and improving the social image of the teaching profession, while H10 called for more time and resources to be devoted to ensuring that teachers are self-stimulated, have positive self-esteem, are motivated and develop self-directed learning habits.

This suggests that the focus of education policy on improving teachers' PL should go beyond strengthening their subject and pedagogical knowledge to considering their contexts, changing their attitudes, providing them with adequate time and space to change and equipping them with the essential tools and skills to be change agents. School heads can play a crucial role in attaining such a desired outcome through their daily interactions with teachers. Marginalising school leaders' roles and involvement in teachers' PL might have a negative impact on its effectiveness.

5.3.5 Overall perceptions of formal PL

Heads expressed no obvious negative or positive opinion, which indicates that they were careful not to criticise how things were planned and conducted by the MOE. Specifically, responses were clearly divided in responding to a statement suggesting that PL opportunities had not met teachers' actual professional needs: five participants (41.7%) agreed, three were not sure (25%) and four disagreed (33.3%). However, heads with 6-10 years of experience in their current school appeared more likely to agree with this statement (n=4, 100%) than those with less or more experience (n=1, 20% and n=0 respectively).

The same division was also noticed in the responses to a statement suggesting that teachers were not consulted on the content and delivery mechanism of their PL opportunities as can be seen in Figure 5.8.

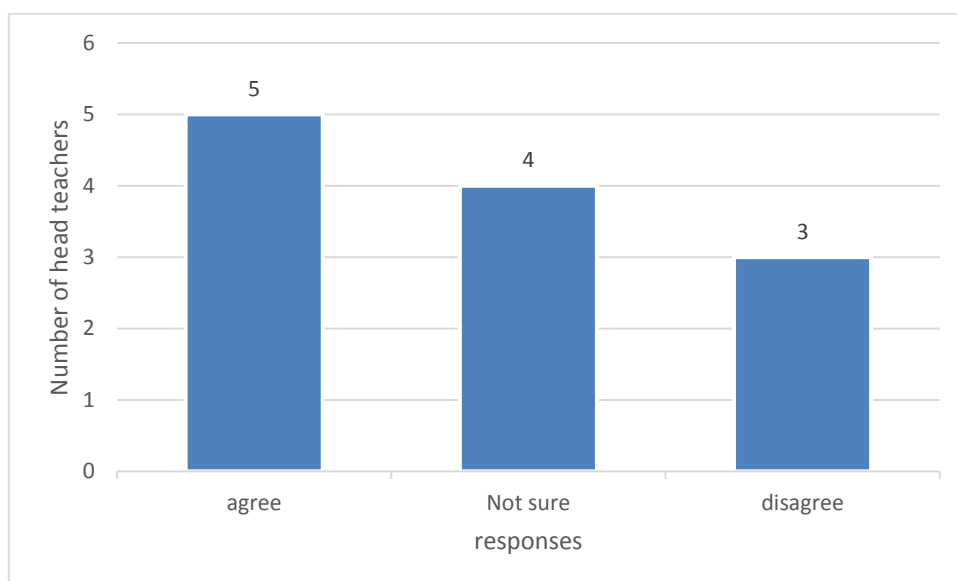


Figure 5.8 'Teachers are not consulted on the content and way of delivery of their PL opportunities': head teachers' overall view

However, variations were noticeable in rating this statement based on leadership experience in the current school: heads with 11-20 years of experience appeared more likely to agree with this statement (n=2, 100%) than respondents with 3-5 or 6-10 years

of experience (n=1, 20% and n=2, 50% respectively). Variations were also evident in responding to this statement based on total time spent in school leadership. All those who had spent 3-5 years in total as school leaders disagreed that teachers were not consulted in PL, whereas 66.7% (n=2) of those with 6-10 years and 42.9% (n=3) of those with 11-20 years of experience in leadership agreed with the statement.

Similarly, head teachers were clearly divided in their responses to a statement proposing that PL opportunities reflected the perceptions of policymakers more than teachers (n=6, 50% agreed; n=2, 16.7% were not sure; n=4, 33.3% disagreed). Variations were also noticeable in rating this statement by leadership experience in the current school: heads with 11-20 years of experience appeared more likely to agree with this statement (n=2, 100%) than those with 3-5 or 6-10 years of experience (n=3, 60% and n=1, 25% respectively). Likewise, differences in responding to this statement could be linked to total time spent in school leadership: 85.7% (n=6) of those who had spent 11-20 years as school leaders agreed that PL reflected the perceptions of policymakers, whereas none of those who had spent less time in leadership did so. This would suggest that many school leaders might not have been committed to the change process imposed by the MOE, since they thought that it did not fit what their schools needed.

This shows a complex picture of how head teachers viewed the MOE's role in PL. These findings suggest that whereas most head teachers may have conformed with and implemented whatever came from the MOE, they might not necessarily have been convinced that these suited their teachers or led to improved students' outcomes. Consequently, they might not have invested much effort in making sure that these had led to the desired outcomes or truly endeavoured to persuade teachers of their benefits. It may also indicate that the respondents thought that decisions regarding teachers' PL were based on how the MOE officials thought they should be and on limited consultation with

schools, instead of widely engaging schools and teachers in deciding what was best for them and determining their professional needs.

From another perspective, this also suggests that school leaders' attitudes towards PL were not only influenced by time spent in leadership; other contextual or personal factors may have contributed as well.

5.3.6 Important aspects of teachers' PL

Head teachers were asked about their perceptions of the importance of particular factors contributing to achieving effective PL. What was revealed was that respondents rated most aspects of PL as highly important, but with some slight variations. Cooperation between subject teachers and sharing experience was the highest rated aspect (n=11, 91.7%), which indicates that school heads valued and might have observed improvements in teachers' practice due to their engagement with each other on a daily basis. Ten respondents (83.3%) rated the following factors as highly important: feedback on teaching practice from experts (e.g. inspectors, senior teachers and school heads), innovative teaching practice and teachers' updating of their subject content knowledge. Observing other teachers' lessons, teachers' development of their pedagogical skills, their commitment to developing their teaching practice and understanding students' needs were rated by nine participants (75%) as very important. However, teachers' own reflection on their teaching practice was rated least important, which raises the question of whether reflection was a skill that most teachers lacked or one that school heads considered less important in improving teachers' practice than other factors such as formal feedback. The fact that reflection is often an invisible and subconscious process may lie behind this very surprising finding. What seems to make more sense is that teachers vary in their reflection, but it is hard to believe that they do not reflect on their daily practice.

While there were no noticeable variations in ratings that could be attributed to the gender of the participant, it was found that more experienced respondents were more likely to value allowing their teachers to observe each other's lessons compared to the less experienced participants, as can be seen in Table 5.48.

Table 5.48 Respondents' perception of the importance of colleague observation

Total administrative experience		n	%
Least experienced	Very important	1	50
	Important	1	50
Quite experienced	Very important	2	66.7
	Little importance	1	33.3
More experienced	Very important	6	85.7
	Important	1	14.3

This suggests that those heads with longer experience placed more emphasis on workplace experience and benefits gained from sharing good practice between teachers, an idea supported by the response of seven (100%) of the more experienced respondents who rated cooperation between subject teachers and sharing experience as a very important aspect of teachers' PL. It also indicates the possible extensive involvement of more experienced head teachers in the daily running of their teachers' PL (Section 5.3.9).

5.3.7 Barriers to improving PL

Head teachers were asked about their perceptions of potential obstacles to better and more effective teachers' learning. All of the stated options were perceived by the majority of respondents as obstacles to better PL. In detail, an excessive teaching load was reported as a major obstacle by all participants, while extra school duties and classroom density (number of students in a class) also appeared to be highlighted by a substantial number of school leaders (n=7, 58.3%), who indicated that these often hindered teachers' learning. Many respondents (n=7, 63.6%) considered the availability of PL resources a

potential barrier to teachers' learning. Likewise, lack of incentive, lack of support and teachers' resistance to any changes were broadly described as factors that had led to ineffective teachers' PL (n=8, 66.7%).

There were differences between males and females in rating these obstacles. For example, male heads were more likely to describe extra school duties (e.g. non-teaching responsibilities) and classroom density as factors that had limited teachers' learning (n=5, 83.3%) than female heads (n=2, 33.3%). Lack of support and teachers' resistance to change were also identified more by males (n=5, 83.3%) than females (n=3, 50%) as factors that had limited PL effectiveness.

There were also noticeable variations by total time spent in school headship. Generally speaking, less experienced respondents were less concerned with the availability of resources, lack of incentives and lack of support as obstacles to effective PL; 50% of them rated these as rarely being obstacles. This indicates that less experienced heads may have been ready to take greater responsibility for their teachers' PL and may have considered it more of a school-based task.

Time spent as head teacher in the current school also appeared to make a difference: those with the shortest and the longest time in post were more likely to agree that teachers' resistance to changes was often a factor limiting effective PL.

This could indicate that less experienced heads were less persuasive in convincing teachers of the need to change and had weaker interpersonal skills, whereas more experienced heads may have used traditional forms of leaderships that teachers would see as controlling and imposing ill-fitted or unwelcome ideas.

Likewise, both those heads with less experience (n=3, 60%) and those with more experience (n=2, 100%) in their current schools were more likely to agree strongly that their schools lacked adequate PL resources compared to heads with average experience (n=1, 25%).

Interestingly and unexpectedly, the more experienced respondents reported less ability to recognise improvement in teachers' practice due to lack of time. This may indicate that they had spent less time in observing such improvement. It might also mean that these respondents were more transparent and perhaps less prepared to diagnose and evaluate the progress in their teachers' learning. This lack of time could also be a result of the leadership style of the older head teachers and how ready they were to delegate some of their authority. Another possibility is a link to how effective they were in using technology to save valuable time.

Surprisingly, all four heads with average time in post reported needing further training on assessing teachers with their PL, in contrast to those with less or more experience (n=2, 40% and n=1, 50% respectively). This might be because they were more honest and transparent than both newly appointed heads, who may have felt more confident, and older school leaders, who might have thought that requiring training on dealing with teachers after spending so many years in school leadership would indicate incompetence.

5.3.8 Future support for PL

Eleven respondents (91.6%) answered an open-ended question about what future support was needed to make PL more effective. The most frequent responses are summarised in Fig. 5.11.

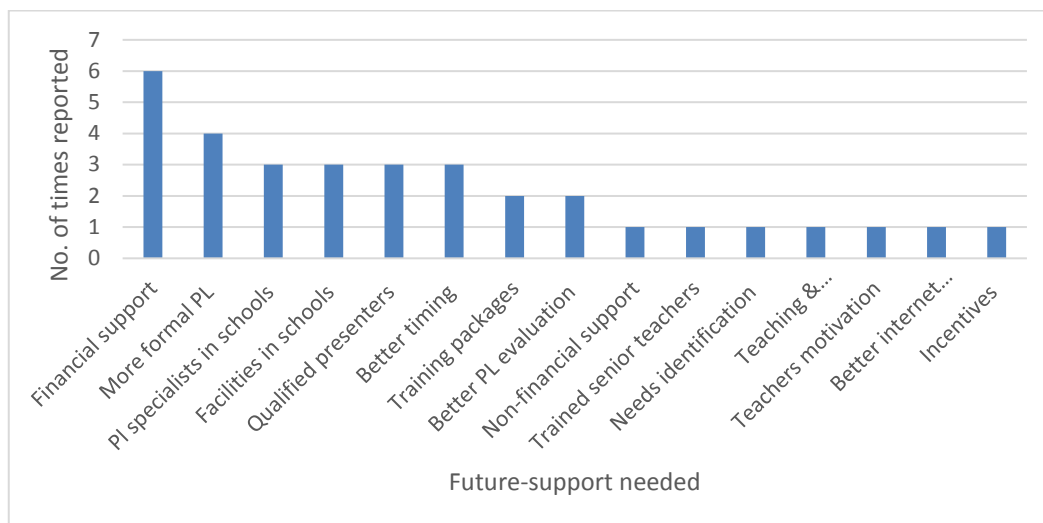


Figure 5.9 Head teachers' views of what future support was needed to make PL more effective

The most popular demand was for the provision of more financial support, which indicates that although the MOE had allocated some PL money for schools, it was not perceived as adequate to put schools' basic PL plans into action or to allow them to create ambitious PL plans. The second most commonly mentioned need was for more formal PL for teachers, which suggests that there were shortcomings in the annual PL opportunities offered to individual teachers.

In addition, three heads identified a need to assign specialists to organise and manage PL in schools and in the education office, a need for more PL facilities in schools (e.g. training rooms and aids) and for more convenient timetabling of PL events. This implies that some school heads saw teachers' PL as the responsibility of others and believed that their own focus should be on managing the day-to-day administration of their schools.

Training packages and better PL evaluation and impact follow-up also appeared to concern some heads, while fewer participants focused on other areas where they thought support was needed, including non-financial support, better preparation of senior teachers and specialised training for head teachers on how to identify teachers' needs and motivate them. Other individual respondents focused on particular areas such as

providing schools with a full teaching and administrative cadre, better internet connectivity and more incentives for teachers who demonstrate active PL.

These suggestions for future support seem to reflect two broad perspectives: the administrative managerial perspective, with a focus on enhancing the availability of resources and supportive people, and the practical transformational perspective, emphasising the need to enhance the quality and delivery of PL events. Although most of these ideas were claimed to be at the focus of the MOE, the real issue might be in tailoring the PL to better suit what schools and teachers actually wanted and needed.

5.3.9 Role of Head Teachers in relation to teachers' PL

5.3.9.1 School leaders' perception of their role

Nine statements in question 4 aimed at eliciting head teachers' perceptions of their role in teachers' PL. What emerged were contradictory indicators. On one hand, there was obvious agreement on the significant role of head teachers in their teachers' PL (n=11, 91.7%). This was reflected in head teachers' reporting that part of their role involved creating a learning environment in their schools (n=12, 100%) and inspiring teachers to enhance their teaching (n=10, 83.3%). On the other hand, nine respondents (75%) did not consider themselves responsible for their teachers' PL. This shows contradictory perceptions and indicates that although respondents believed they had an important role in teachers' PL, they may not have wanted to hold all the responsibility or be exclusively blamed for any failure in improving teachers' practice.

This contradiction was also apparent when the participants had to decide how their role was translated into daily practice. For example, respondents considered ensuring that the MOE's plans and programmes were implemented (all 12 heads) and that teachers' stick to the practices recommended in the formal PL opportunities (n=11, 91.7%) to be basic

elements of their role. At the same time, eleven heads (91.7%) agreed that their role involved ensuring that teachers update their skills and knowledge in accordance with their students' needs. Head teachers might have found themselves in a dilemma when there was a mismatch between what the MOE advocated and what their teachers' perceived as being needed.

The dilemma or confusion was also apparent in the respondents' ratings of the suggestion that content presented in the formal PL opportunities should be used by teachers as is, with no modifications. A clear division appeared among school leaders and they displayed obvious uncertainty (n=4, 33.4% agreed, n=3, 25% were not sure and n=5, 41.7% disagreed).

Likewise, responses to the statement that 'teachers should stick to content presented in formal PL' varied according to time spent in school leadership. Heads with less experience (3-5 years) showed greater disagreement (n=2, 100%) than the more experienced heads (6-10 and 11-20 years; n=1, 33.3% and n=2, 28.6% respectively). This suggests that newly appointed school leaders were more likely to be open to change but less satisfied with what was offered by the MOE.

5.3.9.2 Head teachers' reported involvement in teachers' PL

When head teachers were asked about their actual role in teachers' PL, they claimed full involvement in daily tasks that contributed to enhancing teaching quality. For example, nine head teachers (75%) reported that they had frequently ensured that teachers' professional learning activities were in accordance with the teaching goals of the school, while ten heads (83.3%) stated that they had often made sure that these corresponded well with pedagogical and subject-content development needs. However, only six of the 12 participants (50%) reported that meeting the educational goals of the MOE was a

priority they had sought. This indicates that heads differed in setting priorities for their schools and suggests that some school heads might have found teachers' actual needs diverged from what the MOE advocated; thus they had to adhere to whatever best suited their schools and teachers instead of implementing what was standardised by the MOE.

Indeed, female head teachers reported less commitment to MOE guidelines (n=2, 33.3%) than males (n=4, 66.7%), which suggests that female respondents were more independently minded in taking decisions that might have challenged what the MOE advocated but which seemed to them more closely aligned to their schools' needs. Interestingly, they differed from female teachers, who seemed less likely to oppose formal policies (see Section 5.2.10).

This full commitment to improving teachers' quality was reflected in frequently encouraging teachers to update their skills and knowledge; nine respondents (75%) reported often doing so. Similarly, ten school leaders (83.3%) reported frequent provision of feedback for their teachers on their teaching practice.

More experienced head teachers appeared to be more attentive to providing their teachers with chances to learn from each other, which could have taken the form of peer observation, as can be seen in Table 5.49.

Table 5.49 Teacher involvement in sharing experience: head teachers' views by total time spent as head teacher

Total administrative experience		n	%
3-5 years	Often	1	50
	Sometimes	1	50
6-10 years	Often	1	33.3
	Sometimes	2	66.7
11-20 years	Often	5	71.4
	Sometimes	1	14.3
	Rarely	1	14.3

This supports the finding presented in section 5.3.6 which suggested a higher value being ascribed by more experienced respondents to classroom observation.

However, such full involvement seemed less apparent when it came to physical presence during PL activities. For example, only seven participants (58.3%) reported that they had attended teachers' PL events and only one school head (8.3%) reported that she frequently delivered workshops herself to her teachers. There may be two reasons for this. Firstly, attending such activities requires a substantial expenditure of time, which head teachers might have found difficult. Secondly, some respondents might have not been able to conduct workshops for teachers in specific PL-related issues because they were not trained to do so or had limited specialist subject expertise.

This suggests that it is important for school leaders to be trained in how to develop their teachers' PL and influence them to make the most of their potential. School leaders' ability to analyse and react appropriately to various changing situations and needs of school leadership and their interpretation of their role in teachers' PL are crucial elements in realising meaningful change. The extent to which head teachers are engaged in PL-related decisions and the autonomy they have in meeting the particular needs of their schools seem crucial for the effectiveness of school improvement.

C. Results of phase two

This section presents the findings from the qualitative data, which involved four case study schools, as detailed in Table 5.50.

Table 5.50 Background information on the four case study schools

	Rural School	Outer School	City School	Town School
Head teacher	Reem	Raya	Sameer	Ahmed
Teacher/ subject taught	Hind (f) Social Studies	Zahrah (f) English	Maher (m) Science	Waleed (m) English
Teacher/ subject taught	Faizah (f) Science	Maria (f) Maths	Nassir (m) English	Hamed (m) Arabic
Teacher/ subject taught	Laila (f) Arabic	Nora (f) Social Studies	Hilal (m) Maths	Nadir (m) Maths
Gender	female	female	male	male
Size of school	medium	medium	medium	small
Age range	26-45	27-48	26-51	25-46

5.4 Interview findings

5.4.1 Conceptualisation of PL

In relation to how the participants conceptualised PL, there was no consensus on one particular definition but rather a focus on various aspects that constructed and shaped the participants' conceptualisation, which seemed to be driven by what they perceived as the most important elements of professional learning. While these findings confirm those of the questionnaire, it was evident that all of the participants somehow associated PL with trying to achieve one or both of the following goals: enhancing their teaching practice and improving their students' performance, by diverse means. For some, PL was what teachers did or acquired (the learning activities engaged in and the information or new skills so gained), while others were much more precise and linked their definitions to specific improvements and enhancements in particular areas, such as doing things differently, dealing with students more effectively or changing attitudes. The two ways of

understanding PL, as input or output, were apparent in the various interpretations, expectations and orientations of the participants as revealed through the following main contrasts: changes in ability versus practice, a continuous process versus one-off events, student focus versus teacher focus, external imposition versus internal motivation and individual versus collective responsibility. These are now discussed in turn.

5.4.1.1 Improvement in general capabilities vs change in teaching and learning

While confirming the questionnaire findings, the interview data suggest two main ways to epitomise the participants' understanding of PL. Some participants saw it as an improvement in their general capabilities and know-how, which included acquiring information and learning how things could be done differently, while for others, PL was an alteration in practice which took the form of changes in thinking, doing things differently, having positive attitudes, or engaging in learning activities with others. However, neither of these two ways of conceptualising PL seemed to be peculiar to one group or another; rather, this distinction represents variations in individuals' understandings which might be attributed to many interrelated factors, such as the complex systems that individuals existed in, their context, social factors, or internal motives and personal dispositions.

Improvement in general capabilities and know-how

Nearly half of the participants emphasised the input (what was acquired during PL events) rather than the output (changes in teaching and learning) of PL. For instance, Nassir (a male English teacher, City School) defined PL as

A collection of many things but the most important is increasing subject knowledge and knowledge about teaching techniques.

"مجموعة من الأشياء ولكن الأهم هو زيادة المادة العلمية ومعرفة طرق التدريس"

Most of the respondents seemed to refer broadly to having greater familiarity with new teaching techniques and curriculum content. Head teachers in particular thought that the term implied, in part, improving the capabilities of teachers in general; this input-oriented understanding seemed also to reflect the way PL was understood in the education office, where inspectors often focused on what teachers received in PL activities.

This shows that the understanding of PL was confined by some to what teachers acquired through formal events, which suggests that such participants viewed PL as involving a limited scope of change in particular areas to overcome a weakness or fill a gap, rather than a change to teaching practice as a whole.

Change in teaching and learning

The alternative was to conceptualise PL as implying the result of a process, which often took the form of a change in practice, beliefs, or students' achievements. This was evident from the responses of two inspectors, three head teachers and nearly half of the teachers, who focused more on the output and the desired outcome than on the input. For instance, Reem (Rural School head teacher) placed her focus on the goal of better teaching:

...an improvement in the experience and skills of teachers so that their performance is improved and their teaching practice is enhanced.

"تحسين في خبرات ومهارات المعلمين من أجل تحسين أداؤهم وممارساتهم التدريسية"

Sameer (City School head teacher) seemed also to support this understanding, while focusing on the effects on students.

Nearly half of the teachers thought that PL should be reflected in what happens in the classroom and specifically in students' performance. However, such positive change in teaching practice and students' achievement, according to Fahad (an Arabic language inspector) cannot happen unless accompanied by a positive change in teachers' attitudes

and beliefs, a condition highlighted by very few participants although valued highly in the questionnaire responses.

PL in my opinion is a development in convictions and beliefs.

"في رأيي التعلم الإنمائي هو تطوير في قناعات المعلمين"

The type of change suggested by those who saw PL as a change in practice seems to have been of the dramatic and comprehensive type, affecting the whole teaching process.

This suggests that changes in both abilities (being more familiar with various kinds of knowledge and teaching techniques) and practice (what and how teachers think and what goes on in the classroom) are essential components of the learning process and of the definition of PL. However, changes in teachers' practice might be artificial and short lived if teachers have negative attitudes towards the change process.

5.4.1.2 Continuous process vs one-off events

All school heads used the word 'process' to describe PL, which implies that they viewed it as a continuous effort; indeed, three of them referred clearly to PL as a never-ending development. For their part, inspectors seemed more likely to perceive it as a series of one-off events, reflected in their focus on particular events, topics, skills or strategies. It may be, however, that this focus on particular areas and skills was part of a longer-term planned and continuous process and that it was based on the feedback inspectors received from schools that they visited. This may be inferred from the two-sided view of PL expressed by Sultan, a maths inspector:

PL in our Educational Office takes two forms: the individual part which usually takes place in the school, where teachers exchange experience and discuss issues related to teaching their subjects, and there is the part that is done by the inspector who visits the school and is supposed to conduct PL activities based on the professional needs of his teachers.

"يأخذ التعلم الإنمائي في محافظتنا التعليمية شكلين: الجزء الفردي والذي يكون عادة في المدرسة حيث يتبادل المعلمون الخبرات ويناقشون المواضيع التي تخص التدريس في موادهم، وهناك الجانب الذي يقوم به المشرف التربوي الذي يزور المدرسة ويفترض أن يقوم بحمل أنشطة مهنية تعليمية للمعلمين بناء على إحتياجاتهم المهنية"

However, if it is true that the formal one-off PL events were part of a longer-term process planned by the MOE and education office, this did not seem to be obvious to teachers or school heads, perhaps because this fact had not been communicated to them. In contrast, teachers were more likely to believe that school-based PL activities were part of a process. Thus, there seems no evidence of 'joined-up thinking' between the MOE and schools, perhaps because of inadequate communication (see Section 5.4.2).

In line with the questionnaire findings, teachers seemed to have the greatest variations with regard to the one-off/continuous process dichotomy, which could be attributed to each teacher's perception of what education should target. While many of them advocated the one-off event, which suggests a more structured form of PL, Nadir (a male maths teacher, Town School) made a different argument:

.....knowing new teaching techniques ... cannot be simply conveyed to teachers through meetings or simple workshop...

"...معرفة طرق التدريس الجديدة ... لا يمكن نقلها للمعلمين ببساطة من خلال الإجتماعات أو الورش البسيطة"

Nadir's argument suggest the limitation of one-off PL activities in leading to real change in practice; thus he argued that these need to be followed by a practical element, such as trying newly learned ideas in the classroom. Similarly, Zahrah (a female English language teacher, Outer School) referred clearly to PL as a process that does not stop but runs like a train to more than one station; this view was supported by four other teachers.

These variations in how PL was perceived by individuals in the education office and schools suggests that PL was seen as incorporating a range of planned and spontaneous learning opportunities, comprising both one-off events and series of long-term ongoing learning occasions. However, it seems that many teachers engaged in PL activities with

the aim of learning about particular ideas they needed at that time, which explains why many of them highlighted the one-off interpretation.

5.4.1.3 Reasons for improving PL: student-focused vs teacher-focused

PL was widely linked to improving the performance of both teachers and students, which confirms the questionnaire finding of the main reasons for improving PL. Specifically, the purposes that participants identified for improving teachers' PL can be clustered around two main ideas: first, improving students' learning and meeting their needs, a view which female participants tended to adopt more than males, and second, increasing teachers' subject knowledge, improving their pedagogical skills and enhancing their teaching practice, which most participants supported.

A substantial number of participants emphasised the first area (student-linked), focusing on the quality of what students learn, improving their personalities and helping teachers to understand students' needs better. This indicates that although the teachers linked PL to students, they had various rationalisations for improving their PL, which ranged from achieving good student outcomes and enhancing ways of dealing with them to contributing to producing better human beings in society.

Surprisingly, Reem seemed to be the only head teacher who clearly advocated the idea of linking PL to meeting students' needs, by saying:

PL ... makes teaching techniques diversified and useful for students.

"التعلم الإنمائي ... يجعل من طرق التدريس متنوعة ومفيدة للطلبة"

The second, teacher-linked, purpose of improving PL also appeared to gain the attention of the majority of participants, both male and female, as a basic aim of PL. However, most inspectors and head teachers seemed to focus more on broad aims such as improving teaching techniques or gaining pedagogical skills and knowledge, occasionally referring

to a wider platform of purposes that included learning to interact with others. Talal (an English inspector) was the only inspector who discussed the effect that PL might have on teachers' ability to introduce 'innovative' ideas into their teaching.

Although most teachers broadly shared similar ideas for the purpose of improving their PL, some were more concerned with the effects PL had on their self-efficacy; specifically, increasing their self-confidence through achieving better competency in practice.

In short, while it can be said that there was an overall adequate awareness of the ultimate aims of PL in schools, there was no clear evidence that this was something that PL providers made sure to convey through PL events. Moreover, it seems clear that teachers had come to PL activities with a variety of purposes, which seem to have affected the way they engaged in these events.

5.4.1.4 Externally imposed vs internally motivated improvements to PL

While confirming the findings of the questionnaire that the participants had adequate awareness of the need to improve their PL, their interview responses linked it to four main drivers of change, these being advances in knowledge and technology, changes in students' learning, internal desire and reflection on particular individual needs, and the need to overcome teaching weaknesses under pressure from society.

Advances in knowledge and technology

Many participants linked their efforts to improve PL with their need to update various kinds of knowledge and skills in line with the latest advances around the world, especially those related to teaching methods, subject knowledge and using technology in education. Head teachers and inspectors regarded this as an external driver that had often led teachers to change and a result of globalisation; therefore some argued that PL needed to be part of the school culture.

Most teachers also seemed to strongly connect improving their PL to advances in knowledge and means of attaining it, many of them highlighting the pressure to change that advances in technology had put on them.

Social and moral pressure

PL was also seen to be driven by internal forces, mainly social pressure, a point made by three head teachers, and moral pressure, which was highlighted by a substantial number of teachers and by most heads, who focused particularly on personal and ethical responsibility as an internal driver of change.

The above findings suggest that there were both internal and external forces leading teachers to change. However, these may sometimes have been in tension, especially if they advocated different aims. Thus, the way teachers adapted to improve their PL as a response to their moral responsibility might have differed if they were driven by the aim of improving their students' results. Therefore, external drivers such as globalisation and competitiveness or internal ones such as moral purposes might have led in different directions and accordingly towards different aims for education.

Changes in students' learning

More than half of the teachers interviewed also reported changes in students' learning as a driving force for improving their learning. This emphasis on being responsive to students' needs was translated into attracting students' attention and making learning interesting to them, coming up with better ways to motivate them and understanding how their thinking changed. This was driven by a belief that such understanding would facilitate better communication with students and eventually enhance their performance, as Hilal (a male maths teacher, City School) argued:

If we think about our students ... their ideas changed a lot and they are more familiar with new technology than when we were at their age. We do need, as teachers, to

know how our students think, what they like, what are their preferences ... so that we can communicate better with them.

"إذا ما فكرنا في طلابنا فنجد أن أفكارهم قد تغيرت كثيرا وأنهم أكثر اطلاعا بالتقانة مما كنا نحن عندما كنا في نفس عمرهم. فنحن نحتاج كمعلمين الى التعرف على كيف يفكر طلابنا وماذا يحبون وماذا يفضلون ... حتى نتمكن من التواصل معهم بشكل أفضل"

Internal desire

PL was found to be triggered by an internal feeling that it was needed; this was agreed by almost all of the participants. For instance, the Arabic inspector, Fahad, believed that PL reflected teachers' willingness to change and recognition of the need for change:

PL is similar in my opinion to our personal needs... I don't know if I'm right! In the past we needed light so we invented the light, we needed to move faster so we invented the car... this means that life is based on our needs and these needs should suit our time and therefore we need to know exactly what our needs are to satisfy them.

"التعلم الإنمائي يشبه في اعتقادي حاجتنا الشخصية ... ولا أعرف إن كنت محقا! في الماضي احتجنا للضوء فاخترعنا المصباح، احتجنا الى التنقل بشكل أسرع فاخترعنا السيارة ... وهذا يعني أن الحياة تركز على حاجتنا ويفترض بهذه الحاجات أن تناسب وقتنا الحاضر ولذلك فمن المهم جدا التعرف على هذه الحاجات من أجل إتباعها"

This actually shows a kind of reflection that might lead to more positive attitudes towards change, an idea supported by many teachers who thought that teachers' reflection on their own practice would lead them to change. This inner desire, according to Fahad, is promoted when there is a positive attitude towards change.

What this suggests is that PL is a multidimensional process that is triggered by many internal, external, contextual and cultural factors. However, since these are initiated by different aims, they may be in tension, which might lead teachers to adopting particular attitudes towards certain PL events or types.

What is more, although PL might often be seen as an externally imposed force for change, realising a genuine change in teachers' practice seems to be strongly determined by their willingness to change and conviction that change is needed. Teachers engage in improving

their PL for many complex reasons; thus it is important for real change that these events meet their expectation and satisfy their desires. The school's culture seems to be a key driver in shaping teachers' purposes for improving their PL.

5.4.1.5 Individual vs collective responsibility for improving PL

The findings suggest that PL reflects both collective and individual responsibility. It was perceived by some participants as a collective responsibility of those involved in the PL process, especially the teachers, the school, the education office and the MOE, while stressing the need for teachers to be active and interact with their colleagues. However, it seems that most of the head teachers and teachers gave more weight to individual responsibility for improving teachers' PL. Reem, for instance, argued that teachers should be 80% responsible for improving their own teaching practice and seven of the teachers allocated a similar weight to this individual responsibility, although Nora, (a female social studies teacher, Outer School) argued that in reality it doesn't exceed 60%.

Such an emphasis on individual responsibility might be seen as reflecting the importance that should be devoted to personal settings and individual beliefs when planning for and implementing PL activities; these need to follow a learner-centred approach by focusing on what individual teachers actually need. However, the mismatch revealed by the questionnaire data between the stated belief that teachers should have the largest share of responsibility and the actual practice (the individual effort invested in PL) indicates the potential importance and contribution of collective learning to improving teachers' PL.

What the above discussion of the conceptualisation of PL suggests is that effective PL should take account of four main areas of change: in knowledge and skills, in beliefs, in teaching practice and in students' performance. However, this study did not investigate changes in students' achievements in depth, since the only evidence that could be

obtained during the limited time available was students' marks, which represented an objective assessment, contrary to the epistemological position of the researcher that knowledge is subjectively constructed.

Furthermore, these findings suggest that teachers might learn similarly under different circumstances, that they might learn differently under the same circumstances, that they might change beliefs but not change practice, that they might change practice but stick to their beliefs, that they might acquire new information and skills but not change beliefs, or that they might change their beliefs without acquiring new information and skills. This wide set of possibilities is what makes investigating teachers' learning in PL events a very complex issue.

5.4.2 Involvement in the change process

The interviews revealed differences among participants in their views of the extent of teachers' involvement in making decisions about their PL and areas of mismatch between what PL providers thought on one hand and what teachers and head teacher believed on the other. These are detailed below.

5.4.2.1 Communicating with teachers

Consistent with the questionnaire findings, the three changes that participants most often reported knowing about were the specialised centre for teacher training (SC), the Electronic Educational Portal (EEP) and changes in the curriculum. However, the interviews revealed that the centralised nature of the educational system was reflected in how the MOE communicated with teachers from the top down, i.e. from MOE headquarters to schools, with the education office as the supposed link between them. Bottom-up communication rarely occurred. Teachers' views ranged from expressing their absolute unawareness of what was going on in the MOE to arguing that they did not need

to know about everything and that they should only know about changes related to the curriculum. However, many teachers reported limited knowledge of what was happening in the MOE and many of those who knew about some of the latest initiatives did not seem to have a clear grasp of the rationale for the major proposed reforms.

The participants reported that they knew about the latest updates in MOE policy through three official channels: written correspondence from the educational office, visiting committees from the MOE and via the EEP. Most teachers also heard about new initiatives from their friends. Views varied regarding the three formal means of communication. Most head teachers highlighted written correspondence as a way of communicating with teachers; for instance, Raya (Outer School head teacher) spoke of their usefulness in introducing teachers to MOE initiatives. Forming committees at MOE headquarters was mentioned mostly by inspectors as a way to communicate new initiatives to schools, while teachers focused more on the EEP as the means by which they learned about new things. However, most of the participants highlighted some limitations of these channels. Two inspectors, including Sultan, admitted that communication was poor:

There is a lack of communication and if there is communication it happens only occasionally when there is a need to nominate teachers for a particular PL activity.

هناك نقص في التواصل وإن كان هناك تواصل فهو يتم أحيانا فقط عند الحاجة لترشيح معلمين
لنشاط ما

Three head teachers also thought that the whole communication process lacked teachers' voice. More specifically, many teachers expressed negative opinions of the effectiveness of these three central communication channels in familiarising them with the latest developments. Thus, Waleed (a non-Omani male English teacher, Town School) disagreed that written correspondence helped him to keep up to date and complained that his school had not received adequate publications, fliers or magazines for this purpose, while Maria

(a maths teacher, Outer School), along with three other teachers and one head teacher, thought that because of lack of time the EEP might not have been very useful to some teachers. Maher (a male science teacher, City School) described the EEP as outdated, while Reem advocated the use of other social media sites including Facebook and Twitter instead.

On the other hand, some interviewees evaluated communication in schools more positively. For example, all of her fellow head teachers agreed with Reem that they used a diverse range of ways to communicate with teachers:

We have a Twitter account as well for the school, which we use to spread the teaching techniques we use and as a means of motivation and communication with other teachers in other schools.

وكذلك لدينا حساب تويتر للمدرسة نستخدمه لنشر طرقنا التدريسية وكطريقة لتحفيز والتواصل مع معلمين من مدارس أخرى

5.4.2.2 PL plans

There was almost a consensus among participants that PL plans were rigid, imposed and unsuitable for teachers' needs or context and that they limited teachers' adaptation and creativity.

Only one inspector and one head teacher expressed positive opinions about these plans, whereas many participants criticised them heavily. For instance, Reem expressed her discontent with the way the plans were prepared, arguing that the main issue was that there was no opportunity for teachers' voices to be heard, while another head, Raya, thought that the plans were badly made and often conflicted with teachers' duties in schools.

Two inspectors agreed that PL plans were imposed on schools and even on the education office and were often irrelevant to teachers' needs; one of them, Fahad, objected that

PL plans are not based on teachers' professional needs.

لا تبني خطط التعلم الإنمائي وفقا للاحتياجات المهنية للمعلمين

Thus, it was crucial to understand how teachers' professional needs were identified in these plans.

5.4.2.3 Identifying teachers' professional needs

Identifying teachers' professional needs was said by both inspectors and head teachers to be a cornerstone of achieving real change. Inspectors clarified how teachers' professional needs are identified. For instance, Sultan asserted:

Teachers' PL needs are identified through the observations of those who supervise teachers, like senior teachers, school heads and inspectors, and also through analysing the evaluation forms used in the School Performance Development System, which is conducted by these people, and coming up with the areas that need to be developed ... When we have all these observations and evaluations we sit together and suggest the necessary kinds of PL activities and prepare our PL plan.

يتم تحديد الاحتياجات المهنية للمعلمين من خلال ملاحظات القائمين على الإشراف على المعلمين مثل المعلمين الأوائل ومدرء المدارس والمشرفين التربويين وكذلك من خلال تحليل استمارات التقييم المستخدمة في نظام تطوير الأداء المدرسي التي تتم من خلال هؤلاء وصولا الى الجواني التي ينبغي تطويرها ... عندما يكون لدينا كل هذه الملاحظات والتقييمات فإننا نجلس مع بعض ونفترح الأنواع المناسبة من أنشطة التعلم الإنمائي ونضع خطتنا الإنمائية

However, most of the participants disagreed that this mechanism had helped in identifying teachers' needs accurately and were sceptical of its suitability. This was clear when one inspector, Fahad, expressed his astonishment at how teachers' needs were identified:

You might laugh if I tell you about how professional needs are identified. These needs are identified by holding meetings between the inspectors and some senior teachers ... the total number of us and the senior teachers might not exceed seven. Then these seven people discuss and choose what PL activities should be there, but actually we have more than 800 teachers! How can these seven people decide what the 800 teachers need? What the seven have come up with might suit their PL needs only but not the needs of all the teachers... this is my opinion.

قد تضحك اذا ما اخبرتك بكيفية تحديد الاحتياجات المهنية، يتم تحديدها من خلال اجتماعات بين المشرفين وبعض المعلمين الاوائل ... وقد لا يتجاوز عددنا جميعا السبعة أشخاص، وبعد ذلك يناقش ويقرر هؤلاء السبعة ماهية التعلم الانمائي المطلوب، ولكننا في الحقيقة لدينا أكثر من 800 معلم!!! وما قرره السبعة أشخاص قد يناسب احتياجاتهم ولكن ليس احتياجات جميع المعلمين ... هذا هو رأيي، ولذلك ما بدأ بخطأ سوف ينتهي بخطأ

Most teachers expressed similar opinions about the limitations of the mechanism for identifying their needs and the majority declared that they were rarely directly involved themselves. For those few teachers who were occasionally consulted, there was a wide-ranging belief that the MOE had not taken their opinions seriously.

It seems that a major part of the criticism was directed towards the suitability of the evaluation forms used in the school performance development system, mentioned above by Sultan as the tool used to identify teachers' professional needs. Whilst only one inspector and one head teacher advocated their usefulness, the rest of the inspectors and head teachers asserted their inappropriateness in identifying teachers' specific needs. Those who criticised these forms (or what can be called the MOE-determined evaluation checklist) argued that the main issues were that they did not recognise the differences between subject areas and that they did not give head teachers much space to evaluate specific details in teachers performance. Instead, as Hamed (a male Arabic language teacher, Town School) suggested, teachers' needs can be identified by sitting with them and asking them about their needs.

Interviewees including all head teachers and many teachers noted that identifying teachers' professional needs in schools was more likely to be accurate because of the closeness of those who identified these needs to the teachers, because of the diverse means used to identify these needs and because teachers were more engaged in making decisions about shaping PL events. The importance of closeness to teachers was also acknowledged by two inspectors.

5.4.2.4 Nomination for PL events

Although nominating teachers for PL events was claimed to be based on their professional needs, the widespread view among participants was that it was usually based entirely on PL planners' perceptions, often arbitrary and sometimes disorganised.

Inspectors admitted that the PL activities offered sometimes did not fit teachers' needs, a 'mistake' that they blamed others for. All head teachers agreed that they had no role in selecting teachers for PL events and described nomination for PL activities as unsuitable, unfair, imposed and blind to teachers' preferences. This view was supported by most teachers, who thought they would be more attracted and committed to these opportunities if they had the option to select what they want to attend.

However, a few teachers expressed positive opinions about how they were nominated for PL events and tried to justify why PL was imposed on teachers. For instance, Hilal said:

Most of the ... teachers are nominated by inspectors, which can be understood because the idea is to include most teachers in these training sessions instead of giving the chance for those who have the desire and who are very few.

في أغلب الأحيان يتم ترشيح الأسماء من قبل المشرفين التربويين وهو ما يمكن تفهمه لأن الهدف هو أن يحضر معظم المعلمين هذه الورش التدريبية عوضاً عن إعطاء الفرصة لمن لديه الرغبة فقط والذين هم قلة

Even if this was true, however, informing teachers about the content and aims of the PL event seemed not to be considered in many cases, as indicated by many responses. Conversely, whenever teachers had the option to choose their PL type, they seemed more likely to engage better; this was advocated by most participants, who thought that teachers' preferences had received more consideration in school-based PL than formal PL from the education office or the MOE.

Overall, although there was recognition that consultation of schools and teachers had improved in the last three years, the general opinion was that most of this consultation

was very limited, ad hoc and artificial and that there had been no serious attempt to convince teachers of the need for change. While a few participants, especially the English inspector and the English language teachers, shared positive perceptions, the remainder expressed clear discontent with the level of this consultation. Most participants thought that teachers' convictions were rarely targeted and that many of the changes were introduced with no clear rationale.

It also seems that the low involvement of teachers in making decisions about their PL had generated negative attitudes towards the MOE and its proposed changes, as suggested, for instance, by one of the teachers, Waleed:

Not engaging teachers means that the ministry does not trust them.

عدم اشراك المعلمين يعني أنهم ليسو محل ثقة الوزارة

This perception seems to have reduced commitment to the centrally advocated changes among teachers.

5.4.2.5 Factors affecting commitment to change

Commitment to PL was reported to be relatively weak, contrary to the questionnaire findings. One explanation might be that participants were trying to convey a positive image when completing the questionnaire but were more open and frank during the interviews, which identified various factors as influencing commitment to change.

Most of the teachers identified **external motivation** from both the MOE and the school as a major factor influencing the level of commitment. Head teachers focused more on **internal motivation**, on teachers' desire and willingness to engage in PL and their realisation that they were performing a noble mission, while inspectors and two heads highlighted the **influence of the context and culture** on the strength of commitment.

Many teachers also reported that **family commitment** had affected their engagement in improving their PL. Because of her family responsibilities, Maria thought that attending workshops in Muscat, far from where she lived, was difficult. Substantial numbers of teachers, inspectors and head teachers also thought that teachers' working conditions had influenced their commitment.

Some teachers also highlighted the **availability of support**, especially from schools and inspectors, and a few, including Waleed, said that this had led them to resist change. A substantial number of participants also linked strength of commitment to the **financial support** that schools and teachers received, while some thought that the lack of adequate funding was a barrier to participation in many PL activities and others argued that teachers were more committed when they were financially rewarded.

Time and the accessibility of PL were also advanced by some teachers as factors that influenced teachers' commitment to improving their PL. They attributed their weak commitment to a shortage of time and claimed that when they had time they were more committed.

Almost all participants, whether inspectors, head teachers or teachers, agreed that **accountability** was a major factor in determining strength of commitment. Many argued that promotion was not linked to teachers' investment in PL. There was no incentive to work harder that was directly linked to attending PL events; whether teachers worked hard to improve their PL or not seemed to have no effect on their chances of being either promoted or penalised. One of the inspectors, Sultan, was among those who complained of this missing link:

Because they see no benefit in attending PL events... Will it be added to their CVs? What will it add to them?

لأنهم لا يرون جودى من وراء حضور هذه الأنشطة... هل ستضاف الى سيرتهم الذاتية؟!!!
ماذا سوف تضيف لهم؟!!!

Both inspectors and head teachers also argued that the restricted authority they had to hold teachers accountable had contributed to reducing their potential to strengthen teachers' commitment to change.

Relevance to their classrooms and students was another factor that affected teachers' commitment. Some, including Waleed, stated that they had not participated in some PL activities because they thought what they learned there was not suited to their contexts and students, while others, such as Hilal, were more committed when they felt that the PL event was more relevant to their contemporary or future needs and desires. Thus, Nadir argued that selecting teachers for the right PL activities was crucial in strengthening commitment and convincing teachers of the advantages of attending PL events.

A considerable number of teachers also highlighted **teachers' preferences** and opportunity to choose their PL events as having affected the extent of their commitment. Those with weak commitment thought that most PL events were imposed on them and that they had no option but to attend.

Finally, a substantial number of teachers said that **the quality of the PL event and the quality of the trainer** had significantly influenced their commitment to attend PL activities.

5.4.3 System and school support

Supporting teachers in their learning and developing their potential was widely identified by inspectors and head teachers as an essential part of their role, which conforms to the questionnaire findings. However, views varied on the extent to which the current system components and structures had enabled teachers to acquire and develop effective

teaching practices. Four main areas were highlighted: available PL opportunities, regulations and structures, the role of heads and the existence of a learning environment.

5.4.3.1 PL opportunities available to teachers

Formal PL activities offered to teachers across the four case study schools were reported to have utilised a variety of delivery modes that often focused on wide range of topics from curriculum to teaching techniques. These were clearly provided at three levels, depending on whether they originated at the MOE, the education office or the school.

MOE-based PL

MOE officials and experts prepared activities based on the MOE annual PL plan. The activities themselves took place in Muscat, mainly in three places: the main training centre, the specialised centre and Sultan Qaboos University (SQU). They were based on the feedback from the education offices and on best practices identified by MOE officials and experts as necessary for teachers. The aims of these programmes were to enrich and add to teachers' experience, to communicate the MOE vision to them and to introduce them to innovations originating at the MOE. However, relatively few teachers were offered these opportunities.

Education office-based PL

PL activities at the second level were prepared by inspectors in light of their visits to schools and their identification of areas where improvement was needed. Occasionally, inspectors would consult a few senior teachers about their teachers' weaknesses and what should be offered to address them. The frequency of these activities varied from one teacher to another, with a minimum of one opportunity each per year. Most took place in the training centre of the education office. The aim was both to introduce teachers to new

experiences and to overcome some of the major teaching weaknesses observed by the inspectors.

School-based PL

Each of the four schools also offered PL activities prepared by its own leadership team, usually comprising the head, the deputy head, senior teachers and other experienced teachers, based on their observation and evaluation of teachers' work in the classroom, on discussion with them, on analysis of students' work and on priorities for the development of the school. These activities were reported to be more closely related to teachers' needs, to offer more reflection on teachers' practice and to have elicited better engagement. Compared to those emanating from the MOE and the education office, these school-based PL activities were more frequent: two weeks at the beginning of each term and several other occurrences during terms but outside participants' teaching timetables. The aim was to overcome teachers' individual weaknesses, share experience and the school's vision, introduce updates and keep teachers connected. All teachers in each school were offered these opportunities.

5.4.3.2 Existing regulations and structures

Although there was a general indication that improving teachers' quality had received increasing attention at the MOE and that improvements had occurred in many areas, the existing regulations on improving teachers' quality were reported not to have changed accordingly, which had obstructed the endeavours of schools and teachers to achieve this goal. Regulations in place were described by all school heads as often complex and loosely applied, especially in respect to schools' autonomy and teachers' accountability under the centralised education system. The main areas of concern were leadership, coordination, follow-up, funding, guidelines, flexibility and timetabling, discussed in the following paragraphs.

Limited authority of school leadership

All head teachers showed clear discontent with the limited authority the MOE granted them in holding teachers accountable for improving their PL and in offering them PL opportunities outside their schools, which required official approval from the education office. An example of such complex regulations was the bureaucratic procedures for arranging for teachers to visit another school, which required head teachers to obtain official approval from the education office, as Reem explained:

If I wait to get permission from the Education Office then the PL event will be finished before I can get this permission. Getting such permission is one of the obstacles to teachers' PL.

إذا انتظرت أخذ الإذن من المديرية فسوف تنتهي فعالية التعلم الإنمائي قبل الحصول عليه، فالحصول على مثل هذا الإذن هو من معوقات التعلم الإنمائي

Several teachers also believed that many regulations restricted the benefit that could be derived from PL. Hilal, for instance, said:

Many teachers do want to develop themselves professionally but they are restricted by the discouraging outdated rules

هناك العديد من المعلمين ممن يرغبون في تطوير أنفسهم مهنيًا ولكن القوانين القديمة والمخصصات المالية المحدودة جدًا تعيقهم ولا تشجعهم

Lack of coordination

Although there was an official plan for formal PL, there seemed to be little coordination between the different units of the MOE and the education office at the implementation phase. An example was the selection of the same teachers by two departments to attend different PL activities at the same time, which was highlighted by Sultan. Other inspectors, including Fahad, highlighted the lack of coordination with SQU, where pre-service teacher training and some in-service PL activities occurred.

Lack of follow-up

There was partial consensus regarding a lack of follow-up of the impact of PL activities in schools, as admitted, for instance, by an inspector, Talal:

What is missing is following up to see whether this teacher has benefited from what was offered to him

الشيء المفقود هو المتابعة من أجل رؤية ما إذا استفاد المعلم مما قدم له

Many teachers expressed similar opinions. Nassir, for instance, said:

The missing thing is the follow-up.... after any PL activity there should be implementation in the classroom and follow-up by those who conducted the PL activity, which could take the form of a classroom visit or online follow-up by sending something like a project.

ما هو مفقود هو المتابعة ... فيعد أي نشاط مهني ينبغي أن يكون هناك تطبيق في غرفة الصف ومتابعة من قبل الأشخاص الذين قدموا النشاط من خلال زيارة صفية أو متابعة عن طريق الإنترنت عبر ارسال شيء مثل تقرير

Inadequate funding for PL in schools

Although funds were allocated for schools to spend on improving teachers' quality, all school heads described funding as insufficient and complained that they had no autonomy in how to spend it.

Controlling guidelines

Many examples were reported by the participants suggest that the education office interfered in how school's facilities were to be used. This is exemplified by the case reported by head teacher Raya:

We have just one interactive whiteboard which is kept in the Physics lab and only Science teachers are allowed to use it as instructed by the education office... although it would be of great benefit to all subjects areas and might help in improving students' learning ... if permitted to be used by other subject teachers, of course!

لدينا سيورة تفاعلية واحدة فقط موجودة في مختبر الفيزياء ولا يسمح لغير معلمي العلوم باستخدامها حسب التعليمات من المديرية ... رغم كونها مفيدة لجميع المواد وقد تساعد على زيادة تعلم الطلبة!!! ... إذا ما سمح لبقية معلمي المواد باستخدامها بالطبع

No flexibility

Most of the participants showed clear signs of disappointment at the lack of flexibility when the suggested PL modes, timing or mode of delivery sometimes did not fit their context; thus, Ahmed (Town School head teacher) asserted that: *It isn't flexible at all.*

ليست مرنة على الإطلاق

Ahmed's complaint seems to encapsulate the responses given by many other participants and suggests a mismatch with the special context of each school or teacher.

Clashes with teachers' daily work

Formal PL activities were not scheduled as part of the school timetable from the beginning of the school year, but rather treated as ad hoc events; thus, many teachers believed that they added an extra burden to their normal workload and placed unwarranted pressure on them to compromise the time they were supposed to devote directly to their students.

5.4.3.3 The Head teachers' role

Head teachers' contribution to improving teachers' PL seemed to be based on three main factors: their willingness to do so, their understanding of what their teachers needed and of how they felt, and the extent of their readiness and ability to improve the quality of their teachers. However, although all head teachers showed full commitment to improving their teachers' learning and practices and considered it a basic part of their role, as was also revealed through the questionnaire, they varied in their readiness to

become involved and in the strategies they used to support their teachers' learning. The following paragraphs discuss first their common strategies, then some individual ones.

Strategies commonly used by all head teachers

- a) **Providing the infrastructure:** While admitting their limited financial resources, all school heads claimed to be ensuring that they provided whatever resources they could to encourage teachers' learning in their schools and to improve their working conditions. These included learning centres, libraries, computer rooms, access to the internet and a variety of educational technologies.
- b) **Providing formal opportunities:** In each of the four schools, there was at least one INSET week at the beginning of each term, two to four all-staff workshops during the school year and weekly time-blocks for subject area meetings during non-teaching hours. Head teachers adapted their school timetables to accommodate such PL activities. These opportunities were intended to help teachers to pool their experience and to reflect on their work collectively.
- c) **Staff meetings:** All school heads organised staff meetings as a PL opportunity to disseminate the school's vision and share ideas gained by some teachers in external PL activities. The quality of these meetings varied according to the quality of the speakers and their ability to convey to their colleagues what they had learned.
- d) **Classroom observation and feedback:** In all schools, heads have kept track of teachers' performance by attending lessons and discussing with teachers ways to improve their teaching, which were often limited to pedagogical rather than subject knowledge; however, some teachers thought that the head teachers' role was hampered by a lack of subject specialist knowledge.

- e) **Paying attention to teachers' attitudes:** It was recognised, by all school heads, that nurturing positive attitudes among teachers would facilitate their engagement in the suggested PL activities; to this end, they reported often spending time with their teachers, trying to motivate them and to convince them of the benefits to be gained from attending PL activities and interacting with each other. They also claimed to have taken up teachers' suggestions and responded to their inquiries and complaints.
- f) **Creating future PL plan:** All head teachers claimed to have tried to anticipate the future direction of their schools and to be proactive in setting the priorities for development for the next year, especially with regard to what PL activities would be needed. Examples provided by head teachers included their own observations, discussions with their school leadership teams and analysis of the available data on what their teachers needed and lacked.
- g) **Distributing leadership responsibilities and identifying teachers' professional needs collectively:** In all the schools, head teachers have engaged many senior and long-experienced teachers in analysing teachers' performance and deciding on areas of priority. The three main resources used to do so were classroom observation, analysis of students' work and discussion with teachers. Decisions on what to include in the school's PL plan were based on feedback from and discussion with the school leadership teams, which included school administration members and teaching staff from all subject areas. All head teachers appeared well aware that in order to persuade teachers to change, it was important to properly identify, understand and meet their needs.
- h) **Providing psychological and emotional support:** All head teachers reported incidents illustrating the attention they had given to the psychological needs of

their teachers. They all considered providing psychological and emotional support for teachers an essential element in helping them to cope with challenges and to continue with their careers.

Individual strategies used by some head teachers

Acting beyond the strict bounds of their authority: Head teachers differed in the extent to which they were ready to seize the initiative in order to support their teachers' learning. For instance, while most head teachers used whatever room was available for conducting PL activities, Reem showed more persistence and allocated a permanent room with an interactive board to host PL events at her school. In the same vein, Reem was bolder than her fellow heads in providing external PL opportunities to her teachers without seeking the approval of the education office. This led Reem to find alternative ways to overcome the shortage of funds received from the education office, as this example shows:

Last year we conducted a workshop presented by a good trainer but it cost us 700 riyals, which was collected from the teachers and the other requirements were provided by the school administration.

قمنا خلال العام الفائت بعقد ورشة عمل قدمها مدرب جيد ولكنها كلفت 700 ريال تم جمعها من المعلمات ووفرت المدرسة بقية المتطلبات

Modelling: A strategy adopted by three of the four case study schools (Rural, Outer and Town schools) was for senior or long-experienced teachers to prepare model lessons and deliver them to other teachers, enabling them to see in practice how good teachers taught their lessons. At the end of each lesson, there was a discussion and group reflection on how the lesson had gone and how teachers could benefit in their own classrooms from what they had seen.

Promoting partnership and support among teachers: Another strategy involved obtaining the approval of a good teacher to spend time working closely with an underperforming colleague and thus influencing him or her. The strategy was explained by Reem, who had adopted it at the Rural School:

What we do in our school is that we make sure that active and hardworking teachers are mixed up ... intelligently ... with lazy teachers and spend time together in the school and even outside while coming or leaving the school ... this has led the good teachers to have influence on the lazy ones. Of course, we have the agreement of the good teacher but we make sure that the other teacher is not aware of what is happening.

ما نقوم به في المدرسة هو أننا نتأكد من خلط المعلمات النشيطات والمجتهدات، وبذكاء، مع نظيراتهن الكسولات وأن يقضين وقتاً مع بعض داخل وخارج المدرسة حتى خلال الحضور ومغادرة المدرسة ... وهذا أدى إلى أن يكون للمعلمات الجيدات تأثير على المعلمات الكسولات، وبالطبع حصلنا على موافقة المعلمة الجيدة وحرصنا على عدم علم المعلمة الأخرى بما يحدث

Assigning teachers to appropriate PL activities: Through their observation and discussion with school leadership teams, the head teachers of the Rural, Outer and Town schools showed awareness of the importance of matching teachers' PL modes and activities with their individual preferences and needs.

Getting teachers to reflect on what they had learned: Female head teachers seemed more aware than their male counterparts of the importance of facilitating teachers' reflection at the end of PL events. Reem and Raya of the Rural and Outer schools said that they made sure to ask their teachers about what they had gained and to encourage them to convey to their colleagues what they had learned from external PL activities. The idea was to put some positive pressure on their teachers before attending any given PL activity so that they would pay full attention and try to grasp most of the materials presented; this was intended to make the teachers aware that their individual learning contributed to that of the whole school.

Developing partnerships with other schools: The head teachers of the two girls' schools reported working collaboratively with other nearby schools by exchanging teachers' visits and inviting the other schools to PL events.

Creating an ethos of motivation and support: In the two girls' schools (Rural and Outer) and to some extent in the Town School, there was evidence that the head teachers realised the importance of the ethos of the school in creating a culture of cooperative learning. This was evident through their fostering of networks and support groups where developing individual teachers' knowledge and skills was considered to contribute to improving the whole school's performance; thus, attending an external PL activity was described as a collective gain for the whole school.

5.4.3.4 Existence of a learning environment in the school

School infrastructure

Although all four schools had the essentials for improving teachers' quality, including learning centres resourced with books and internet facilities, some basics were reported to be missing, which might have hindered teachers' learning. For example, no permanent space was formally allocated to the running of PL activities, some of the latest educational technologies like interactive boards were missing and teaching aids were inadequate. Participants claimed that providing these fundamentals would have encouraged more teachers to take advantage of them and would have contributed to creating the feeling that the school was a hub for teachers' learning.

External experience

Exposing teachers to external expertise was crucial and had the potential to drive teachers to accept change, according to most of the participants. Many thought that

experts from outside the school had more impact on teachers than did their colleagues, as exemplified by this remark of Ahmed, head of Town School:

One session conducted by an expert can convince teachers who might not be convinced by their colleagues even if they attended tens of PL activities run by them.

يمكن لورشة واحدة يقدمها خبير أن تقنع المعلمين الذين قد لا يقتنعوا من خلال قرناؤهم حتى وإن حضرو عشرات الورش

Participants used the term 'external experience' to include both PL trainers and presenters from the MOE and abroad. They gave some examples of how exposure to external experience had affected their teaching. Faizah, a female science teacher, argued for the benefits of such exposure:

We need experts from outside the Sultanate and we need to be introduced to other countries' experience in teaching. I once attended a course presented by a British guy who presented many teaching techniques different from what we are using in Oman ... most of the materials was new to us and thus we benefited a lot... introducing foreign experience to teachers would be very useful.

نحن نحتاج الى وجود الخبراء من خارج السلطنة ونحتاج الى الاطلاع على تجارب الدول الاخرى في التعليم، فقط حضرت في احدى المرات دورة قدمها شخص بريطاني والذي تطرق الى العديد من طرق التدريس المختلفة عما عهدناه عندنا في عمان... فمعظم المادة المعروضة كان جديد بالنسبة لنا واستفدنا كثير من... فطلاع المعلمين على الخبرات الخارجية سيكون مفيد جدا

Many participants reported having attended PL events during the last five years delivered by good speakers, and occasionally by international experts, especially at the beginning of the school year. This was part of a recent MOE initiative to employ the services of well known figures, aiming to create positive attitudes to teaching and to stimulate teachers to work harder. Overall, however, such external input to teachers' PL was reported to be very limited and rare. Most of the PL offered in schools was conducted by colleagues or by the same training team in the education office; over time, it had become less convincing

to many teachers. Thus, many participants thought that new blood needed to be injected into the training team and that there should be partnership with universities.

This negative attitude towards the training team seemed to arise partly because most of the materials presented were theoretical and unrelated to actual practice and conditions in classrooms; thus, one teacher, Hilal, argued for a more practical grounding:

Also the presenters who present studies they have conducted themselves ... those are the specialists who have practical experience and who introduce things they have experienced themselves and been through in curriculum or teaching strategies instead of presenting concepts and ideas that anyone can find in books.

وكذلك المقدم الذي يعرض دراسة قام بها بنفسه، هؤلاء هم الخبراء الذين لديهم الخبرة العملية والذين يقدمون شيء جريبه بأنفسهم وعاشوه في المنهاج أو طرق التدريس عوضاً عن تقديم مفاهيم وأفكار يمكن للجميع الحصول عليها من خلال الكتب

Collective learning and shared experience

Collective learning took many forms which varied between schools and individuals, although it was limited overall. It can be divided into formal and informal opportunities.

Formal collective learning opportunities

The formal type took the form of experience being shared by centrally organised groups, often run by the MOE or the school.

The form of MOE-linked collective learning most often reported by interviewees was the **online discussion forums** administered by MOE officials, to which all teachers had access. The aims were to present the latest developments, new initiatives and common issues of interest to teachers, and to offer a platform for discussion between MOE staff and teachers.

Formal meetings occurred in schools and often involved the whole school staff or took the form of scheduled weekly subject area meetings and workshops. The aim of the

former was to discuss matters that concerned all staff members, whereas the latter aimed at sharing experience, reflecting collectively and discussing issues of concern to teachers in a particular subject area, including any challenges they might face in their classrooms.

Two of the inspectors reported using the technique of conducting **model lessons** with their teachers, which they claimed had been very influential and had had a positive impact on teachers.

The English Language Department of the education office organised annual two-day **English language forums**, which usually accommodated around half of the English teachers in the district each year.

Microteaching lessons were used in the two girls' schools as a collective learning and reflection technique to overcome weak confidence and to help underperforming teachers to improve their teaching by providing them with a secure atmosphere and their colleagues' support.

PL weeks were INSET programmes conducted in schools at the beginning and sometimes at the end of term, when students did not attend school. Workshops were presented, some targeting the entire school staff and others the teachers in certain subject areas.

One inspector, Fahad, reported having used the technique of **inspector-led discussions** to stimulate high-performing teachers to do better. These teachers would be invited to discuss a topic usually related to a teaching weakness commonly observed by officials of the education office.

Fahad also used **directed reading** to stimulate and challenge high-performing teachers. When visiting a school, he would propose that they read certain books, which would then be discussed during his next visit to the school.

Although these seven or eight types of formal collective learning were identified by interviewees, many teachers reported that their use was rare, especially at the boys' schools.

Informal collective learning opportunities

A few informal alternatives were initiated voluntarily by the teachers themselves, triggered intentionally or unintentionally, and reported to be more frequent at the two girls' schools than the boys' schools.

WhatsApp discussion groups were held in all four schools, but were often limited to teachers from a single subject area. Sameer, head of City School, asserted their importance:

Teachers of each subject area have a group that meets through WhatsApp. These groups work as families for teachers ... teachers feel secure ... so whenever a teacher has a problem or something he doesn't know he raises the issue in the group and receives suggestions and help from his colleagues.

في كل مادة هناك مجموعة واتس اب للمعلمين وهي بمثابة أسر للمعلمين ... حيث يشعر المعلمون بالأمان ... ولذلك
فقط عندما تكون هناك مشكلة أو شيء يهم المعلم يقوم بطرحه في المجموعة ويحصل على مقترحات ومساعدة من زملائه

In addition to the ability of almost all smartphones to run WhatsApp, the widespread use of this technique among teachers seems to have been facilitated by the ease with which colleagues could be contacted and help could be obtained.

Spontaneous discussions constituted a very common unplanned type of informal PL which occurred between teachers during their non-teaching time, in common rooms, corridors or elsewhere. In some cases, this was intentionally used as a collective problem-solving technique, although many teachers seemed not to be conscious of it.

Socialisation was another form of unintentional learning which occurred during regular informal teachers' gatherings, at which they talked, asked for and received advice from

their colleagues during their breaks or other non-teaching time. This kind of tacit learning was clearly more common in girls' schools than boys' and seems to have contributed to creating a positive school learning culture.

However, there was no overall evidence that the majority of teachers had improved their PL with the clear purpose of contributing to the collective learning of their colleagues or schools.

5.4.4 Overall perceptions of PL

5.4.4.1 Formal PL

The overall perceptions of most of the participants were negative; they described most formal PL as nonspecific, irrelevant to teachers' needs and boring. This confirmed the findings of the questionnaire and offered some explanation.

Three of the head teachers felt that most formal PL events added nothing new and had changed nothing in teachers' practice, while many teachers thought that most of the time these were too general and had not focused on the specific skills and knowledge each teacher needed. Moreover, in addition to the boring and theoretical nature of the formal PL, as six teachers described it, most PL activities were said to have repeated the same content year after year, bringing nothing new. Hilal complained that most of these events were irrelevant to his real needs, an opinion supported by seven other teachers.

Fahad, an inspector, expressed the same opinion, that most formal PL was irrelevant to teachers' needs:

Many programmes and workshops we have do not reflect the real teachers' professional needs.

كثير من برامجنا وورشنا لا تعكس الإحتياجات المهنية الحقيقية للمعلمين

Many formal PL events were also of poor quality, according to three male teachers.

5.4.4.2 PL in the school

The impact of school-based PL appeared to be perceived more positively, in line with the majority view emerging from the questionnaire data. Most of the interviewees described it as more effective, more useful and better aligned to their contexts and professional needs; they also considered the school to be the best place for real teachers' learning to occur. The interview data thus confirmed the finding of the questionnaire, while offering many potential explanations of this perceived greater effectiveness.

Head teachers of those schools that were located far from the education office training centre linked this effectiveness to the valuable time saved by conducting PL activities on school premises. Four teachers expressed a similar belief, attributing the effectiveness of school-based PL to having a shorter distance to travel.

All head teachers also related this effectiveness to the ability of the school leadership to identify each teacher's professional needs more accurately. Raya, for instance, highlighted her senior teachers' role in this regard:

Yes, PL is more effective in the school, because the senior teachers are closer to the teachers and know that not all of them have the same needs or the same weaknesses.

نعم التعلم الإنمائي أكثر فاعلية في المدرسة وذلك بسبب أن المعلمين الأوائل أكثر قرباً من المعلمين وهم يعرفون أن هؤلاء المعلمين يختلفون في احتياجاتهم ونقاط ضعفهم

The closeness of the school leadership team to the teachers seems to have helped them to meet their needs more effectively.

Among two inspectors who expressed a similar view, Sultan credited this significantly more positive perception of the impact of PL in schools to the particular attention each teacher was likely to receive, which often helped them to overcome their particular

teaching weaknesses. This was consistent with the opinions of teachers, most of whom highlighted the potential ability of the school to identify teachers' needs more accurately.

Nassir was one of eight teachers who attributed this positive impact to the interactions in which teachers had often engaged in their schools and the feedback they easily got after PL events.

Moreover, it was evident from many participants' responses that the types of PL events held in schools had provided teachers with more diversified and practical experience and that they corresponded better with their needs. For example, Hind, a social studies teacher, disclosed some of the diversified forms of PL happening in her rural school:

In the school, we have many PL forms like microteaching, where a teacher delivers a lesson and the other teachers attend and work as students. We also have a plan of exchanging visits to each other's classrooms to see how others are doing things.

لدينا في المدرسة العديد من أشكال التعلم الإنمائي مثل "التدريس المصغر" حيث يقدم معلم ما درسا ويكون بقية المعلمين بمثابة طلبة، وكذلك لدينا خطة لتبادل الزيارات الصفية لكي يرى المعلمون كيف يعمل الآخرون

Faizah, a science teacher at the same school, offered a different explanation, ascribing the positive impact of school-based PL to the fact that teachers often had PL activities on school premises and rarely in other places, which seems an unsurprising explanation, especially if some teachers had rarely or never attended PL outside their schools.

5.4.4.3 Impact of PL types

Participants varied in their opinions of the most effective types of PL in improving teachers' learning, but with a clear emphasis that the most highly valued were those types that involved more interaction and those which reflected teachers' contexts. There was a view that all PL activities had potential, as Ahmed, the Town School head teacher, argued:

Any PL activity that aims at improving teachers' knowledge and skills or increasing their experience and enhancing their teaching can be useful and effective.

أي نشاط تعلم إنمائي يهدف إلى تحسين معارف ومهارات المعلمين أو زيادة خبراتهم وتحسين تدريسيهم
يمكن أن يكون مفيد وفعال

However, most of the participants attributed the effectiveness of any PL activity to its particular characteristics and nature, rather than its type. Most effective PL activities were described as having four main features: interaction, observation, self-direction and practicality.

Genuine discussion and interaction with others

Most inspectors, head teachers and teachers agreed that planned and simultaneous conversations and discussions appeared to have had a positive effect in changing teachers' practice. The main benefits of these discussions were that they were often related to things that concerned teachers and were often based on teachers' experience, while many teachers thought that simultaneous conversations had positively affected their reflection on their own practice.

Observation of other teachers

Most teachers appeared to believe that watching how others teach was a very effective technique in improving their learning. Laila was one of those who used such observations to improve her teaching, of Arabic. The benefit of this technique seems to have resided in the opportunity it gave teachers to acquire better explanations and understanding of why things were done in a particular way. Hilal was one of three teachers who stressed the practical value of observing others' work, while an inspector, Talal, thought that observing others' teaching was more useful in improving practice when done willingly.

The only participant who seemed to have an opposing opinion was Nadir, who argued that he and his fellow teachers might be distracted during exchange visits by having to

pay attention both to the teaching and to the students, and who was concerned that the goal of these visits might not be very clear.

Self-directed learning

A few participants advocated self-directed learning as the most useful way to improve teaching. Hilal was one of the few teachers who seemed to rely on themselves to improve their own practice. Those who were more active in self-directed learning, like Nassir, also thought that self-directed learning provided them with the autonomy to choose what suited them best.

Practical elements

The majority of the participants stressed the value of the practical elements of PL events in improving teachers' learning. This recognition was reflected in how two inspectors, including Sultan, said that they dealt with poorly performing teachers:

I think for those poorly performing teachers what is more effective is practical lessons where they attend a lesson delivered by the inspector or by a good teacher and then they try to teach the lesson in their own classroom as they have seen.

أعتقد أن الحصص العملية هي أكثر فاعلية مع المعلمين ضعيفي الإنجاز بحيث يحضر هؤلاء حصص يقدمها المشرف التربوي أو معلم آخر جيد ومن ثم يحاولون أن يقوموا بالتدريس في صفوفهم بنفس الطريقة التي شاهدوها

Reem, a head teacher in Rural School, advocated a similar technique, which she called 'microteaching':

In the school, what I have observed to be very effective, and what we use a lot in our school, is microteaching.

ما لاحظت أنه أكثر فاعلية في المدرسة هو "التدريس المصغر" وهو ما نستخدمه كثير في مدرستنا

The teachers in the two girls' schools also highlighted the effectiveness of this practical PL technique, which seemed to involve the mechanism of 'learning by seeing and imitating',

although some might argue that it might inhibit teachers' creativity and lead them to mechanically follow alleged 'best practices' without considering contextual factors like students' level.

It is evident that techniques characterised by observation, practicality, discussion and self-direction were seen as having a positive influence on teachers' learning. The explanation offered by one teacher, Hind, was that they sought to change teachers' beliefs in appropriate ways:

They indirectly convince teachers of the need to change without hurting their feelings, because they have a particular weakness in their teaching or that they lack a particular skill or that they are old-fashioned teachers.

هي تمنع المعلمين بشكل غير مباشر بالحاجة للتغيير بدون أن تجرح مشاعرهم بسبب أن لديهم ضعفا ما في تدريسهم أن بسبب أن يفقدون مهاره ما أو بسبب كونهم معلمين تقليديين

This line of argument was supported by head teacher Sameer, who highlighted the attention that should be given to dealing sensitively with teachers' feelings.

5.4.4.4 Recognition of improvement

Although the overall perception of formal PL was negative, the participants recognised some areas of improvement, albeit varying in describing their extent.

This variation was clearly apparent among head teachers. For instance, Ahmed saw a dramatic improvement in formal PL, whereas Reem was less enthusiastic but mentioned some particular good initiatives:

Recently, some newly introduced programmes like those offered by the Specialised Centre, the Educational Visitor Programmes and the Academic Programme in coordination with SQU have had real positive effects on teachers' practice and convictions.

كانت هناك آثار إيجابية مؤخرًا لبعض البرامج المقدمة مثل البرامج التي يقدمها المركز التخصصي،
وبرنامج التربوي الزائر، والبرنامج الأكاديمي بالتنسيق مع جامعة السلطان قابوس، على ممارسات
وفناعات المعلمين

Inspectors also recognised other areas of improvement. For example, Talal argued that the MOE had started to introduce teachers to international expertise more effectively and that education offices were more closely involved in making decisions about improving teachers' quality, while Sultan saw an improvement in the timing of PL events.

It was notable that fewer teachers shared this positive opinion, especially English language teachers, which confirms the findings of the questionnaire. Teachers had nevertheless become more engaged in PL activities in recent years, according to Maria, a maths teacher, and three others. Many other teachers mentioned some specific examples of good formal PL activities they had experienced recently which had had a positive impact on them. These included microteaching lessons in schools, training offered by the specialised centre, an educational visitor programme and professional weeks in schools at the beginning of the school year.

There were many explanations for the positive impact of these programmes. They were student focused, had better links to taught subjects and reflected the reality in classrooms and schools. They were also more stimulating, offering additional discussions and interaction, while offering teachers more flexibility and autonomy. Thirdly, they offered better follow-up, were more diversified and were conducted in various locations. Finally, they were conducted by competent presenters, used online communication and offered external expertise.

5.4.5 Barriers to effectiveness

The participants offered various explanations of the low effectiveness of formal PL, which generally confirmed the findings of the questionnaire phase, and added clarifications, examples and justifications.

Inspectors focused on the mismatch between what was planned and what teachers needed, because weaknesses were not properly identified. Fahad, for instance, argued that formal PL events were not focusing on the right areas and were irrelevant to what teachers' actually needed, while Sultan attributed this wrong focus to the idea that the design of formal PL events was based on MOE officials' perceptions and desires, leading to the perception that they were imposed on schools and thus to them being artificially rather than genuinely implemented.

This claim was supported by most teachers, including Hilal, who said:

I think most of the PL activities are imposed on teachers by the ministry.

أعتقد أن معظم أنشطة التعلم الإنمائي مفروضة على المعلمين من قبل الوزارة

In the same vein, another teacher, Maher, maintained that schools were 'marginalised'

^{مهمشة} when decisions were made regarding teachers' PL. All head teachers seemed to agree with this perception of school marginalisation and to feel, as Ahmed argued, that they were sometimes asked to improve teachers' PL but with no clear idea of how to do so, which indicates that they had not received the necessary training that would have helped them to achieve this goal.

In addition to the claims of school marginalisation and imposition of PL, three head teachers argued that the lack of involvement by schools and teachers in making decisions

regarding PL had contributed to a mismatch between what was planned and what was achieved.

A few teachers, including Nassir, related this ineffectiveness to a gap between what teachers knew and what they were required or wanted to implement, especially if they or their students' lacked some basic skills or requirements.

Planning also appeared to have attributed to this ineffectiveness. The lack of what head teacher Ahmed called 'strategic planning', over a three to five-year term, had created a short-term planning culture that operated reactively instead of proactively and with no coordination between the involved parties. An inspector, Sultan, also advocated an emphasis on planning and stressed the lack of coordination:

We found no coordination between different departments in the Educational Office... we offered training for teachers and discovered later on that some of them were nominated at the same time by other departments for other tasks.

لم نجد تنسيق بين أقسام المديرية ... فقد قدمنا تدريب لمعلمين واكتشفنا لاحقاً أن بعض هؤلاء تم تركيزهم من قبل أقسام أخرى في المديرية لأنشطة أخرى في نفس الوقت

There was a widespread belief among teachers and head teachers that this chaotic planning had resulted in many PL activities being inappropriately timetabled, often clashing with the time that teachers needed to spend with their students; thus, they were seen as an additional burden, rather than of benefit to the teachers. Formal PL events were also described by many participants including one inspector as traditional and lacking the element of interest.

What is more, the lack of follow-up to evaluate the impact of PL events was seen as having contributed to their limited effectiveness. As most PL evaluations were done directly at the end of each activity, they may have reflected how satisfied the teachers were with the

conduct of the activities, without providing any evidence as to whether they had learned anything new or would change their practice when they returned to their classrooms. This lack of follow-up was clearly admitted by an inspector, Fahad:

There is no real follow-up or measurement of the impact of training.

ليس هناك متابعة أو قياس للعائد التدريبي

This may be one of the causes of the gap between what teachers were assumed to have learned in PL events and what they delivered in their classrooms. Inspectors may also have contributed to creating this gap through their misunderstanding of impact follow-up, as suggested by another inspector, Sultan:

To be honest, inspectors often follow up teachers in things they have trained them on, but not on the skills they haven't taught to them or those trained by others. Inspectors are often asked to select one topic from many and conduct a workshop for their teachers, and thus when they visit their teachers in their classrooms they only focus on the content they delivered in their training ... I know the evaluation and follow-up by inspectors should be much wider, but actually this is what happens in schools. So there might be good training but there is a gap ... the lack of follow-up makes it difficult to have sound feedback that shows the teachers' real needs or the real impact of the training.

وللأسف، غالباً ما يقوم المشرفون التربويون بمتابعة المعلمين في الأشياء التي درّبوهم عليها ولكن ليس في المهارات التي لم يدرّبوهم عليها أو تلك التي درّبها عليهم الآخرون. غالباً ما يطلب من المشرفين اختبار موضوع من عدة مواضيع وتقديمه للمعلمين عبر ورشة ولذلك فعندما يزور المعلم في الصف يركزون على ما تم التدريب عليه ... أعرف أنه ينبغي أن تكون المتابعة والتقييم بشكل أوسع ولكن هذا ما يحصل في المدارس. ولذلك قد يكون هناك تدريب جيد ولكن هناك فجوة ... فغياب المتابعة تجعل من الصعب الحصول على تغذية راجعة تظهر الاحتياجات المهنية للمعلمين أو الأثر الحقيقي للتدريب

Most inspectors and head teachers also said that teachers were sometimes the main barrier to their own learning. Head teachers attributed this to the lack of internal motivation and desire to change, a perception supported by a few teachers including Nora.

Most participants also perceived a lack of flexibility, due to centralised control, as a barrier to the effectiveness of PL. All head teachers, for instance, agreed that the rigidity of the centralised plans and the strict guidelines from the MOE had narrowed the possibilities

for meeting the changing situations in their schools and had hampered their ability to respond appropriately to their teachers' needs.

Two inspectors, three heads and a few teachers also identified culture as having contributed to limiting the effectiveness of PL. Hilal, for example, pointed out that Omani society considered it undesirable to criticise the work of others to their face, even if the criticism was constructive:

There is still the issue of our social relations and culture, which prevent us from critically evaluate our friends and colleagues. We often prefer to keep good relations at the cost of work efficiency.

وهناك كذلك موضوع العلاقات الاجتماعيه والثقافة والتي تمنعنا من تقييم أصدقاءنا وزملاءنا بشكل ناقد، فنحن غالبا ما نفضل الإبقاء على علاقات جيدة على حساب الكفاءة في العمل

Finally, many participants, especially teachers, reported the low quality of many PL presenters and trainers as a major factor limiting PL effectiveness.

5.5 Chapter summary

This chapter has presented the results of this study in three sequential parts. The first part clarified the purpose of the pilot study and highlighted some changes that resulted from it. The second offered a descriptive analysis of the data obtained from the questionnaire survey, organised in tables and figures to show the general trends and the main variations between groups. In the third part, the data obtained from the semi-structured interviews were organised, analysed and presented thematically, supported with interview extracts and triangulated with the questionnaire findings. The next chapter discusses these results and relates them to the literature and to the theoretical ideas discussed in Chapter 3.

Chapter 6 Discussion of the findings

6.1 Introduction

This chapter is devoted to analysing the main issues suggested by the findings of this study (as shown in Chapter 5), with the aim of relating them to the literature and to the theoretical ideas discussed in Chapter 3.

Chapter 5 presented the findings of this study in relation to the main research question, 'To what extent do Omani teachers working in Post-Basic Education Schools (students aged 16-17) perceive their professional learning to be effective in the light of recent educational reforms?', and the following research sub-questions:

RS1: What does PL mean to teachers?

RS2: To what extent do teachers perceive themselves as having an active role in improving their own PL?

RS3: What sort of PL opportunities do teachers consider to be the most useful in their professional development?

RS4: To what extent have these opportunities led to enhancements in teachers' practice?

RS5: What factors hinder the improvement of teachers' PL?

RS6: To what extent are teachers supported in improving their learning?

The key findings highlight four main common issues or areas for debate linked to the planning, implementation or evaluation of teachers' professional learning that were identified across the four case study schools. The first relates to underestimating the complex nature of the actual practical challenges involved in the planning for improving teachers' PL (see Section 6.2). The second issue relates to the incompatibility of existing PL opportunities with teachers' actual needs in the implementation, as the findings suggest a mismatch between what teachers reported benefiting 'the most' from and what was offered to them (see Section 6.3). The third issue relates to the difficulty involved in

the evaluation of teachers' learning due to a complex range of contextual factors (e.g. school environment and culture), external factors (e.g. funding and central controlling regulations) and interrelated dynamics (e.g. internal motivation and work conditions) that were found to influence teachers' beliefs and practices related to PL (see section 6.4). The fourth issue relates to the inadequacy of support during implementation (see section 6.5). These four issues now guide the discussion of the findings.

6.2 Challenges involved in planning to improve teachers' professional learning

One key issue that emerged was that improving teachers' PL was implicitly promoted by planners (policymakers and PL providers) as a simple and straightforward task. Educational reforms in the MOE seemed to favour a mandated change based on simple cause and effect and relying on linear sequential activities, which reflects Fullan's change model (Fullan, 2007). This had led to a focus on the planning stage and on how the reform should be implemented, while little attention was paid to how teachers enacted the reforms; how they interpreted, understood, reacted to, engaged in and coped with their new learning experience and more importantly how the centralized PL plans affected their teaching practice. This finding is consistent with that of Maguire, Braun, and Ball (2015), that teachers in four English secondary case study schools varied in their responses to centralized educational policies and enacted them differently, prompting the suggestion that the implementation of educational reforms is affected by the implementers' interpretations and understanding, which is a more complex process than is sometimes imagined (Braun, Maguire, & Ball, 2010). Thus, from a complexity theory perspective there is a need to question how effective educational interventions can be if they ignore such important factors and variations in the system.

Analysing the data from this study reveals that the teachers in the four case study schools varied in their understanding, attitudes, involvement, reflection and reaction to change, as shown by Fig. 6.1.

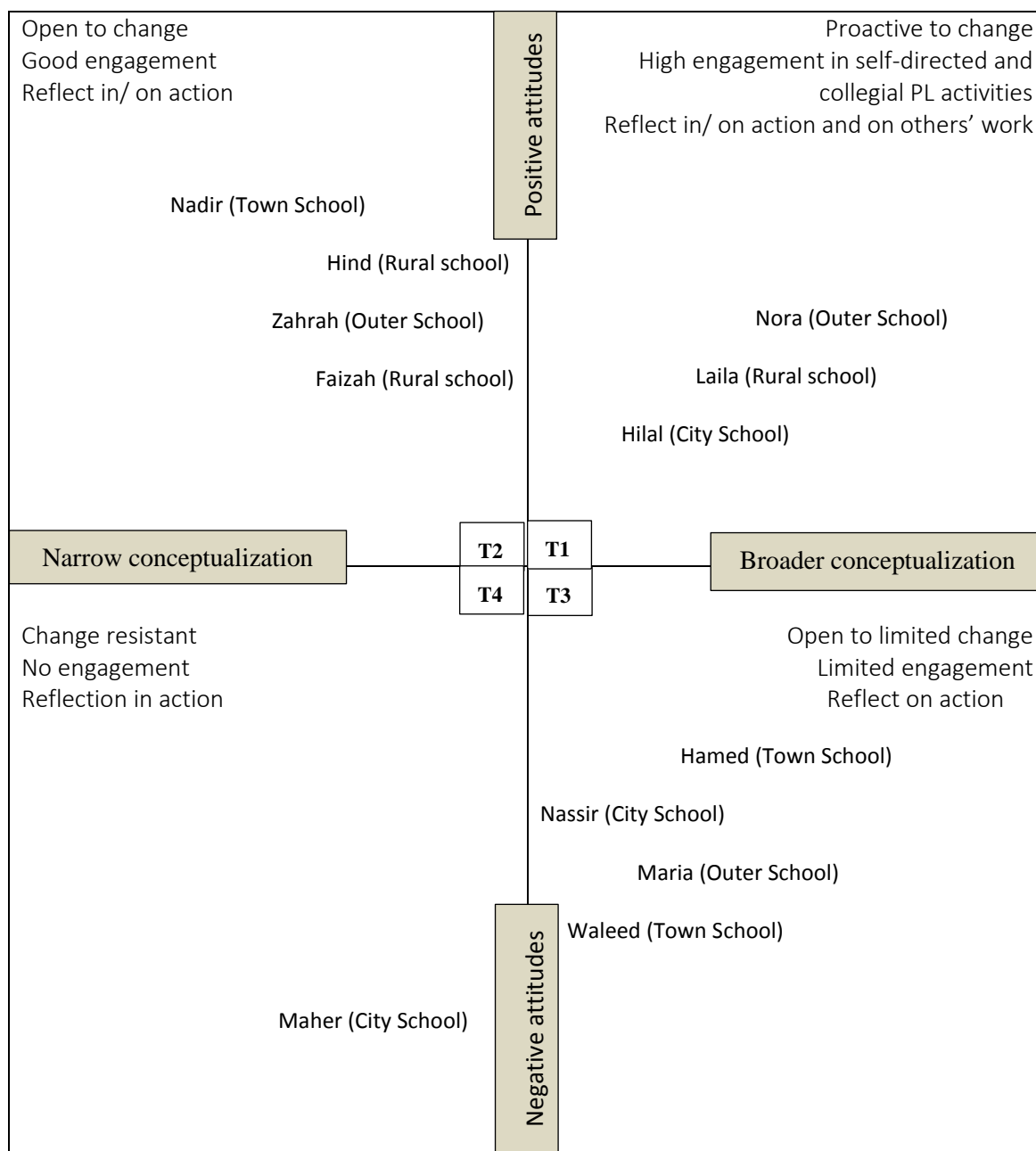


Figure 6.1 Classification of the participants based on their understanding of and attitudes towards PL

Figure 6.1 shows a grid that paints a picture of the teachers who participated in the second phase of this study and places them under four main categories based on their conceptualization of PL and attitudes to change. It is noticeable that whereas teachers in City School varied in their attitudes to PL, all of the teachers in Rural School had positive

attitudes. This indicates that teachers' reactions to change may have been shaped not only by the organizational climate or leadership of each school; other factors might have had an effect. It is noticeable also that female teachers showed more positive attitudes towards their PL, which reflects better social interaction (see Section 6.3.4) and higher actual involvement of school leadership (see Section 6.4.2) in improving teachers' PL. This indicates the possibility that the culture in the two girls' schools promoted a sense of identity that was informed by 'professional socialisation' and values of subject areas (Weidman et al.,2001), whereas 'organisational socialisation' and mandates of the school/ workplace (Chao et al.,1994) dominated in the two boys' schools (see Section 3.5.3).

The data from this grid highlights two deficiencies of the centralized 'linear' PL design. The first is related to the underestimation of the variations in understanding, aspects and purposes of PL, which resulted into inadequate attention being paid to the diverse ideas and paradoxes that might exist in the educational system, a core theme in complexity theory (Walby, 2007). The second is related to not considering the differences between schools and the various contexts and situations of reform actors (teachers and head teachers) and not allowing them to adapt what suits their circumstances best, a key concern of contingency theory (Dambe & Moorad, 2008). These two deficiencies are now discussed.

6.2.1 Underestimating the variations in understanding, aspects and purposes of PL

Several studies have demonstrated that involvement in and commitment to improving PL are affected by how it is understood by teachers (e.g. Netolicky, 2016; C. Watson & Michael, 2016). Likewise, this study found a positive link between how teachers conceptualized their PL and the extent to which they were willing to become involved in

formal, informal and self-directed PL activities (see Section 3.3.2 for differences among these). The findings of this study further reveal a complex picture of how PL was conceptualized, taking the form of a broad continuum of understanding (see Figure 6.2).

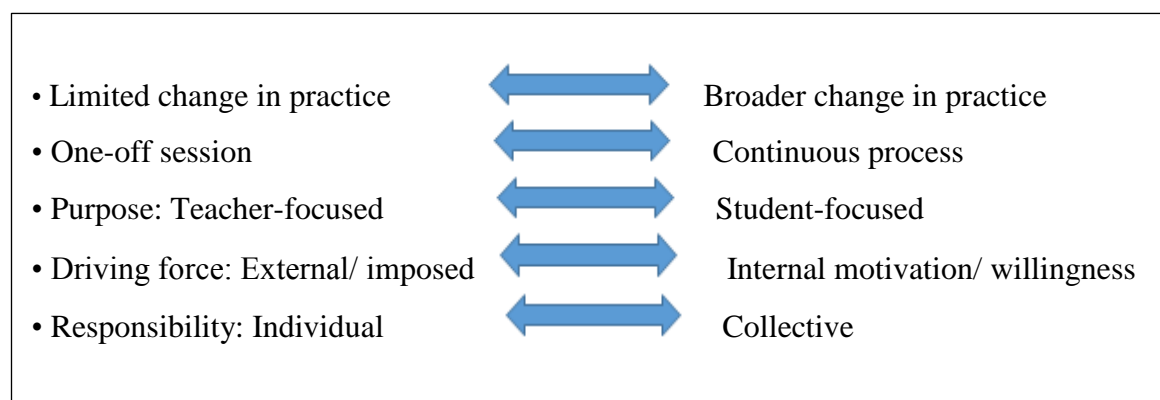


Figure 6.2 Continuum of teachers', head teachers' and inspectors' conceptualizations of PL

Unsurprisingly, these variations in conceptualizing PL reflect the argument presented in section 3.3. The left-hand end of the continuum reflects the conventional PD perspective, where the change required was predictable, limited, specific and time-bounded, whereas the right-hand end represents the perspective of several studies urging that PL be conceptualized as a holistic and complex process of change involving dynamic interaction between several components (such as people, beliefs and influences), rather than as separate knowledge- and skills-building events (e.g. Opfer & Pedder, 2011). This echoes the argument of some studies that PD is an outdated term and that using PL widens the perspective to take in both the input (enhancing teachers' ability) and output (impact on practice) of teacher quality initiatives (e.g. Timperley, 2011; C. Watson & Michael, 2016).

However, although there were some participants at each end of the continuum in Fig. 6.2, the conceptualization of most of the teachers, head teachers and inspectors were somewhere in the middle, which highlights the difficulty and variation that might be involved in deciding teachers' professional needs, even when they work under similar

conditions, in one system or in the same school. This seems to have been overlooked at the national level in the MOE, because the PL plans were created centrally and were imposed on schools regardless of these differences.

It is useful to analyse the variations between teachers at the two ends of the continuum in conceptualizing PL, to understand what had driven their engagement in PL, how they perceived their roles and what sort of PL they considered more effective in enhancing their teaching. For planners and head teachers, knowing such variations would help to guide expectation, inform strategy and facilitate identification of the best ways to support teachers in their learning.

Teachers' responses indicate that those whose understanding captured the traditional form of PD, comprising nearly third of participants, seemed to prefer being involved in individual learning activities with little or no interaction with others and to attend events to listen to 'experts' rather than to express their real anxieties and needs. They had limited themselves to what was formally offered and assumed it satisfied their needs. They wanted to improve basic skills, knowledge and pedagogical competence, seeing learning as a one-off event that ends with the training day or workshop, and were interested in increasing their stock of pedagogical knowledge, which might explain their satisfaction with attending one-off events. Improving their performance was largely seen as the responsibility of others; thus, although they expressed a commitment to improving their PL, they showed less readiness to be held responsible for their learning through their actual practice. PL meant to them reproducing formally advocated 'best practices' and what has been proven to have worked with others. They often preferred to learn individually, driven mainly by a desire to develop their practice, while rarely linking it directly to improving their students' performance, yet they often required external pressure, from the MOE, school leadership or students, to invest more in their PL. Eraut

(1994) argued that addressing specific problems they might face in their daily teaching is what motivates such teachers to attend a specific course or speak to a colleague.

In contrast, those teachers whose conceptualization of PL was broader (more than half of participants), wanted to improve a wider range of knowledge. This included knowledge about their students, better ways of reflection (individual, on others' work and with others), more involvement and chances to interact with others and learn from their experience. They cared about changes in their practice and their students' performance. Active and dynamic collaboration with others was an essential element in their learning, so they valued collective learning opportunities highly and sought them actively. These teachers showed more commitment and better readiness to take responsibility for their own learning and even for others'. PL meant to them an ongoing transformative learning experience that enabled them to adapt what they had learned to suit their context and needs. They clearly linked improving their learning to enhancing their students' performance and were often driven by an internal desire and willingness to improve their practice. Noticeably, similar differences were also evident between head teachers in their conceptualization of PL.

The former perspective, which dominated the earlier years of educational reforms in many developed countries (Little, 1993), was later shown to be disconnected from teachers' actual practice in their classrooms, triggering the need to rethink the meaning of PD (Sparks, 2002) and leading eventually to the emergence of calls to adopt the wider perspective of PL (Netolicky, 2016; Stewart, 2014).

This distinction in conceptualizing PL suggests that it is possible that the first group misunderstood the complex nature and simplified the many existing dynamics involved in improving teachers' PL (Kekang, 2014; Walby, 2007). In other words, they linked their

learning to one level of the system: 'the teacher themselves'. An alternative explanation is that they were satisfied with what they had because they thought they were doing well and could predict any changes needed in their teaching. This may have led them to narrow their aim to achieving little change in the quality of their teaching, like knowing about a new specific teaching technique or being introduced to a new educational technological tool that might reduce the time and effort required to prepare for their lessons. Their narrow conceptualization could also be attributed to their overall experience of one-off events and their limited experience of other PL modes of delivery, which may have left them unable to compare the two.

In contrast, the group of teachers at the other end, who were obviously proactive towards their own learning, seemed to link their learning to a wider set of components including themselves, their students, their school and other teachers and schools.

This comparison shows that teachers differed in their reaction to and engagement in new learning experiences. It seems that the main differences between the two groups were in whether the change they wanted was minor or major and in the extent to which they associated and linked their learning with interaction with others. For example, Nassir (a male English teacher, City School) thought he was a good teacher who did not need much training. He admitted, however, that he sometimes needed to increase his knowledge of a particular topic in his subject area or to learn how to use an unfamiliar teaching technique. Therefore, he attended PL events with a particular goal in mind, to improve something specific. In contrast, Nora (a female social studies teacher, Outer School) was open-minded when attending PL events, believing that she would learn something new from either the content presented, the presenter, or conversations with other participants. For her, these events represented potential opportunities to reflect on others' practice and to develop her own.

It can be assumed that those teachers on the left-hand side of the continuum in Fig. 6.2 let the change imposed by the MOE control and decide how they should teach in the classroom, whereas those on the right-hand side seemed to have been more aware of the uncertainty that changes might bring and better prepared to adapt these to suit their contexts, while being in charge of what to apply in their classrooms.

If the above discussion is viewed through the non-linear approach to change that complexity theory adapts (Morrison, 2008), two limitations of the top-down, centrally directed, one-size-fits-all model of change can be identified. The first relates to the linearity of this model: it is questionable how changes in classroom instruction can be derived from a linear change model which does not help teachers to challenge and question their long-held ideas and methods and which denies them adaptation to their own context. It is evident that such a model promotes commitment to implementation, rather than to learning, among teachers. Teachers' reactions to this change model ranged from feeling comfortable at avoiding new areas where they lacked competence and experience, to implementing the kind of change they thought most suitable, even if this differed from what was centrally intended.

The second limitation relates to the predictability and controllability of the outcome of educational change initiatives and to the difficulty of achieving teacher change when social behaviour is isolated from its setting and when diverse ideas and paradoxes that exist between schools and teachers are ignored. What is evident here is that changing teachers' practice and attitudes is a long and difficult process that needs not to be simplified and cannot be achieved by attending one-off sessions (W. Jones & Dexter, 2014; Zehetmeier et al., 2015).

Having recognized the main differences between the two ends of the continuum, it is nonetheless evident that both views remain important in achieving real change, because teachers must 'internalise a tremendous amount of new knowledge about learning and teaching' (Earl et al., 2003, p.16), to keep up with the rapidly increasing knowledge base related to their subject areas, but must also be ready and able to challenge their existing beliefs (see Eraut's model in Section 3.3.2). Thus, it is crucial that PL events go beyond increasing teachers' abilities, to changing their beliefs in order to minimize their resistance to change. Maher (a male science teacher, City School) clearly resisted change promoted by the MOE; he admitted that he never used any of what he had learned in PL events in his classroom, because he did not think they were useful. Indeed, his attitude towards anything formally offered by the MOE was very negative. In contrast, those who were more open to change were more likely to alter their beliefs.

Although such a variety of reactions to change might not be surprising, identifying the stages of change that teachers go through (Carnall, 2007) is crucial to highlighting and being alert to differences between teachers and to supporting them (see Section 3.2.3). It appears that understanding teachers' reactions to change is crucial in evaluating the effectiveness of teacher improvement programmes and identifying what has gone wrong (Guskey, 2002) and that targeting teachers' beliefs is key to the success of the implementation.

This shows that change in practice is the result of an interactive process mediated by both increased capacity for practice (enhanced subject and pedagogical knowledge) and alteration of beliefs. Nevertheless, since the findings give no indication that the existing formal PL opportunities have helped teachers to challenge their beliefs, the conceptualization of those who captured the wider change perspective can only be attributed to their experience, to internal motives or to the influence of colleagues, of

school leadership and of culture. Indeed, these teachers were found to be more engaged in self-directed PL activities, as shown in Figure 6.1.

Having clarified the teachers' various responses to change and considering the common and individual strategies of head teachers to improve teachers' professional learning (Sections 5.3.9 and 5.4.3), Fig. 6.1 can now be modified to indicate the possible support approaches that head teachers can use with each category of teachers, as shown in Fig. 6.3.

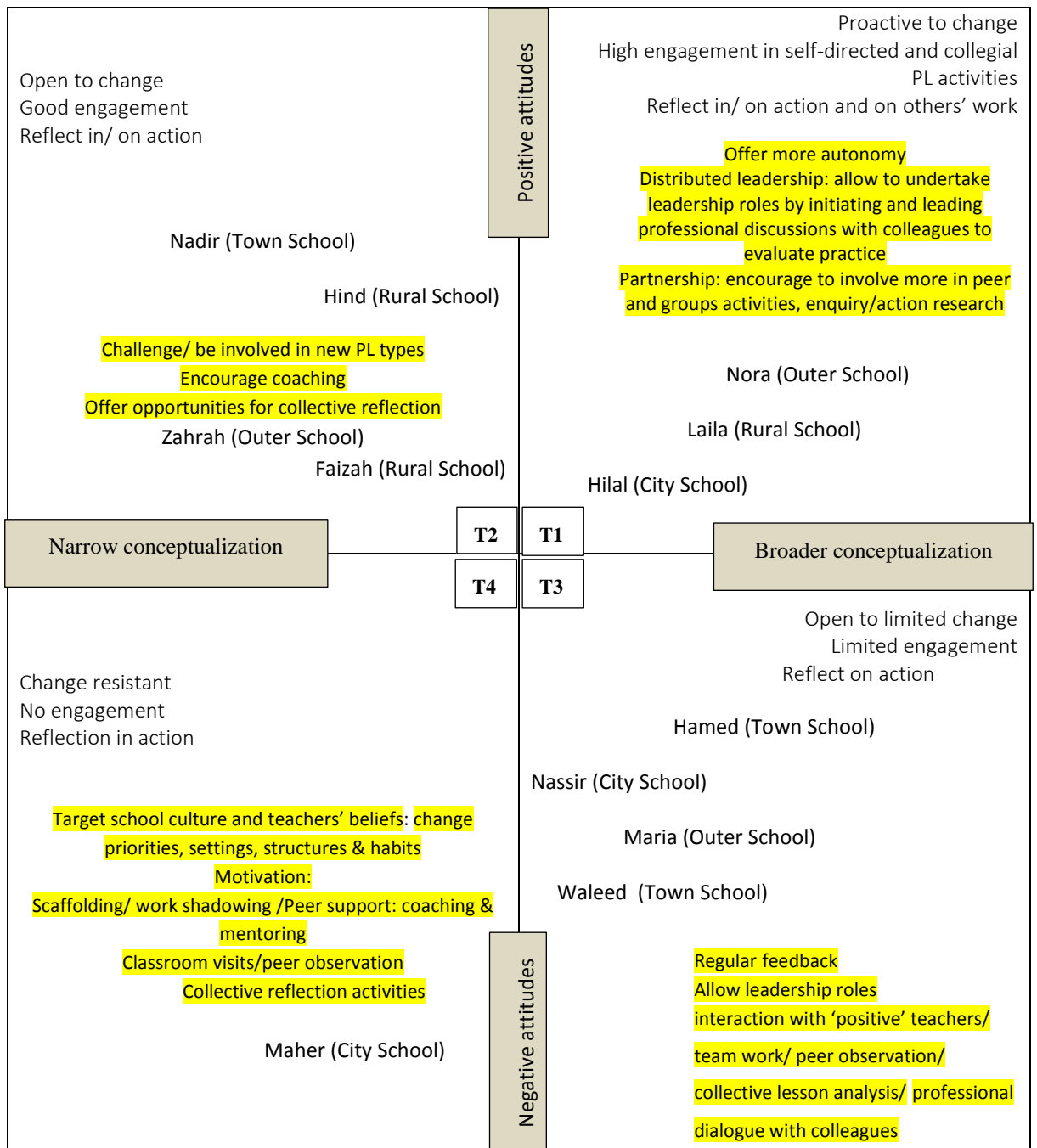


Figure 6.3 Possible support approaches for teachers with varied understanding of and attitudes towards PL

To simplify the ideas in Fig. 6.3, deciding the appropriate support each teacher needs in her/his PL requires a clear analysis of what s/he prefers to learn, how and why, to facilitate the creation of a framework of action aiming either to widen her/his understanding or altering her/his negative attitudes, or both. This may be a complex, time-consuming and expensive process, however, as problems are easier to identify than solutions.

6.2.2 Restricting the role of teachers and school leaders in the change process

The need to involve teachers in determining their professional learning needs is widely stressed (Beswick, 2014). However, a common theme raised by inspectors, head teachers and teachers in this study was that little attention was paid to involving teachers in decision-making regarding their PL, especially with regard to forming PL plans, identifying their professional needs and nominating them for PL events. This supports the findings of two previous studies which investigated teachers' participation in decisions related to their continuous professional development in Oman (Al-Lamki, 2009; Alyafae, 2004). This study also reveals a link between the extent to which teachers were committed to the formal PL activities and the degree they were involved in shaping their PL, reaffirming the findings of other studies (e.g. Gill & Hoffman, 2009; Zehetmeier et al., 2015). This limited involvement might be understood, according to complexity theory, as a direct effect of the linear change model that the MOE adopted in planning for PL. Comparing this model to Fullan's model of the process of change (Section 3.2.1), it can be inferred that the linear rational planning approach and the one-way communication that the MOE adopted had left schools little room for participation in decision making. This had led to the central change being viewed as a mandated blueprint to follow and limited chance for innovation.

The belief held by most teachers that their voices were not being heard seems to have engendered negative attitudes in many of them towards changes advocated by the MOE and to have resulted in an overall negative evaluation of the contribution of the MOE and the Educational Office officials in improving their PL, as revealed in Phase 1 and confirmed in Phase 2 of this research. A reasonable explanation might be linked to the dominance of the effect-limited, top-down way in which the MOE communicated with teachers and to

inadequate school consultation, which were apparent, via the survey, from teachers' limited knowledge of the latest events and updates in the MOE, all of which further suggests a lack of genuine teacher involvement.

This underestimation of the importance of communicating with teachers, along with the lack of clear criteria for nominating teachers for PL events, seems to have resulted in a kind of mistrust between the teachers and the MOE, which was apparent from claims of preferentialism and scepticism of the seriousness of any consultation with teachers and from their feelings of under-appreciation. Whilst this might imply that overall, most teachers were keen to take part in PL, yet many of them showed negative and contradictory attitudes towards formal PL. This suggests that the MOE's inadequate communication may have led to a lack of clarity about the aims and mechanisms of reform, which in turn may have affected teachers' willingness to participate in formal PL events.

In addition, head teachers were found to be almost completely excluded from making decisions regarding their teachers' MOE-based and Educational Office-based PL; their autonomy was restricted and they had limited control of school-based PL. This seems to have weakened the potential contingent leadership of some head teachers and denied their important capacity to adapt their approach to helping to improve classroom teaching and to fit and respond differently to various circumstances (Bush, 2011; Fiedler, 1978). However, their reactions to this marginalization varied unexpectedly from expressing their powerlessness to influence PL (e.g. the head teacher of City School) to ignoring/disregarding the guidelines of the MOE (e.g. the head teacher of Rural School).

Likewise, school leaders, and surprisingly inspectors, lacked the necessary autonomy and authority to hold teachers accountable for improving their PL because of the many loose and dated regulations and bureaucracy. Both head teachers and inspectors attributed

teachers' weak commitment largely to the lack of accountability and to teachers' feeling that their status would not be affected either positively or negatively, however hard they worked to improve their PL.

The importance of this suggested missing link between accountability and teacher involvement in improving their performance reflects the findings of other studies. For example, Hilal (2012) found that the process of teacher evaluation adopted by the MOE in Oman was not linked to teachers' participation in professional development opportunities, which he argued would have hindered the improvement of their commitment to engaging in PD activities. Conversely, published research indicates that teacher evaluation can play a crucial role in supporting and convincing teachers to enhance their teaching performance (Goldhaber & Anthony, 2007). Therefore, it can be inferred that the inadequate arrangements related to teachers' accountability and performance appraisal adopted by the MOE have not helped to increase teachers' involvement and commitment to improving their PL, mainly because of the lack of adaptive structures reflecting the extent of changes in how teachers learn. Complexity theory sees such adaptive structures as vital for the effectiveness of change.

This indication of the need for more accountability seems to be driven by two different perspectives: an emphasis on individual teacher responsibility, which was mostly raised by inspectors and head teachers, and the need for incentives and a reward system, a common theme raised by all participants. However, whether more accountability measures would lead to improvements in schools is yet another controversial question (O'Day, 2002).

In addition, the findings reveal a mismatch between one of the key policy aims, to promote the schools' role in improving teachers' practice (see Section 2.4.3), and the centralized

direction that the MOE had imposed on schools. Restricting schools' autonomy in seeking external PL opportunities and setting controlling guidelines on how to spend the 'inadequate' budget received from the MOE, as maintained by all head teachers, are examples of this contradiction. The very limited financial support schools received seems also to have affected the head teachers' strategic leadership, consistent with the argument of Day (1999) on the importance of the availability of resources for school effectiveness.

This invites the suggestion that the bureaucratic structure of the MOE has denied schools the autonomy to decide what suited their context best or to plan strategically for what would be needed in the immediate and mid-term future. Leithwood et al. (2004) maintained that school heads' ability to plan for and develop their staff is an essential part of a strategic leader's role. However, while some school heads responded by maximising their use of resources available in their schools to promote and facilitate their teachers' learning, others seemed to have used this bureaucracy as a justification to excuse their low involvement in improving teachers' PL. Therefore, enabling the enthusiastic school leaders by increasing their space of autonomy in managing their schools would contribute positively to supporting teachers' PL.

It is unsurprising that a centralized educational system, which adopted a predetermined one-size-fits-all approach to planning for teacher quality improvement in the MOE, had not sufficiently accounted for the various contexts and settings of the schools; indeed, it was likely to be responsible for a mismatch between what the MOE planned and what schools needed. It can also be argued that the imposition of this linear direction actually inhibited the ability of both teachers and head teachers to initiate and adapt responses fitting their situations and limited their ability to be proactive, which Fiedler (1978) identified as crucial in responding appropriately to the changing conditions and requirements in schools. School leaders' space of autonomy and their ability to decide

what fits their schools' and teachers' changing circumstances is also a key element stressed by contingency theory (Dambe & Moorad, 2008).

Thus, it is important when planning for educational change to consider the various contexts and situations of implementers and to allow them to adapt programmes to their circumstances. The controlling, centralized change model adopted by the MOE and the rigid, standardized PL plans that were imposed on schools restricted schools' leaders' space in dealing with many contextual challenges facing their schools. It seems that while this controlling change model ensured the implementation of the imposed plans, it had little effects in promoting commitment to change among teachers, thus preserving the status quo in classroom instruction.

The above inference is also supported by the finding that teachers had a passive role in the education reforms in Oman; they had very little input in deciding the design and content of these reforms. Besides, many teachers reported attending professional activities that they did not want or need. This seems to have affected their attitudes to centralized PL and to have triggered negative beliefs and emotions among some teachers that the PL plan was created to suit the agenda of MOE officials only, which might indicate that restricting teachers' role to implementation has contributed to creating a mismatch between the MOE's expectations and teachers' aspirations. This might be seen as a paradox, because although the MOE acknowledged that teachers needed to be empowered to learn, this was prevented by their passive role in shaping their own PL. Solving such a dilemma might require being open to the wider factors and dynamics that influence teachers' performance, as argued by Mason (2011). For the MOE, this might necessitate obtaining a variety of perspectives, wider consultation and continuous feedback from schools.

6.3 The incompatibility of existing opportunities with teachers' actual needs in the implementation of PL plans

Overall, the current study reveals a discrepancy between policymakers' expectations and teachers' beliefs regarding the potential for improving teachers' practice of a centralized PL based on the decisions of the MOE or the Educational Office, a common theme raised by teachers, by head teachers and unexpectedly by two of the inspectors. This finding is in line with those of previous studies (e.g. Opfer & Pedder, 2011; Timperley, 2008). Teachers perceived the impact of school-based PL more positively, by contrast, in line with several studies (e.g. Brezicha et al., 2015) which support the idea that 'providing teachers with differentiated support [in the school] improves teachers' understanding of the reform and supplies teachers the necessary tools to implement the new idea, facilitate teacher voice and participation in the process' (Brezicha et al., 2015, p.97). The findings suggest that this discrepancy can be attributed to four main causes: disconnectedness from the classroom; little attention to teachers' beliefs and attitudes; insufficient consideration to promoting teachers' reflection; and inadequate focus on sharing experience.

6.3.1 Disconnectedness from the classroom

The findings of this study on the reported impact of the centralized formal PL largely fit with the outcomes of research on teachers' professional learning (e.g. Barber & Mourshed, 2007). For instance, they confirmed the warning by Mayer and Lloyd (2011) that when the focus is on enhancing teachers' content and pedagogical knowledge, the classroom outcome is overlooked.

Overall, teachers felt that formal PL had the strongest impact on enhancing their content and pedagogical knowledge (Doran, 2014; Ingvarson, Meiers, & Beavis, 2005), however,

there was no indication that this had led to better teaching practice in classrooms or developed new ways of thinking among teachers. This inconsistency may be due to the traditional way in which PL events were conducted, with a focus on providing teachers with transitional learning experiences and updating their content knowledge, while giving less consideration to practical matters and to interactions between PL facilitators (mainly inspectors) and teachers or among teachers themselves, which is a key concern of social constructionism. Prior studies have noted the impact of teacher interaction on enhancing teaching practice (e.g. Loughland & Nguyen, 2016). Thus, the status quo in classroom instruction could be attributed to the rarity of planned opportunities for collaborative problem solving, enquiry and dialogue about how to face daily challenges in the classroom.

Furthermore, it was a common belief amongst teachers, head teachers and inspectors that the content presented on formal training occasions was often too general and not directly linked to what went on in the classroom or to various learners' needs and settings, which justifies teachers' demotivation in applying what they had learned in their classrooms. This corroborates the suggestions of Kekang (2014) and Turner (2006) that not paying adequate attention to the context of implementation (teachers and classroom) lessens the likelihood of change in practice. It can thus be suggested that the lack of connection/relevance between what was introduced in PL events and what was needed in the classroom demotivated some teachers from applying it and led them to sticking to their old methods, reinforcing the warning of Hoekstra and Korthagen (2011) against the gap between the content presented in PL events and what is taught in classrooms.

The finding of this study that PL was most effective when done in schools is consistent with various other studies (e.g. Cole, 2012; Lunenburg, 2011). Indeed, analysis of this positive belief about the impact of school-based PL reveals two interesting possibilities:

firstly, that the positive impact of PL resulted from its being more diversified, collective, contextual and needs-linked; and secondly, that the teachers were describing their satisfaction with the events rather than with their effectiveness. If the first possibility is true, it may be explained by the active and collaborative climate teachers enjoyed and by their needs and preferences being met. It may also be linked to the practical knowledge teachers experienced in school-based events, which could have facilitated applying what was seen, discussed or practised in their own classrooms. This is in accord with recent studies indicating that the affordance of 'professional space' (Admiraal et al., 2016) and communities of practice (Sanders, 2016) in schools promote interaction and learning.

6.3.2 Little attention to teachers' beliefs and attitudes

This study suggests that teachers' beliefs and convictions are key elements in realizing changes in their teaching practice. This fits with the outcomes of other research (e.g. Fenwick, 2003). However, the findings indicate that teachers' beliefs were overlooked and neglected when initiating and implementing PL activities. This seems to have contributed to a planning-implementation mismatch by creating overall negative attitudes among teachers towards the centralized change process. It was also evident that neglecting teachers' views in the planning phase of PL has reduced the effectiveness of mentoring and providing support for teachers in their learning during the implementation phase. This finding reinforces the observation of Talbot and Campbell (2014) that teachers' beliefs and perceptions are rarely the core focus of many educational reforms.

The findings also reveal that although all teachers shared their strong convictions of the importance of improving their professional learning, their actual engagement and commitment to formal PL was relatively weak. This discrepancy between beliefs and actions can be attributed to three factors. The first is the lack of change ownership, because many of the teachers perceived themselves as objects in their PL, while trainers

decided in most cases what and how teachers should learn; this confirms the importance of teacher ownership in creating active change agents in the school (Pyhältö et al., 2011).

The paradox, as seen through the complexity theory perspective, which argues that social behaviour cannot be controlled or predicted, is that if learning is an attempt to 'adapt' to an ever changing world and contextual circumstances, then PL events controlled and prescribed from the top down, lacking teacher input cannot be expected to improve teachers' learning. The second causal factor is the mismatch between what teachers needed and what formal PL events targeted, which has been shown to lead to change resistance (Towndrow et al., 2010). Thirdly, the inconsistency of central PL with teachers' own conditions and the compromise teachers had to make in order to attend out-of-school formal events, like travelling long distances or missing a school day, may have contributed to creating negative attitudes towards engagement in formal PL activities. Hoyle and Wallace (2005) found that such difficult conditions triggered teacher dissatisfaction.

In contrast, Burns (2008, p.21) argued that 'competencies learned informally are perceived to be used more often'. The findings of this study support a similar conclusion, although teachers varied in their engagement in informal PL. This might be attributed to some of the learning or contextual influences highlighted by Eraut (2004); mainly the challenges of the work, school-based relationships and daily interaction, and the support of colleagues. Alternatively, it may be because these informal learning opportunities often focused on ways of improving students' achievements. The control and autonomy teachers had in these informal learning modes may also have led to this consistency and better impact on practice.

Hence, it could conceivably be argued that although students' achievement was often linked to teachers' enhanced subject knowledge (Hopkins, 2000), changes in teachers' practice is unlikely to happen if their attitudes remain negative.

6.3.3 Insufficient consideration to promoting teachers' reflection

Reflection, a cognitive process that draws upon one's own and others' experience to resolve problems and decide changes in practice, has been shown to enhance practice-based learning and to promote teachers professional development (Loughran, 2010; Luttenberg & Bergen, 2008). The results of this study, in agreement with those obtained by Doecke and Parr (2011), show that teachers' reflection was an important factor in developing teachers' knowledge and teaching and in improving their learning. However, it seems quite neglected in centralized PL activities, which have not focused directly on what teachers face in their classrooms. This missing link to the classroom environment seems to have restricted teachers from reflecting on their practice and to have reduced opportunities to change classroom instruction. This supports the finding of Camburn (2010) that embedded learning is crucial to reflective practice.

Furthermore, many teachers reported attending several formal PL activities unaware of their objectives and sometimes being placed in non-interactive or inconsistent groups (e.g. teaching different age groups). It is possible that this hindered collective reflection among them.

In contrast, the results of this study have shown that reflection was reported to have been used more as a result of engaging in informal learning activities in schools, although some teachers were sometimes unaware of this kind of learning, as argued by Shulman (1987). This noticeable significance of informal reflection supports the findings of Camburn and Han (2015) and may be attributed to the daily challenges facing teachers, as many

reported that they had often tried to find solutions to problems in their classroom teaching by speaking to colleagues.

This study also suggests a link between how teachers conceptualized PL and the extent to which they were engaged in reflective practices, as shown by Figure 6.1. Those with a narrower and more conventional PD perspective reported incidents of reflection during their actual teaching (reflection in action) or based on others' judgement of their practice, whereas those with a wider perspective reported more incidents of reflecting on action that involved evaluating previous experience. These differences in reflection are widely highlighted in the literature (e.g. Schon, 1987). A possible explanation for these variations lies in whether teachers preferred to learn individually, rather than collectively through daily social interactions, or in their awareness that such interactions help to enhance their teaching.

This leads to the suggestion that the extent and type of reflection teachers apply to their daily experiences influences the extent of change in their practice. While reflection in action is important, reflection on action and on others' work is more useful in achieving broader change.

6.3.4 Inadequate focus on sharing experience

This study reveals that interpersonal relations and daily interactions with colleagues played a significant role in shaping teachers' attitudes towards involvement in improving their PL, a key aspect of social constructionism (Watson & Evans, 2012). For example, some participants talked about occasions where they had tried new teaching techniques or attended a particular PL event because a colleague described a positive experience to them. Such positive influence was more noticeable among teachers who had positive attitudes, which was the case for all three female teachers in Rural School, for instance.

These teachers were found to engage more in informal and formal collective learning activities (see Fig. 6.3) and in different types of PLCs (see Section 3.3.4) that helped them to construct their knowledge.

Such positive connections can be understood through Vygotsky's constructivist ideas about learning, which suggest that people construct their meanings and build their knowledge through their daily interaction in the workplace (Vygotsky, 1978). These daily interactions seem also to have led to the creation of informal learning communities, or what Jean Lave and Etienne Wenger refer to as 'communities of practice' (Harris & Jones, 2010), which have facilitated knowledge sharing among teachers. Collective learning has also been advocated by many studies as valuable in changing individual teachers' practices (e.g. Darling-Hammond & McLaughlin, 2011) and recognised to be useful in driving broader improvement in the school as a whole. The real value of the collective learning for those with the broader PL conceptualization could have been in helping them to see things from a new perspective by observing, engaging and reflecting on others' practices and experience.

Social constructionism (Denscombe, 2014) perceives engagement in daily social interactions as a key contributor to shaping teachers' understanding and attitudes towards involvement in PL. This was made evident in this study by many accounts, such as the Rural School head teacher's description of the changes she observed in the attitudes of a change-resistant teacher as a result of spending more time with other teachers with positive attitudes, in the teachers' room and travelling to and from school. Social interaction was a type of daily spontaneous informal learning experience that almost all teachers had been through, as suggested by many of the examples given, although most of the teachers did not refer explicitly to it as a source of learning.

Hansman (2001) highlighted the link between teachers' learning and their interactions with colleagues in their context. Engaging in PLCs, as a kind of social collective learning, is also argued to offer 'a very powerful way of engaging teachers in reflecting upon and refining their practice' (Harris & Jones, 2010, p.174). In the same vein, the findings of this study reveal that improving teachers' PL was strengthened when there was a collective social environment in the school that promoted both developmental and reproductive learning among teachers. This confirms Fuller and Unwin (2004) conclusion on the effects of the workplace on the learning process: that creating an 'expansive-learning' environment in the school (see Section 3.3.4.4), where collaborative working is linked to daily practices, is likely to have a positive impact on teacher learning.

However, there was more evidence in the two girls' schools studied, compared to the boys' schools, that collective learning was explicitly linked to whole-school improvement and embedded in the culture of the school. Female teachers seemed more engaged in formal collaborative learning events in their schools, which can be linked to the climate of social interaction that the head teachers in the two girls' schools planned for and encouraged (Porcaro, 2014); e.g. mixing demotivated with hardworking teachers in working groups and in the teachers' room to inspire them and making better use of coaching techniques. This confirms the finding of Loughland and Nguyen (2016) that teachers' practice and beliefs changed as a result of their involvement in organized collaborative learning experiences. It also reinforces the findings from the OECD countries:

In a majority of participating countries, female teachers endorse direct transmission beliefs less strongly than male teachers. They also report greater use of structuring and student-oriented practices than their male colleagues. Also according to their self-reports, they are more often involved in co-operative activities (Baker, Grisay, Klieme, & Scheerens, 2009, p.113).

Thus, it can be argued that teachers' involvement in PL can be enhanced partly but not solely by diversifying and increasing their opportunities to interact with each other.

Nevertheless, the findings suggest that formal PL opportunities in Oman often promoted individual learning and were rarely designed to encourage collective learning, which resonates with Thibodeau (2008) assertion that collaborative learning is not often part of the formal PL experience. Overall, most of the participants reported inadequate opportunities to share ideas with colleagues due to contextual factors like excessive teaching load or the limited time for discussion during formal PL events. Seen through the lens of social constructionism, the above findings suggest that the disappointing impact of formal PL in developing new knowledge among teachers can be explained by how little attention was paid to the social aspects of knowledge building and the scarce consideration of the models teachers created of their social world (Foucault, 1972). The problem seems to lie in viewing learning as a linear process, which clearly does not fit the constructionist perspective.

In contrast to formal PL, substantial learning, in the form of constructing new knowledge, which was reported as a result of informal learning opportunities, involved some sort of interaction with others. It seems that the greatest value and most positive impact of participating in informal PL activities were in interacting with more experienced teachers, resonating with Vygotsky's 'more knowledgeable other' theory. Besides, it could be attributed to the voice teachers had in deciding how to learn, especially in PLCs, as suggested by Harris and Jones (2010). It may be that the non-linearity of teachers' interactions facilitated more natural and contextual learning.

Interestingly, however, a few teachers preferred to learn individually and reported less involvement in group activities. Their attitude could be explained by a narrow understanding of PL and by their aim being restricted to improving their own teaching.

What is more, it seems that even in informal, spontaneous discussions, the knowledge and ideas teachers exchanged may have contributed to their negative or positive attitude towards change (Fullan, 2007), because they were based on their individual interpretations, which may have contradicted the MOE vision (Hargreaves, 1993). These findings suggest that interactions between teachers can potentially lead both to sharing experience and to altering attitudes and beliefs if carefully designed so that teachers with positive attitudes are involved and taking the lead.

6.4 The difficulty of evaluating teachers' learning due to the influence of multi-level factors

Several interrelated factors were found to affect teachers' learning at the national, school and classroom levels.

6.4.1 Factors at the national level

Many education reforms have been accused of underestimating the contextual realities of teachers and schools (Wedell, 2009). The findings of this study show that although formal PL was argued by educational planners to be based on analysing schools' contexts and teachers' needs, many teachers and head teachers expressed their dissatisfaction with how it was designed and implemented, perceiving it as mostly reflecting policymakers' agendas. This incongruity seems to be caused by inadequate consideration of two key features stressed by complexity theory, mainly the importance of sharing knowledge and enhance internal connections and communication between various components of the system. The first relates to a lack of clarity about the mechanism used in deciding PL

programmes and nominating teachers for PL events, which was widely believed to be blurred and criticized for lacking teachers' voice. The second relates to insufficient attention that was paid to the importance of communicating, connecting with and convincing teachers of the need for the changes to be adopted (Fullan, 2013), which resulted in low commitment to centralized change that was widely argued by teachers and head teachers to be fragmented and not to have targeted teachers' true professional needs. This suggests an enactment fracture in the system (Davies & Hughes, 2009), where the changing professional needs of teachers have increased well beyond the capacity of the centralized system to identify them. In addition, the lack of clarity affected teachers' learning negatively.

The linear change approach seems also to have contributed to creating bureaucratic issues, in the form of long and complex decision-taking processes and requirements, creating negative pressure on schools (Fullan, 2013) and hampering their inspiration, adaptation and autonomy in enhancing teachers' quality, thus making planning for PL a challenging and undesirable experience. According to Hoyle and Wallace (2005), a lack of change autonomy triggers dissatisfaction and contributes to a discrepancy between what is planned and what is achieved.

Similarly, many problems that appeared at the implementation phase could be linked to a lack of coordination between various units in the Education District, e.g. nominating the same teacher for two different PL events at the same time. Lack of coordination was also apparent in relation to pre-service training like communicating with the SQU (the government University responsible for pre-service training) to make sure that the modules taught corresponded well with the curriculum in schools, which can be considered an external factor influencing implementation (Fullan, 2013). Mason (2011) argues that coordination is essential for a smooth implementation of change.

Fullan (2013) asserted that one cause of the failure of educational reforms is that 'government agencies have been occupied with policy and programme initiation, and have vastly underestimated the problems and processes of implementation' (p.119). It seems that this underestimation has led to a misconceived understanding of impact follow-up, as most PL events were evaluated at the end of each event itself, rather than by observing their effects in the classroom. This misconception could be a result of trying to implement the central PL as precisely suggested by planners (Ball et al, 2008), which led inspectors to pay less attention to assessing the impact on teachers' practice in the classroom (Fullan, 2001; Grace & Gravestock, 2009); there was commitment to the plan but not to the change. The paradox, from the perspective of social constructionism, is that the evaluation mechanism focused on how teachers responded to PL events but not on the meanings they associated with these events (Eraut, 1994). It is no wonder that such a misjudged feedback mechanism has not helped in providing the appropriate support for teachers in their learning (Eraut, 2004).

The low quality of some PL events and presenters was also found to have contributed to their ineffectiveness, lending supportive evidence to the key barriers identified by Eraut (2004). Teachers described many PL events and presenters as traditional and lacking the element of interest and practicality, which negatively affected teachers' willingness to attend formal PL events.

Nevertheless, the findings of this study revealed variation among teachers in their commitment to improving their PL, which was affected by the external motivation that they received. Different types of incentives, like extra payments, attending a conference, receiving an appreciation letter, seemed to have made a difference to teachers' commitment to improving their PL. However, most of these were seldom from the MOE or the Education Office and more often from the school.

6.4.2 Factors linked to the school

Although the MOE had ambitious policy expectations of making schools 'training units', the findings suggest that the centralized control of formal PL and the little autonomy granted to schools had contributed to the school being conceived as the place where reforms were implemented, rather than a key player in shaping teachers' attitudes, interactions, beliefs, commitments and practices.

A contingency theory view of this finding might help to explain what went wrong, the divergence between the vision of the MOE and the results in schools. While the MOE held schools accountable for initiating more school-based PL, it marginalized them from decision-making related to shaping teachers' PL, limited their autonomy in enhancing teachers' quality and controlled how they worked. This denied schools the possibility of meeting their contextual demands and limited their ability to respond appropriately to their teachers' particular needs. Many controlling guidelines were imposed on schools, restricting them from deciding what suited their environment best, leading most head teachers' to express the concern that while being asked to manage the implementation, they were restricted from deciding what was best for their schools. Head teachers also had to find time slots to fit in PL activities, as these had not been considered basic components of the school day right from the beginning of the school year. All schools also reported lacking the basic infrastructure that could have helped in promoting teachers' learning, like PL coordinators and designated rooms in which to conduct PL events.

While engagement in PL varied among and within the four case study schools, the variations between head teachers on the extent of their involvement in improving their teachers' PL might indicate that schools had many potential opportunities to develop teachers' practice, which those head teachers who thought they were powerless had missed. Head teachers' willingness to be involved in enhancing teachers' practice was

found to be crucial to its effectiveness, reinforcing the arguments of Bransford et al. (2000). However, they were found to differ in their readiness to meet this task and on how they believed this should be done, which ranged from focusing on the need for more funds to demanding more autonomy. Accordingly, the strategies they used to support their teachers' learning varied in their extent and impact (see Section 5.4.3).

School culture was found to be another factor that affected teachers' learning in the workplace in various ways, reinforcing Eraut (2004) model of the effect of relationships with people at work (see Section 3.3.2). Colleagues' influence and support, and the existence of learning communities were found to be crucially influential in enhancing teachers' learning. Loughran (2010) argued that the availability of such supporting factors in a school can have a positive impact on convincing teachers of the need to change. However, the centralized linear change approach seems to have ignored such effects and underestimated the influence of parallel interactions between teachers, head teachers and even inspectors on how they understood and implemented educational reforms. What is evident from a complexity theory perspective, which challenges the predictability of outcomes in complex systems, is that what has resulted out of these interactions went beyond the path predicted by educational planners.

6.4.3 Factors linked to the classroom

Not surprisingly, work-life balance and teachers' working conditions represented a challenge and led some teachers to spending less time in learning, which is consistent with the key inhibitors established by Harris and Jones (2010) as limiting teachers' involvement in professional learning communities. These hard circumstances contributed to demotivating some teachers from investing in developing their PL.

However, the way teachers viewed their roles and responsibilities in the change process, as reactors or as initiators and partners, was found to be linked to their reactions and to the amount of time and effort they devoted to improving their PL (Moore et al., 2002; Wheatley, 2005). The teachers in this study reacted to education reforms in three different ways: by adopting, ignoring or adapting them to their context. These could be linked to Carnall (2007) five-stage cycle of change (denial, defence, discarding, adaptation and internalisation), although, as this study found, teachers' reactions are influenced by many other contextual, internal and external factors at various levels (see Section 6.4). Deciding what motivates each teacher can be challenging, because of the complex and dynamic environments of schools and the diverse contextual differences that were found to influence teachers' reactions, which have been shown to be strongly associated with teachers' understanding of and attitudes towards PL (see Fig. 6.1). This is in line with the assertion of Damşa et al. (2010) that policymakers need to analyse, understand and consider teachers' reactions and attitudes during the implementation phase of educational reforms.

Furthermore, the findings suggest that stagnation in teachers' practice might be because they were not challenged to change their mental models of how to teach (Bandura, 1997); most appeared to believe that the curriculum promoted memorization and that exams tended to focus on testing low-level thinking skills. It can be inferred that because what was required from teachers in formal PL interventions had not challenged or required them to question their long-held ideas, many were not convinced of the need to change.

Moreover, while there were variations related to experience and gender in how teachers engaged in and valued PL in various locations, internal motivation was also found to be a key factor in determining their involvement in PL, which confirms reports in the literature highlighting the significance of teacher motivation in promoting more involvement (e.g.

Kelani & Khourey-Bowers, 2012). It also supports the findings of McMillan et al. (2016), whose study of the motivating and inhibiting factors in CPD in Ireland gave more credit to internal than to external motivation in promoting teacher involvement.

What this might mean is that teachers' beliefs and convictions are key elements in generating a change in their teaching practice, as suggested by other studies (e.g., Grace & Gravestock, 2009); those teachers with the wider change perspective believed that they needed to change and were able to do it. However, this seems not to have received adequate attention, with clear evidence and multiple examples indicating that teachers' beliefs and motivation were not considered when shaping and implementing PL activities (see Section 6.3.2). Hammond and McLaughlin (2011) cautioned against such a discrepancy and argued that it is a result of the lack of teachers' voice.

This study has also found that different teachers used various kinds of informal PL, e.g. experimenting with new teaching techniques they had read about, reflecting on their practice, observing others' teaching and engaging in discussion with them. These activities fit in with the main categories of informal learning activities that Meirink et al. (2007) identified as being undertaken by teachers. The findings of this study reveal a link between being active in self-directed PL and reported changes to teaching practice.

However, engagement in informal PL varied among teachers and between the four case study schools. For instance, it was more obvious in Rural School compared to the other schools. This variation was found to be influenced by many personal and contextual factors, e.g. teachers' interests and internal motivation, colleagues' influence and head teachers' role (see Sections 6.4.2 and 6.5), which is in line with what Berg and Chyung (2008) concluded as to influences on teachers' engagement in informal learning. However, there were indications that informal learning was not formally recognized or

supported. This was apparent in the difficulties that teachers faced when wanting to become involved in self-directed learning activities outside their schools, such as visiting another school or attending a conference. Nevertheless, there were differences between male and female teachers in their perceptions of the frequency and value of PL in various locations: most female teachers reported that informal PL in their schools had helped them to enhance their teaching practice, whereas male teachers valued more out-of-school informal learning activities. This reinforces what the data revealed of better social interaction in female schools, but it could indicate that male teachers were favoured in PL events that required travel arrangements. It could also be attributed to an aspect of Omani social culture whereby women are expected not to drive far from their homes, which further shows that women face more work-life balance pressure.

The gap between what is planned and what is realized, as seen through the lens of complexity theory (Morrison, 2008), which stresses the importance of understanding the diverse ideas, relationships and contradictions that might exist in complex systems, can be attributed to the insufficient consideration that was paid to the various interconnected factors at different levels which affected improving teachers' quality (see Fig. 7.1). This includes the teacher (his/her beliefs, attitudes, experience and working conditions), the school (its culture, infrastructure and leaders' willingness and capacity), other schools (other teachers and links between schools) and the MOE itself (coordination, communication, structures and regulations). What the data from this study reveal is that although the change model adopted by the MOE was based on the uniformity of what was offered to all schools, the schools and individual teachers responded to it differently.

The solution, from a multi-level cause-effect perspective that complexity theory advocates, lies in adapting a non-linear change approach that promotes the distribution and sharing of knowledge by considering and involving various components of the whole

system (Kelani & Khourey-Bowers, 2012; Stewart, 2014) and ensuring continuous two-way communication between them. Similarly, Fullan (2007) stressed the importance of keeping a balance between all these various components. This inference is supported by Walby (2007) contention that policymakers need to admit that various contextual factors might influence their educational institutions' performance and that they should adopt non-linear and dynamic educational plans.

6.5 The availability & nature of the support provided

The findings from this study have identified a link between supporting teachers in improving their PL and the impact on their learning and involvement in formal and self-directed PL. This confirms the findings of other published research in this area (e.g., Eraut, 2011; Hodkinson & Hodkinson, 2005). Both Knight (2011) and Truesdale (2003) found that teachers who were supported by being coached by their peers after having a PD activity were more likely to change their teaching practice compared to those who only had the PD activity, but no support later on, and were left to implement the change by themselves in their classrooms.

The importance of support for the sustainability of the change process is also highlighted by Guskey (2002, p.388), who argued that 'support allows those engaged in the difficult process of implementation to tolerate the anxiety of occasional failures', which implies that PL designers need to consider ways of making implementation smoother and easier for teachers.

However, the findings of this study indicate that the focus in the MOE was more on the delivery of PL activities (e.g. providing workshops and orientation on changes in curriculum), while very little attention was paid to understanding variations in the support needed by individual teachers or schools during implementation in the classroom. Although several forms of formal support were acknowledged, including online discussion forums, workshops, meetings, guided discussions and various kinds of incentives, most of these were school based and resulted from school leaders' or inspectors' initiatives rather than being basic components of how PL was formally advocated by the MOE.

Furthermore, Guskey's (1998) attribution of the limited impact of some PD activities to the mismatch between 'incompatible organizational policies' and 'implementation efforts' is supported by this study's finding that the regulations and arrangements in place in relation to improving teachers' quality did not echo the aspiration of the schools and teachers. In many cases, this divergence demotivated and impeded teachers from adapting what they had learned to their own classrooms and denied them further involvement in learning activities outside their schools, such as attending conferences or visiting other schools. This suggests a contradiction between one of the goals formally stated by the MOE, 'to prompt more self-directed PL' (see Sections 2.4.2 and 2.4.3), and the flexibility and autonomy teachers had. It can be inferred that organizational support in the form of compatible regulations and adaptive structures are key to the effectiveness of PL, which corresponds to a core concern of complexity theory.

Furthermore, there was clear evidence that 'supporting teachers' was confined to offering them formal PL activities and providing some basic infrastructure in schools (e.g. educational technology). This was apparent in the other examples the participants

provided in relation to what was missing and what was needed to make teachers' PL effective. These showed that teachers' and head teachers' expectations and aspirations were much wider and extended to ensuring that regulations were revised and aligned to changes in other areas related to improving teacher quality, providing adequate financial allocations, allowing autonomy and flexibility for teachers and schools, having better infrastructure and paying better attention to the quality of PL events and presenters.

In contrast, the four case study schools provided wider ranges of support, although with variations amongst them. The support teachers received was the highest in Rural school and the least in City School. All head teachers regarded supporting teachers in improving their PL as an essential part of their role; however, in practice there were distinctions among them in how they translated this commitment into action. Noticeably, the head of Rural school, who was studying for a master's degree at a private university in Oman, was more involved in her teachers' PL than were the other heads, finding innovative solutions that enabled them to overcome various obstacles. This could be attributed to two factors: her higher degree studies may have widened her perspective, sharpened her reflections and increased her awareness of the importance of teachers' learning; alternatively, her internal motives and personal beliefs may have been positively influenced by her experience. Her noticeable positive attitude towards her own learning was echoed in her teachers' obvious motivation and commitment to both self-directed and collegial learning.

It can be inferred from the above that school leadership support can play a crucial role in leading teachers to change their practice, a link consistent with widely reported research findings (e.g. Bottery, 2004; Bush, 2011). This stresses the attention that PL planners need to pay to school leaders' capacity and willingness to improve teachers' quality.

Furthermore, although a link was found between colleagues' support and conceptualization of PL, it is noticeable that most of the reported instances of interaction between teachers took place in formal structured events in the schools, rarely as planned initiatives carried out by the teachers themselves, except for the most commonly reported forms of informal collective learning, spontaneous discussions, which happened during non-teaching time. This appears to question the existence of a genuine culture where seeking colleagues' support is seen as a strength rather than a weakness.

In the MOE, the restricted view of support needed to make PL effective and the likely failure to realize its complex nature and connectedness to a wide range of components (e.g. teachers, schools, infrastructure and regulations) might explain both the mismatch between the aims and outcomes of several PL activities and their reported limited effectiveness. Three inferences could conceivably be drawn.

The first inference reflects the ideas of complexity theory that change should be non-linear. The linear and limited communication between the MOE and schools has led to a lack of 'joined-up thinking' between the two, as it promoted top-down control and minimized bottom-up feedback. This has reduced school input into decision-making about improving teachers' PL and contributed to a reduction in PL effectiveness by creating a relation of mistrust between the MOE and some teachers, particularly those with negative attitudes. Therefore, ensuring a two-way communication and feedback between the MOE and schools, a 'dialogue' as seen by complexity theory, would create a balance between the expectations of PL designers and teachers.

The second inference reflects the ideas of contingency theory. The low commitment to the central change advocated by the MOE can be attributed to the little reflectiveness of its design to each school's situation and diverse requirements, which Day and Gu (2007)

maintained is a prerequisite for the sustainability of commitment and the effectiveness of change. The strict guidelines the MOE was trying to impose on schools and its attempts to unify how things were done, especially in regard to teachers' quality improvement, seems not to have helped in responding suitably to various schools' settings. This may explain a belief widely expressed in the interviews that many PL events were conducted to satisfy the desires of the MOE officials. This challenges the assumption by the MOE that one unified PL plan would suit all schools. What seems to be missing is a consideration of the special context of each school and of the need to explicitly link training content to teachers' practice in their classrooms (Turner, 2006).

The third inference reflects the ideas of social constructionism. Supporting teachers in their learning should be seen as a core component of the planning for teachers' quality improvement; thus, it needs to be embedded in the school culture and treated as a daily routine. This would require promoting knowledge building as a natural result of providing space and opportunities for interactions, discussions and the sharing of experience among teachers.

Consequently, considering a broader perspective of support is critical for the effectiveness of PL. Support needs to be seen as a key element in understanding PL and to be widely considered when planning for and implementing PL activities. It seems that supporting and ultimately achieving genuine sustainable change in teachers' practice will require rethinking the meaning and process of PL.

6.6 Synthesis of the findings

This chapter has discussed the findings of the study and related them to the relevant literature and key theoretical ideas set out in Chapter Three. The findings reveal the limitation of the top-down change model adopted by the MOE in driving changes in classroom practice, mainly because it underestimated the variations that existed among schools. Table 6.1 summarizes the main similarities and differences between the four case study schools in relation to the four main issues identified in this chapter. It was noticeable that the head teacher of Rural School was better able to contribute to improving her teachers' professional learning and creating a collective and supportive learning climate and that the teachers in this school had more positive attitudes and engaged more widely in sharing experience. The situation was similar in Outer School, although the head teacher was less involved in practical PL activities. In Town School, variations were noticeable between teachers in their attitudes and preferences, but the overall climate appeared to have less effect on promoting the sharing of experience or the offering of support to colleagues, compared to the Rural and Outer schools. In contrast, the head teacher of City School seemed to lack the necessary practical skills to involve himself in creating a learning climate in the school, while most teachers had negative attitudes and restricted conceptualization of the different ways in which they could improve their teaching practice and the organizational climate was less supportive of teacher learning compared to the other three schools.

Table 6.1 Similarities and differences between the four case study schools with regard to perceptions and actual engagement in central and school-based PL

Issues related to improving PL	Evidence from case study Rural school	Evidence from case study Outer school	Evidence from case study Town school	Evidence from case study City school
Challenges involved in planning to improve teachers' professional learning	<ul style="list-style-type: none"> Common faced challenges: <p>No school autonomy, bureaucracy, marginalization of head teachers, top-down communication with little school input, little teacher consultation</p>			
	<p>Variations between schools:</p> <p>Head teacher: proactive, delegate responsibilities, involved others in decision making, Teachers: All teachers had positive attitudes and broad conceptualization of PL, high engagement in self-directed, collegial PL activities and collective reflection School climate: promotes social interaction and engaging activities, collective responsibility, focus on collective learning and student outcomes</p>	<p>Variations between schools:</p> <p>Head teacher: Active, delegate responsibilities, involved others in decision making, Teachers: Two teachers had positive attitudes and broad conceptualization of PL, good engagement in self-directed, collegial PL activities and collective reflection School climate: promotes social interaction and engaging activities, collective responsibility, focus on collective learning and student outcomes</p>	<p>Variations between schools:</p> <p>Head teacher: reactive, focus more on administrative issues, involved some HODs in decision making, Teachers: Variation in conceptualization of PL and more negative attitudes, low engagement in self-directed, collegial PL activities and collective reflection, more individual reflection on action School climate: promoted individual, focused on individual teacher learning</p>	<p>Variations between schools:</p> <p>Head teacher: reactive, focus more on administrative issues, rarely involved others in decision making, Teachers: two teachers had narrow conceptualization of PL and negative attitudes, low engagement in self-directed, collegial PL activities and collective reflection, some resistant to change, more individual reflection on action School climate: promoted individual, focused on individual teacher learning</p>
Mismatch between what was being offered to teachers and what they might actually benefit from	<ul style="list-style-type: none"> Central PL: <p>very little interaction between teachers, reflection, and chances for sharing experience, disconnectedness from the classroom; little attention to teachers' beliefs and attitudes</p>			
	<p>School-based PL:</p> <p>Diversified formal and informal PL, linked to classroom, attention to individuals' needs and references, focus on reflection, plenty of chances for sharing experience</p>	<p>School-based PL:</p> <p>Various formal and many informal PL, linked to classroom, attention to teachers' needs, focus on reflection, many chances for sharing experience</p>	<p>School-based PL:</p> <p>Many formal PL opportunities but less informal, linked to teaching and learning, attention to teachers' attitudes, less attention to teachers' reflection, some chances for sharing experience</p>	<p>School-based PL:</p> <p>Various formal but rare informal PL opportunities, linked to teaching and learning, less attention to teachers' references and reflection, few chances for sharing experience</p>

External & internal factors which influenced teachers' beliefs and practice	<ul style="list-style-type: none"> Common Factors: <p>lack of infrastructure, coordination, communication, follow-up, external motivation and clarity about PL system, low quality of some PL events and presenters, controlling guidelines, teachers' working conditions, low challenge to teachers' mental models</p>			
	<p>School-related factors:</p> <p>Head teacher involved more practically in improving teachers' learning, and ensuring adequate the basic infrastructure</p> <p>School culture promoted various kinds of formal and informal learning opportunities, social interaction and cooperation</p> <p>All teachers viewed themselves as initiators and had high internal motivation and positive beliefs and attitudes</p>	<p>School-related factors:</p> <p>Head teacher was proactive in shaping and arranging for PL activities, and in facilitating teachers' interaction and learning.</p> <p>School culture promoted various kinds of formal and informal learning opportunities, social interaction and cooperation</p> <p>Most teachers viewed themselves as initiators and had high internal motivation and positive beliefs and attitudes</p>	<p>School-related factors:</p> <p>Head teacher was supportive and active in engaging in conversations with teachers to motivate them but he did not involve in practical PL activities.</p> <p>School culture promoted individual learning, average social interaction and cooperation, and few informal learning opportunities</p> <p>Most teachers viewed themselves as reactors to change and varied in their internal motivation and beliefs and attitudes</p>	<p>School-related factors:</p> <p>Head teacher role was restricted to offering encouragement and psychological support, as long as his time and authority allowed him, but less involved in practical activities. and ensuring adequate the basic infrastructure</p> <p>School culture promoted individual learning, minimal social interaction and cooperation, and very few informal learning opportunities</p> <p>Most teachers viewed themselves as reactors to change and had low internal motivation and apparent negative beliefs and attitudes</p>
The availability & nature of the support provided	<ul style="list-style-type: none"> National level: <p>incompatible organizational policies and lack of adaptive structures, little attention to understanding variations in the support needed by individual teachers or schools during implementation</p>			
	<p>School level:</p> <p>Wider supportive leadership, colleagues, more resources, positive school climate, different kinds of incentive and motivation from head teacher, two-way communication</p>	<p>School level:</p> <p>Wider supportive leadership, colleagues, available resources, apparent positive school climate, different kinds of incentive and motivation from head teacher, two-way communication</p>	<p>School level:</p> <p>Good supportive leadership, less supportive colleagues, not many resources, overall positive school climate, a lot of motivation and encouragement from head teacher, mainly one-way communication but with occasional feedback from teachers</p>	<p>School level:</p> <p>encouragement and psychological leadership support but Less supportive in practical issue, less supportive colleagues, few resources, negative school climate, mainly one-way communication with little teacher input</p>

From a complexity theory perspective, which argues that variations in systems affect their overall effectiveness, Table 6.1 suggests that the underestimation of the variations between the four case study schools, mainly in the capabilities and efforts of head teachers, teachers' understanding and attitudes, and the extent to which the school culture was supportive of learning, may have created a dilemma for the centrally-led change approach adopted by the MOE, which assumed uniformity of implementation. Whereas educational planners might feel contented with the situation in Rural School, this linear model of change offered no clear way to improve the situation at City School, other than sending in the inspectors more often. This suggests the need for an alternative approach, paying closer attention to the contextual circumstances of each school, that might take the form of a bottom-up model with top-down support, as suggested in Chapter Seven, which follows. This final chapter will summarise the main findings, provide answers to the research sub-questions, consider some limitations and implications of the study and suggest possible future research areas.

Chapter 7 Conclusion

7.1 Introduction

This concluding chapter summarises the findings of the study and provides answers to the main research question (Section 7.2) and the sub-questions (Sections 7.2.1 to 7.2.6); Section 7.2 also contains a revised model of PL based on the findings. Section 7.3 describes the contribution of this study to knowledge. Next, there is an evaluation of the conceptual framework and research design (Section 7.4) and a discussion of their limitations (Section 7.5). Section 7.6 considers implications for policymakers and practitioners, then Section 7.7 suggests some areas for future research.

7.2 Substantive findings

The main research question guiding this study was: **To what extent do Omani teachers working in post-basic education schools (students aged 16-17) perceive their professional learning to be effective in the light of recent educational reforms?** The aim was to identify teachers' perceptions of the effectiveness of recent educational reforms which may help to improve their professional learning and enhance their teaching practice.

A key finding was the disappointing outcomes of many PD experiences in enhancing teachers' learning in Oman, lending supportive evidence to the findings widely reported in similar contexts like Saudi Arabia and Kuwait (e.g. Akkary, 2014; Mansour et al., 2014) and in the Western context (Fullan, 2007) with regard to the effectiveness of educational reforms in improving teachers' PL, although these differ in nature. This study found that improving teachers' PL was effective in some specific areas (e.g. improving the quality of

teachers' subject and pedagogical knowledge) but not in others (e.g. changing their thinking, attitudes, or classroom practice), corresponding with the findings of other studies (e.g. Opfer & Pedder, 2011; Timperley, 2011). A plausible explanation for the observed discrepancy between expectations for teachers' PL and its outcomes is that while overall educational policy and reforms in Oman are centrally decided by policymakers and planners, they must be translated into action plans that schools can implement, yet the leaders and staff of these schools have little input to their design or contents. These findings underscore the contention in the literature (e.g. Fullan, 2007; Terhart, 2013) regarding the divergence between the planning of educational reforms and their implementation; however, the literature does not always offer clear explanations for this mismatch. This study has identified four key areas that could explain such a divergence: (1) underestimating the effects of variations among schools or teachers and not paying sufficient attention to the roles of those who implement change; (2) a mismatch between what the PL system offered and what teachers actually benefited from; (3) a set of interconnected external and internal factors which influenced teachers' beliefs and practice and the planning and implementation of PL at various levels (Fullan, 2013); and (4) the availability and nature of support provided.

Viewing these four issues from a complexity theory perspective (Morrison, 2008), it was concluded that although the centralised direction adopted by the MOE in Oman, which assumed the predictability of teachers' needs, was shown to have contributed to increasing teachers' content knowledge, it fell short of making fundamental improvements to what goes on in schools and classrooms. Thus, this study has raised important questions about the practicality and usefulness of educational reforms which fail to have a significant impact on practice.

Perhaps the most serious disadvantage of centralised systems is that although they may set high expectations for schools, they do not enable schools to respond individually to what matters most to them. Many of the reforms seem mismatched with schools' contexts, offering them inadequate understanding and little room for interpretation, as they rarely pay attention to how implementers understand, interpret and enact these reforms. The results showed that teachers in City School and Town School were less involved in knowledge sharing, compared to Rural School and Outer school; however, pre-determined formal PL plans did not consider such a variation.

This study has shown that practice was generally not taken seriously when planning for the reforms, which led teachers to resist change. It also found that the centralised approach to change from a 'top down' perspective had underestimated and oversimplified the complex nature of both the education system and teachers' learning. It had not corresponded sufficiently closely to the wider contextual dynamics, to the socio-cultural context or to multiple areas of influence that were found to affect teachers' experience, beliefs and practice, all of which greatly limited the intended changes to classroom practice. One might reflect that it is not the number of policy reforms that are devised which actually matters. It is whether these affect practice and lead to improved outcomes for schools and students. The results of this study indicate that no matter how PL opportunities are produced and offered, no significant change in practice will occur as long as implementers' existing attitudes and beliefs are neglected instead of being challenged and ultimately changed. Because of their obvious positive attitudes, teachers in Rural School showed more readiness to change compared to the other teachers.

Although this case study approach involved a relatively small sample of participants, the findings have important implications for practice and policy, as shown in a revised model

of PL (Fig. 7.1), this was developed from a provisional working model which was presented in Chapter 3, Section 3.6.

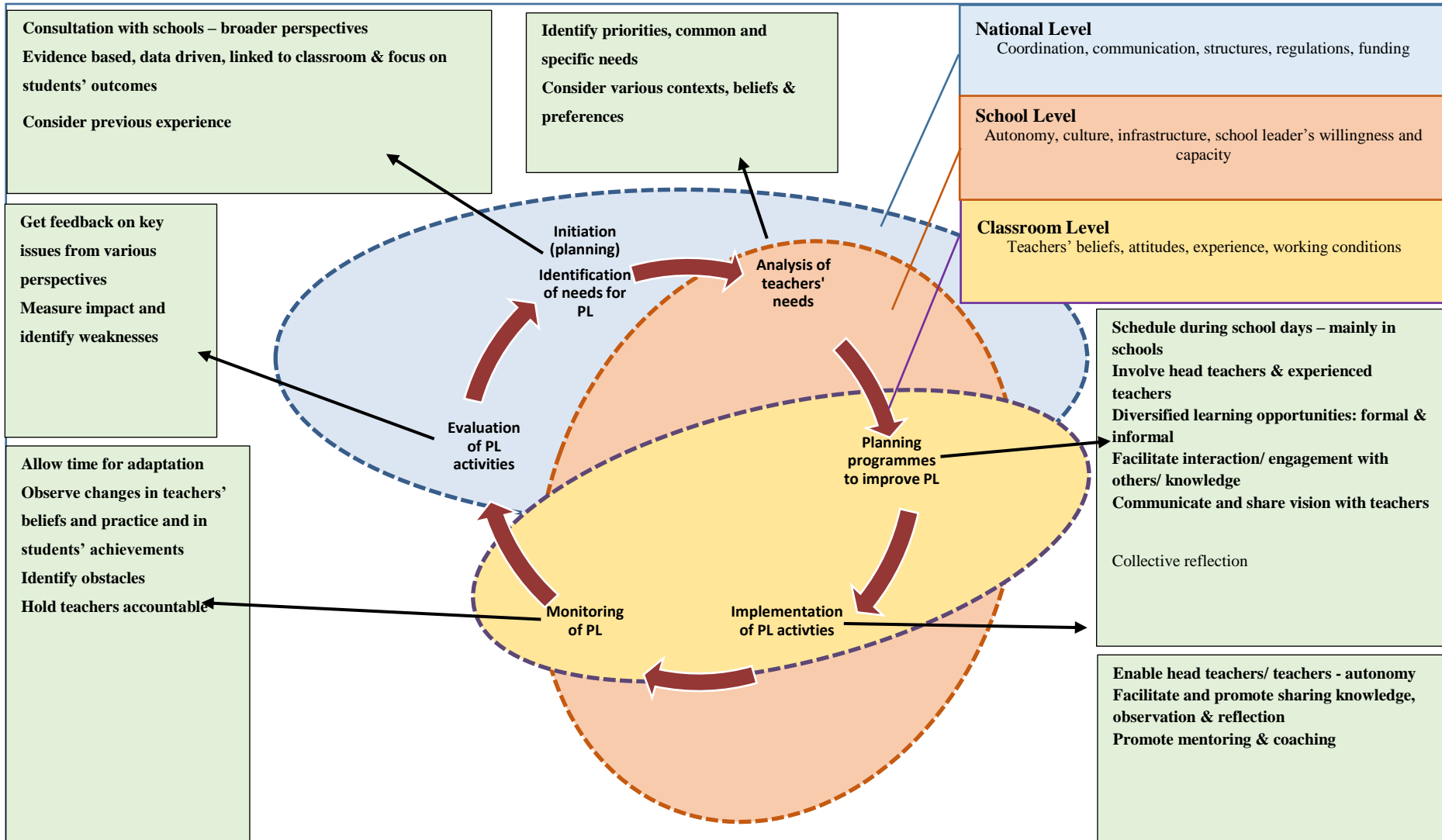


Figure 7.1 Revised model of PL based on the findings

This PL model, as shown in Fig. 7.1, consists of three interconnected stages: initiation (planning), implementation and evaluation. It recognises a range of procedures (e.g. wider-involvement, continuous monitoring and feedback) and conditions (e.g. autonomy, willingness and space for sharing experience) that should be provided and facilitated to enable and support teacher learning at the national, school and classroom levels. PL, as this model proposes, is a non-linear process in which what happens during each stage influences how effective are the others; thus changing circumstances should determine actions to be taken rather than predetermined plans.

The evidence from this research suggests that although most significant changes are only visible in the long term, viewing the change as an accumulated process, rather than an event, entails being attentive to the many factors that affect this process and to how the individual elements that constitute its various phases are handled and affected by what goes on in the other phases. Therefore, the results of this research support the idea that reforms should allow schools more flexibility with regard to taking decisions based on contextual understanding and continuous monitoring and feedback, rather than making decisions centrally and evaluating the whole reform at the end.

This study concluded by establishing three other important inferences, which clearly underpin the social constructionist approach adopted (see Fig. 7.2), as they linked teachers' learning and their ability to construct and develop knowledge, alterations in their beliefs and changes in their practice in their daily social interactions.

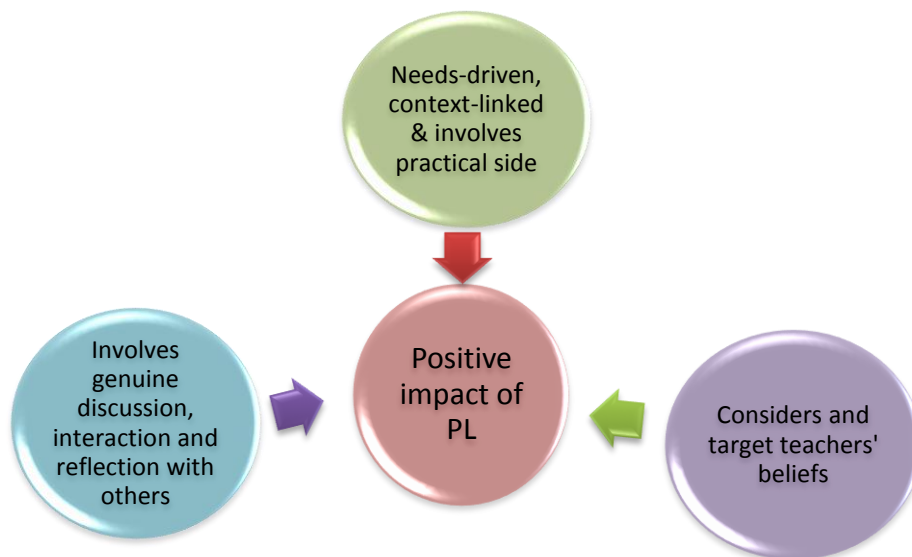


Figure 7.2 Factors that increase the positive impact of PL

Firstly, teachers were found to learn better when the learning experience was needs-driven, linked to their context and had a practical side, which highlights the importance of teachers seeing and believing that they are able to use what they have learned in their classrooms. Such a belief on the need to change was more evident in Rural School compared to the other schools.

Secondly, the existence of collaborative learning environments, as was more noticeable in Rural School and Outer School, was shown to be a very important factor in driving teachers to change, as these create better opportunities for collegial learning and shared experience, stimulating teachers to reflect more on their practice, both individually and collectively. This underlines the need to enable teachers to meet and exchange experience, which should be integral to PL events.

Thirdly, teachers' self-efficacy, their belief in the need to change and their perceptions of their roles and responsibilities in improving their PL (e.g. Moore et al., 2002; Wheatley, 2005) all affected the extent of their engagement in and benefit from PL activities. However, this study argues that the impact will be maximised in a climate that promotes these three necessities equally, rather than paying attention to one of them.

Thus, it seems to be a serious weakness of top-down approaches to change that they disregard the learning that can result from such interactions and engagement. The fact that the effectiveness of reforms is ultimately determined by the individuals who implement them, rather than those who create them, seems to underline the need for greater attention to be paid to their roles.

This necessitates viewing a school as an active participant in shaping teachers' PL and as a place where the planning phase should start; it might require 'backward planning', which clearly conflicts with the centralisation of the education system that adopts a 'top-down' approach. With regard to evaluating educational reforms, the focus should be on their impact, rather than whether or not they were implemented. However, this study argues that impact will be maximised in a climate that promotes the updating of both content and pedagogical knowledge through interaction, space to share knowledge and collective reflection.

The six sub-questions (Chapter 1, Section 1.3) that were utilised to help answer the main research question are now considered in turn.

7.2.1 What does PL mean to teachers? (Sub-question 1)

The teachers' overall conceptualisations of PL indicated the existence of a continuum (see Chapter 6, Section 6.2.1, Fig 6.2), which ranged from focusing on the input and what was to be gained (e.g. increasing their subject/pedagogical knowledge base) to focusing on the output and consequences (e.g. acquiring positive attitudes and developing new ways of thinking). This continuum of understanding highlights the complex nature of teachers' PL and the various interplaying personal and contextual factors that might be involved in the practicality of improving it. However, by assuming that their one-size-fits-all central PL plans would be implemented similarly in all schools, policymakers seem to have underestimated

the problematic nature of PL, which has led them not to appreciate that many teachers would not use what they learned in the way envisaged.

Most of the teachers in the four case study schools showed high levels of awareness of the importance of improving their PL and linked it to enhancing the quality of teaching and learning, but they differed in their views on how best to improve it, depending on whether they wanted major or minor changes and on the extent to which they associated their learning with interaction with others; thus, some preferred individual and one-off sessions which offered them specific content enabling them to overcome particular challenges (which was more noticeable in Town School and City School), while others were open to any new skill or experience and were more willing to be involved in collective learning activities (which was more evident in Rural School and Outer School). This is in accord with recent studies in similar contexts, Saudi Arabia in particular, indicating variations between teachers on how they understood PD and how they preferred to learn (Sywelem & Witte, 2013).

In fact, some of those who never implemented what was offered in formal PL events were still able to achieve good student outcomes; this was the case with Hilal from City School for example. This leads to the possibility that because the different interpretations and goals that teachers might have in approaching PL events were not considered during the planning of educational reforms, the inspectors and head teachers who were responsible for overseeing and following up their implementation found themselves ill prepared to react to change resistance and less able to explain the positive outcomes of some of those who rejected change and stuck to their own ideas. A clear implication here is that imposing change from the 'top down' will make it difficult to consider the various factors that might differ from one context to another and from one teacher to another.

7.2.2 To what extent do teachers perceive themselves as having an active role in improving their own PL? (Sub-question 2)

This research has shown that teachers' roles and involvement in improving their PL varied with the location and type of PL activity, as the statistical tests (Mann-Whitney and Kruskal-Wallis) indicated. While having a passive role in the design and engagement of 'top-down' (MOE and education office-based) PL initiatives, teachers unsurprisingly reported stronger involvement in 'bottom-up' school-based activities and in informal collective learning interactions. This finding is consistent with that of Al-Mahdy and Sywelem (2016), that teachers in Saudi Arabia, Oman, and Egypt are not involved in the planning process of their PL.

The negative perception of involvement in top-down initiatives was attributed to insufficient communication between the MOE and schools and to teachers having no voice in making decisions regarding the priority and delivery mechanism of many PL programmes, which then have led to negative attitudes towards the MOE and its desired changes. It was also linked to head teachers' marginalisation in making decisions about how these initiatives were decided and designed.

In contrast, school-based 'bottom-up' initiatives received more positive approval from teachers, who saw them as responding better to their professional needs and preferences, offering them more opportunities to engage in learning activities and to share experience, particularly in Rural School and Outer School.

However, teachers were found to vary in their involvement and attitudes towards informal and self-directed PL, which was influenced by various personal and contextual factors, including previous experience and self-efficacy, external and internal motivation, the context and culture of the school, life-work balance and support from colleagues, head teachers and inspectors.

What seems to explain the above findings is that the top-down change initiatives were designed to suit the needs of a wide range of teachers, but did not necessarily suit all of them. In contrast, the school-based initiatives were more able to identify, reflect and meet individuals' needs. Alternatively, it can be argued that the controlling and imposed element in the top-down initiatives conflicted with learning by experience, dialogue and interactions, whereas school-based initiatives, being more responsive to the complexity, contextual factors and socio-cultural factors affecting the quality of teachers' professional learning, were more effective in inducing changes in teachers' practice.

7.2.3 What sort of PL opportunities do teachers consider to be the most useful in their professional development? (Sub-question 3)

This study suggests that teachers' understanding of PL was related both to the sort of PL that they preferred and engaged in (e.g. formal vs informal, individual vs collective) and to their perceptions of the responsibility for improving their learning (e.g. considering themselves responsible and being proactive versus depending on others and expecting external PL to be delivered to them). For educational planners, such variations should not be surprising, because education professionals do not always begin with a richness of understanding, but at the same time these variations should not to be ignored. As the findings suggest, engagement in collective learning activities and in knowledge sharing are fundamental in encouraging teachers towards greater individual responsibility. This was more noticeable, for instance, in Rural School where the head teacher was attentive to such a link and the teachers were proactive and engaged in both collective and self-directed learning. This result is consistent with the findings of some previous studies in the Arab region (e.g. Al-Lamki, 2009; Alharbi, 2011), which showed that teachers benefited more from those opportunities that enabled them to interact with each other.

The results of this investigation show that providing good quality PL activities does not necessarily lead to teacher learning if not directly linked to classroom practice or if teachers' attitudes are negative; the effectiveness of PL activities was attributed to their characteristics and nature rather than to the type of activity. PL opportunities, whether formal (e.g. workshops), informal (e.g. coaching, mentoring, PLCs, visits to other schools) or self-directed (e.g. reading and using the internet) were more useful and had a greater chance of leading to genuine change in practice when they contained practical knowledge and embedded learning mediated by opportunities to discuss and interact with others, to observe how others teach and share experience with them, and to reflect individually and collectively on classroom practice. Teachers considered those opportunities that convinced them of the need to change to be more useful.

However, while changes in practice and beliefs were found to be interconnected, the occurrence of one was not found to guarantee the other, which suggests that both Guskey's (2002) argument that practices change before beliefs and Desimone's (2009) claim of the inverse relationship may be true. In other words, while it is easier for those teachers who are open to change to alter their beliefs when they observe a positive impact on their students' achievements, it may be more useful for those who resist change to try to change their beliefs before experimenting with new teaching techniques. Thus, it can be argued that one of the more important findings to emerge from this study in the Omani context is that the availability of opportunities to share knowledge and to engage collectively in constructing new meanings will facilitate teachers' learning and promote changes in teaching practice.

7.2.4 To what extent have these opportunities led to changes in teachers' practice?

(Sub-question 4)

Many of the changes that teachers reported as a result of their involvement in formal PL were linked to increasing subject knowledge and enhancing pedagogical skills, whereas changes in beliefs, thinking or instructional practice were rare. This was mainly attributed to the transient learning experience and theoretical knowledge often offered in formal PL activities and to the scarcity of opportunities to share, observe, reflect, apply and test learned knowledge in practice in the classroom. In other words, this partial failure to change was attributed to separation from day-to-day classroom teaching and insufficient active engagement in experiencing practical knowledge. Most of the occasions on which teachers reported having changed their pedagogical approach, for example those involving collective reflection, were associated either with school-based PL or with engagement in informal learning opportunities, such as discussing difficulties faced in the classroom with a colleague.

Analysing these incidents and teachers' justifications revealed that those teachers who changed their classroom practice did not do so simply because they had increased their subject knowledge or learned a new teaching technique, but rather because they could use that new knowledge in practical ways in the classroom. The potential weakness of the top-down approach to change is that teachers might learn something but not necessarily use it in practice, which is more likely to happen if they do not know how to adapt it to their classrooms or if they cannot see how it will enhance their students' outcomes and therefore do not believe that it will do so. This finding was supported by the result of an OECD study in 2014, which surveyed teachers' learning environment in 30 countries and showed that mandatory teacher training was often repetitive and irrelevant in Arab countries (OECD, 2014), although some of these, like the UAE, has the highest rates of teachers taking part in professional development.

This research has also shown that schools varied in the collaborative learning experiences they facilitated for their teachers; those with apparently better engagement in collegial learning activities and sharing experience reported more changes in teaching practice, which was the case in the two girls' schools (Rural School and Outer School) that were involved in the qualitative phase of this study. Therefore, it is important to reconsider how practical it is to adopt a one-size-fits-all approach to change in response to such variations between schools. It is evident from this study that such a centralised approach might hinder school improvement rather than facilitate it.

7.2.5 What factors hinder the improvement of teachers' PL? (Sub-question 5)

This study has identified barriers to improving teachers' learning at four levels, as discussed in Chapter 5, Section 5.4.5 and Chapter 6, Section 6.4: the national level, the school level, the classroom level, and those barriers which occur in formal learning opportunities. These factors, which are set out in Figure 7.3, highlight the causality and multidirectional factors that might influence and shape teachers' conceptualisation of PL and affect their beliefs and how they engage, interact and change their instructional practice. Similarly, published research in some Arab countries, like Jordan and Qatar, indicated similar obstacles (e.g. Nasser, 2017; Thawabieh, Al-Hadidi, & Balwanz, 2011).

Barriers at the national level

- Mismatch between PL plans and teachers' actual professional needs
- Schools' marginalization from decision-making and a lack of teachers' voice in planning for PL
- Regulations and organisational structures incompatible with changes in teachers' PL
- Bureaucratic barriers to obtaining permission to offer teachers external PL
- Lack of coordination between various departments of the MOE
- Inadequate consultation with practitioners in designing and determining the content of PL
- Lack of collaboration between schools
- Lack of external motivation/ accountability

Barriers at the school level

- Lack of a designated place to conduct PL activities
- Inadequate infrastructure, financial resources and educational technology
- Lack of colleagues' support
- Not considering time slots for teachers to meet during the school day
- Head teachers' inability to improve teachers' PL
- Cultural influences (e.g. colleagues' influence, society expectations)
- Lack of school autonomy

Barriers at the classroom level

- Lack of internal motivation among teachers
- Teachers' negative beliefs and attitudes
- Work-life imbalance
- Excessive work conditions
- Unchallenging curriculum
- Teachers' resistance to change
- The gap between what teachers know and what they are required to implement

Barriers which occur in formal learning opportunities

- The challenge it presents to teachers
- Lack of the element of interest
- Lack of a practical side
- Lack of impact follow-up
- Timing of the activity
- Low quality of PL event/ presenter
- Disconnectedness from classroom
- Lack of opportunities for sharing experience, interaction and collective reflection

Figure 7.3 Interconnected factors that hinder teachers' learning

Fig 7.3 lists the practical difficulties involved in improving teachers' PL and indicates that changes in teachers' practice do not occur in isolation but are indeed associated with and affected by changes at other levels. This study has shown that the linear change approach of the MOE to educational reform, its inadequate consideration of these various interconnected factors that have been shown to influence improvements in teachers' quality at different levels of the educational system and its unresponsiveness to diverse ideas and to a range of difficulties have minimised the effectiveness of teachers' learning and have had unintended outcomes. For example, one of the more significant findings to emerge from this study is that ignoring these barriers has reduced head teachers' ability to find innovative solutions to shortages of human and financial resources and to respond suitably to their schools' needs.

The key problem with this linear change approach may be that it does not acknowledge that the effectiveness relies on what teachers do in their schools and that it hinders them from being leaders in their classrooms, by marginalising their role in deciding how they should learn and by controlling what they should do and how they should teach. Another criticism concerns the rigidity of providing for evaluation and feedback only at the end of the reform process, which seems unreasonable because it denies chances for contingent responses that would suit the changing situations in schools. These results suggest that accountability and innovation can coexist and are indeed more likely not to be in conflict if educational changes are contextually triggered and supported by politicians from the MOE.

7.2.6 To what extent are teachers supported in improving their learning? (Sub-question 6)

This investigation has revealed a gap between the existing conditions of support in schools and what teachers needed in order to enhance their professional learning, supporting the findings of Al-Awidi and Aldhafeeri (2017), which revealed inadequate PD and lack of support teachers' received in Kuwait, a very similar centralized education system to Oman.

Although teachers acknowledged receiving several forms of formal support including online discussion forums, workshops, meetings, guided discussions and some incentives, these were fragmented and often the result of individual initiatives from a school head or an inspector, rather than a core element of the formal PL system.

The support that teachers received in formal PL opportunities was found to be insufficient, confined to helping them to update their content and pedagogical knowledge and to introducing them to the latest advances in educational technology, while little attention was paid to ensuring that teachers could use their new knowledge in the classroom, to determining whether they did so and, if they did not, to understanding why not. In contrast, teachers' expectations were much higher and included demands for better infrastructure, greater financial allocation, better reward systems, compatible regulations and structures, more autonomy and sympathy with their school duties and teaching responsibilities.

The study has also revealed variations in the strategies and extent to which head teachers supported the improvement of their teachers' PL, reflecting their commitment, abilities and willingness. Coaching, scaffolding and teamwork were the most effective approaches used by some head teachers (mostly in Rural and Outer schools) to support and engage their teachers in improving their professional learning.

These findings suggest the existence of two limitations of centralised change systems. First, centralised change works on the assumption that all practitioners have the same abilities and skills and that they are all ready and able to implement the reform with minimum support, whereas this study has found that while some head teachers and teachers were proactive in seeking new learning opportunities and required little support, others needed to be pushed and supported to enhance their practice. It follows from the fact people vary in their experience, skills and willingness that these variations are likely to result in differences in how reforms might be understood and accordingly enacted, yet this seems to be

overlooked in the operation of centralised systems. The second point is that although the centralised direction might be justified as helping to ensure that a unified vision and goals are achieved, the very assumption that there is only one route to achieving these goals restricts innovation, limits inspiration and stifles the passion for change. Furthermore, trying to unify how teachers learn seems to misjudge the significance of the multiplicity of different forms that learning can take and the various ways in which teachers might learn. Learning needs to be allowed to happen by experiencing, doing and interacting, triggered by an internal feeling for it and a belief in its usefulness.

7.3 An original contribution to knowledge

The study makes five particular contributions to knowledge.

- i. It contributes to the debate about a theory-practice gap, in particular why many PD experiences in large-scale education reforms fail to change teachers' actual classroom practice, and reveals some of its causes by providing evidence from a non-Western centralised educational system which differs in its nature and its socio-cultural context.
- ii. It offers a clear conceptualisation of the distinction between PD and PL, which can be considered another contribution of the study, while highlighting the weaknesses of the first and the strengths of the second. The results of the study feed into a new perspective in which the professional learning of teachers is seen as contextually situated and embedded in their professional lives, through experiencing, dialogue and interaction, and where teachers are seen as active agents in developing their own professional learning.
- iii. In terms of the context, while this study confirms the findings of the previous little and scope-limited research that has been done in this area in Oman, it provides the most comprehensive analysis of PL that has ever been conducted in the Omani context. It offers an independent insight into Omani teachers' beliefs about the effectiveness of their PL and advances understanding of the effects of centralised educational reforms on teachers' PL experiences. This constitutes an original contribution to the understanding of PL, since the evaluation of the effectiveness of PL initiatives at the MOE is done centrally by the same teams that develop them.
- iv. A further original contribution can be identified in the scope and depth of the study, which is the first to evaluate teachers' informal PL experience, to allocate particular significance to the contextual and socio-cultural influences on their learning and to

elicit diverse perceptions, including from the perspective of teachers of multiple subjects, each previous study in Oman having evaluated the effects of formal PL in the context of one particular subject (often English language) or focused on one particular PL activity.

- V. As to its contribution to theory, the phenomenological interpretive research approach adopted by the study, along with the incorporation of the three theoretical lenses of complexity theory, contingency theory and social constructionism, helps to ensure a holistic investigation, understanding and interpretation of the complex and diverse nature of teachers' learning experiences.

7.4 An evaluation of the conceptual framework and research design

While the design of this case study was qualitative in nature, mixed methods of data collection were adopted. Indeed, using mixed methods allowed for the triangulation of the data and offered more robust and consistent conclusions, which helped to strengthen the validity of the findings and the reliability of the study. The adoption of the interpretivist paradigm also facilitated the gathering of sufficient data and the drawing of a detailed picture of the case study schools. It allowed for in-depth investigation, deep understanding and interpretation of the issues revealed to be relevant to the particular context of these schools. This permitted the researcher to identify the limitations of the study and its practical implications, more easily than might have been the case if the positivist paradigm had been adopted and a large sample used instead. It also facilitated the identification of factors underlying the variations between schools, especially with regard to the head teachers' role and the way school is managed and led, although it did not allow the gathering of sufficient evidence for generalisations to be made.

The focus of the conceptual framework on understanding micro-level change in a centralized education system in Oman, even in those circumstances where reforms fail, helped to gain better understanding of why many educational reforms do not lead to changes in teachers' practice, by drawing a detailed picture of how individual teachers understood and reacted to change and what influenced their beliefs and actual practices, through their own perceptions, although it was difficult to validate the teachers' claims. Using several theoretical lenses—complexity theory, contingency theory and social constructionism—allowed for meaningful interpretation and explanation of the data.

It was also beneficial to conduct the data collection at the beginning of the academic year, when teachers had just had their in-service training week. As the researcher is an MOE

official with teaching experience, this helped him to gain the cooperation of the participants and to understand their different perspectives. However, the researcher's status may also have limited the cooperation of participants in some schools and it is possible that some were guarded in their comments and not totally open in expressing their views.

It is nevertheless important to stress that this study did not attempt to find a blueprint for successful change, nor does it claim that such a recipe exists. Rather, it has attempted to highlight the importance of identifying and understanding the many interconnected factors that influence how change is perceived and implemented and the variations that might exist between schools and teachers in their understanding, willingness and abilities in relation to change, which justifies the attention that this study has given to the context of the participants.

7.5 Limitations of the conceptual framework and research design

This section acknowledges eight limitations of this study.

I. The inability to generalise

The constraints of time and resources limited this case study to the purposeful selection of schools in one educational district in Oman. Its scope was further limited to post-basic education schools (students aged 16-17) and to teachers of five core subjects (Chapter 4, Section 4.5). Thus, the findings are not necessarily applicable—and will not be generalised—to other education districts, schools or subject areas, which is a limitation of the case study approach.

II. Scope of the study and sampling

The researcher avoided directly involving officials at the ministerial level or directly evaluating the official plans of the ministry, as this might have been seen as indirectly implying criticism of the MOE's policy and might have made its officials unwilling to authorise the study.

The school inspectors who participated represented only three subject areas: English, Maths and Arabic language. This reduced the ability to explain some variation between subject areas, for example in directly linking improving PL to enhancing students' performance.

In tackling educational reform, this study was also limited to change at the school level. Change at the institutional level was discussed as a platform to understand its impact at the operational level, but with no real intention to investigate this in detail.

Finally, the study neither focused on any specific professional learning activity nor analysed the specific contents of any PL programme; instead, the focus was on teachers' experience and the overall characteristics of the activities.

III. *The issue of reflexivity*

A researcher's interpretations of teacher's perceptions can be affected by his or her value system and level of reflexivity, which can be sources of bias and a limitation in the research. However, the researcher paid considerable attention to this potential bias and was aware of how his previous knowledge and experience at the MOE might affect the participants' responses or influence his own interpretation of the data. Thus, he sought to build rapport with the participants to limit the effects of this possible influence of preconception. In fact, the experience of the researcher at three levels—school, education district and MOE—enabled him to understand the perspectives of diverse PL facilitators and practitioners and to gain their trust.

IV. *The selection of teachers for interview*

The availability (and thus the selection) of teachers for the interviews depended on their willingness to participate and on the permission of their school heads to do so. However, the researcher made sure to include teachers of a variety of subjects with a range of experience (Chapter 4, Section 4.5.1).

V. *Conducting the interviews in Arabic*

The interviews were conducted in Arabic, to allow the participants to express themselves better, and were then translated and interpreted by the researcher. The risk that this might have led to misinterpretation and bias was reduced by taking the steps mentioned in Chapter 4 (Sections 4.7.2 and 4.8.1).

VI. *Significant variations*

The small sample limited the possibility of identifying some significant variations between groups. For instance, the descriptive analysis suggested variations between schools in relation to the availability of PL in the training centre at the education office, which suggests that the location of the school was a factor in determining how many PL opportunities

teachers received and that some schools were more privileged than others in receiving central PL; however, the Kruskal-Wallis test showed this variation to be statistically nonsignificant (see Appendix 23). Surveying a larger number of teachers in each school might have revealed a statistically significant variation, a possibility which merits further inquiry.

VII. Teacher learning

Although this study classified the participating teachers by their conceptualisation of change and attitudes to it (Chapter 6, Figure 6.1), the aim was not to determine how much teachers had learned, as this might be very challenging and difficult to demonstrate.

VIII. Cultural influence

It is possible that the respondents might not have been completely frank in their responses, especially when they had to evaluate the contribution of their colleagues, head teachers or inspectors to their PL. This might be caused by the social culture prevalent in Oman, whereby teachers tend to keep good relations with colleagues and avoid saying anything that might damage these relationships.

7.6 Implications for practice

7.6.1 Implications for teachers

There are four implications for classroom teachers, as follows:

- I. As teaching is facing a rapid development of knowledge, changes in students' learning and advances in educational technology, it has proved to be more effective to address many of the issues facing teachers collectively rather than individually and in isolation; teachers can better enrich, develop and enhance their thinking and widen their practical knowledge by sharing experience and engaging in collaborative learning activities with teachers with similar interests, even from other schools or countries.
- II. In order to cope with the rapid changes in education, it is not sufficient for teachers to update their subject and pedagogical knowledge; instead, it would be desirable for teachers to have opportunities to critically question what they believe and know, and learn how to adopt new practices that might produce changes in students' learning. A large part of their success relies on their ability to reflect on their practice, individually and with others.
- III. Teachers would find it more useful if they accept the largest share of the responsibility for enhancing their learning, as they are best able to clearly identify their own PL needs and to determine how best to meet them.
- IV. It is important that teachers have positive attitudes towards new learning experiences, as failing to do so inhibits their chances of learning.

7.6.2 Implication for head teachers

This study draws the following nine implications for head teachers:

- I. It is essential that head teachers use available human and financial resources effectively and spend these in accordance with the priorities of the school.
- II. It is important that teachers are challenged and encouraged to engage in new learning experiences.
- III. Monitoring, instructional coaching, modelling, peer-to-peer classroom observation, team teaching and activities that involve collective reflection are the most effective collaborative learning techniques to support teachers and motivate them to improve their professional learning.
- IV. The availability of educational technology, access to it and the ability to use it are the ingredients of an extensive learning environment in the school.
- V. It is important that the school day is scheduled to provide teachers with slots of time to meet, observe, listen to and interact with each other.
- VI. Head teachers would find influencing teachers' practice easier if they were more attentive to areas of improvement in professional development required by individual teachers and consider discussing individual needs, interest and preferences with teachers.
- VII. It is vital for the school's leadership to promote a culture of collective responsibility by using distributed leadership.
- VIII. Commitment to collective change can be encouraged by delegating authority for some tasks and by encouraging teachers to plan lessons and analyse students' work collectively.
- IX. It is important that head teachers see themselves as learners and continuously enhance their abilities and skills in improving teachers' PL.

7.6.3 Implications for educational planners

There are ten implications for educational planners, as follows:

- I. The evidence from this study suggests that it is important that the design of professional learning is ongoing, embedded in teacher practice, evidence based, data driven and explicitly focused on enhancing students' outcomes. Thus, it is essential that the professional development activities promote individual and collective reflection that is directly linked to classroom practice and that they involve more active engagement with knowledge acquisition. It is also important that each school has a PL coordinator and a designated room for PL equipped with the appropriate educational technology.
- II. The existence of clear procedures of continuous follow-up and feedback to evaluate changes in teachers' practice and the outcomes in the classroom is vital for the success of change.
- III. It is crucial that schools are encouraged and enabled to develop professional partnerships. Thus, it is important to revise incompatible structures and regulations that restrict collaborative learning activities and partnerships between schools and to ensure that these align schools' aspirations and changes in the PL system. It is also important for involvement in PL to constitute a key part of teachers' annual appraisal.
- IV. Although a centralised educational system might be justified as a way to ensure that all schools keep to the MOE's vision, aiming at looser control and allowing for more adaptation would facilitate more change ownership. It would be more suitable if the design of PL reflected wider perspectives and corresponded to the varied needs of schools and teachers. Granting schools greater autonomy to adapt PL designs to their own circumstances and allowing more substantial roles for both head teachers and teachers in shaping teachers' PL is crucial as well in increasing commitment to change.

- V. In addition to providing formal PL opportunities and facilitating self-directed learning and the sharing of knowledge between schools and teachers, it is essential for planners to provide a range of means of support: identifying and ensuring adequate financial and human resources, adaptive regulations and structures, infrastructure, technology, teaching aids and incentives, along with considering teachers' expectations, preferences and reactions.
- VI. Reforms need to be better communicated to the education professionals concerned at various levels of the system so that they promote change ownership and teacher commitment.
- VII. A balance between holding teachers accountable for their learning and encouraging them to be innovative is significant for better change results.
- VIII. It is vital that the design of PL recognises the significance of teachers' beliefs and takes into account their attitudes, preferences and perceptions.
- IX. PL could be better organised and made less repetitive by the creation of training databases to clarify which teachers have attended which PL activity. It is also important that the central PL is scheduled at relatively quiet times such as the beginning of the academic year, rather than at busy times like exam periods.
- X. The effectiveness of educational reforms in changing teachers' practices relies significantly on head teachers' ability and willingness to contribute to improving teachers' professional learning; therefore, it is important that head teachers are provided with the support and training to enable them to do so. The MOE might encourage and arrange for outstanding head teachers and teachers with transformative leadership skills and expertise to deliver training to other heads and teachers, which would reflect positively on their attitudes and practices.

7.7 Recommendations for future research

- I. This study has examined teachers' PL in post-basic schools in one educational district in Oman. It would be useful to compare the findings with those of another district or to compare two or more other districts to identify any similarities or differences.
- II. It would be useful to conduct a study with a larger sample in order to explore some differences that might not have been revealed in this study. The use of a focus group technique might also be considered, to encourage more interaction among the participants.
- III. This study did not involve gathering any data from any policymakers; doing so in a future study might uncover factors hindering the improvement of teachers' PL that this study has not revealed.
- IV. The role of inspectors in developing teachers' quality is another area that is worthy of research attention.
- V. Levels of expectation are often greater in private schools in Oman than in public schools and it would therefore be interesting to compare these two types.

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Appendix 1

Oman's ranking in TIMSS 2015



International Science Achievement

Singapore and Korea the Top Achievers at Fourth Grade in Science. Japan, Russian Federation, and Hong Kong SAR also in the Top Five.



International Science Achievement

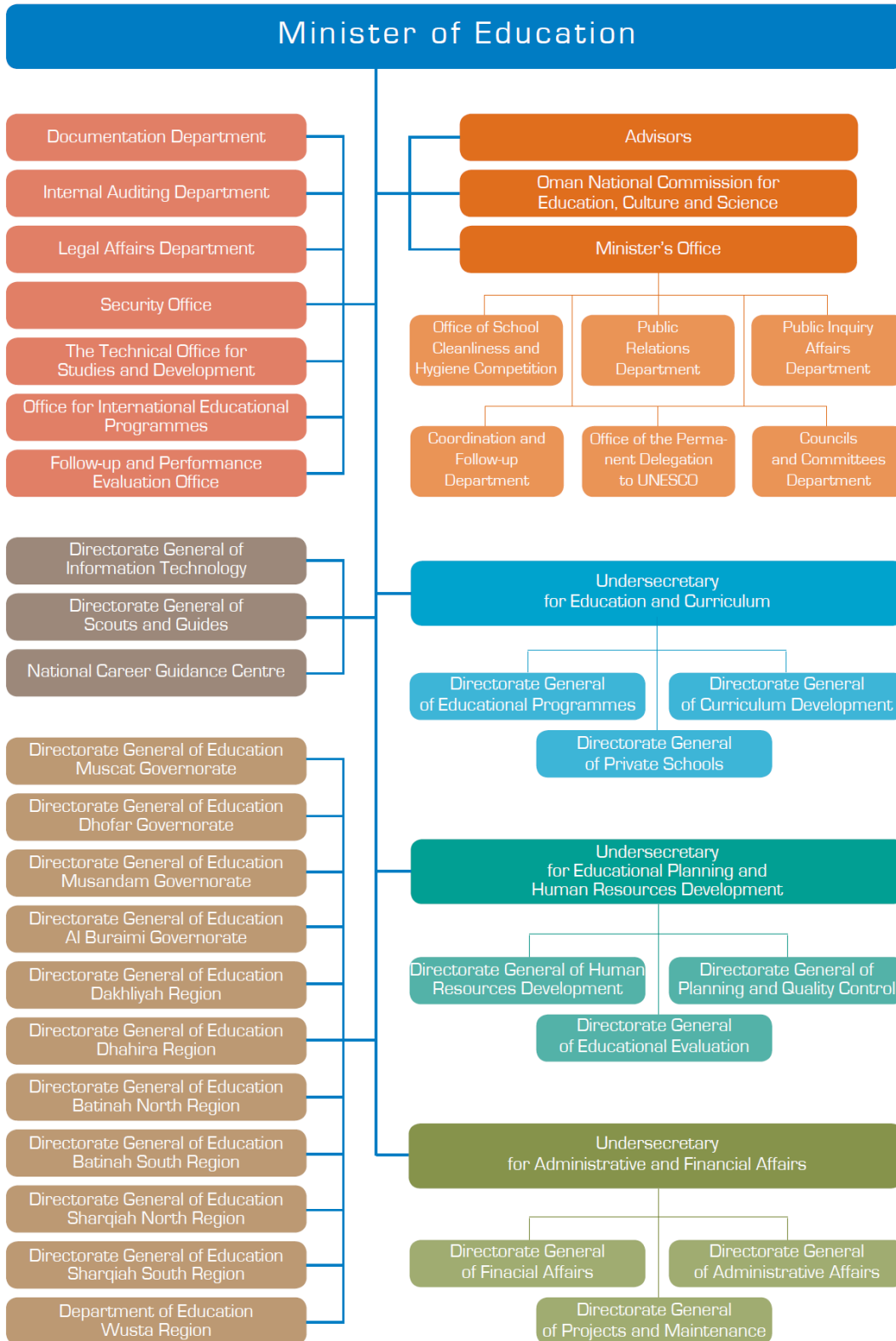
Singapore the Top Achiever at Eighth Grade in Science. Japan, Chinese Taipei, Korea, and Slovenia also in the Top Five.



Source: TIMSS 2015, <http://timss2015.org/#/?playlistId=0&videoid=0>

Appendix 2

MOE Structure



Appendix 3

Main areas of concern in the 8th Plan

No.	Area of Focus	Relevant Goal
1	Teaching and Learning	Improving the educational System based on quality criteria of educational goals and policies
2	Curricula	Improving the curricula to meet the national development plan and labour-market requirements.
3	Educational Evaluation	Improving the proficiency of Student Evaluation System
4	Human Resources	Improving the proficiency of Human Resource Performance
5	Improving the use of IT in Education	Expanding the use of technology in education in line with Oman Digital Society Strategy
6	Special Education	Expanding the provision of equal opportunities for disabled, special needs and gifted students
7	Private Schools	Expanding and improving the quality of the educational services provided in these schools
8	Pre-school Education	To raise the enrolment rate to 50% for the group age of three and a half to five and a half years old

9	Students Welfare	Improving the proficiency of welfare, awareness, psychological, social and vocational programmes provided in the schools.
10	Illiteracy	To reduce the rate of illiteracy among those who missed the chance for education by 50%
11	Educational Media	Improving the proficiency of educational media programmes
12	Teachers and Staff Welfare	Improving and increasing teachers and staff welfare programmes
13	Educational Statistics	Raising the quality of educational statistics to improve educational decision making
14	Buildings and facilities	Providing buildings and facilities to improve the quality of the educational and teaching situations.

Appendix 4
The pilot study (Teachers' questionnaire)

Teachers' Professional Learning (Teachers' Questionnaire)

Dear Teacher

Many thanks for agreeing to take part in my current research, which has the following title: **“Teachers' Professional Learning in the context of recent educational reforms in Oman”**. The following notes are: 1) to ensure that you are clear about the core terms used in the study and 2) to provide some details of your academic and professional background which will provide a helpful context.

Hilal Al-Shandudi

Definitions:

Professional Learning (PL): Any learning activity, formal or informal, that contributes to improving teachers' skills, knowledge and practice in the classroom.

Formal Professional Learning: Instructor-led planned learning, typically provided by the Ministry, Educational Office or the school, that derives from activities within a structured learning setting in terms of learning objectives, duration, content, method and assessment and usually leads to certification (e.g. enrolling on a programme of study, attending lectures, preparing coursework, engaging in seminar/tutorial discussions).

Informal Professional Learning: Self-directed learning that derives from activities external to a structured learning context initiated by individuals, as well as groups of teachers working together, to improve their own skills, knowledge and classroom practice.

Part One: Background information

Status	Your response
Educational Office	
Name of school	
Gender (M or F)	
Age range:	22-25
	26-30
	31-35
	36-40
	41-45
	Above 45
Teaching experience in years	
Highest Qualification	
From which university did you graduate and which country	
Teaching Subject	

Part Two:

1. (a) How often have you been engaged in **formal PL opportunities** in the last 12 months and (b) how important have you found these? **Put a tick where applicable.**

The venue of the PL	(a) How often				(b) How important		
	often	sometimes	rarely	never	Very important	important	Not important
a) in your school							
b) in another school							
c) in the training centre of the Educational Office							
d) in other parts of the Sultanate							
e) outside Oman							

2. PL is important because (choose from 1 'very important', 2 'important', 3 'some importance', to 4 'not important' and tick the relevant box):

Possible reasons	1	2	3	4
a) It helps me to improve my teaching practice				
b) It helps me to manage students' behaviors				
c) It increases my self-esteem and self confidence				
d) It helps me to understand how students learn				
e) It is a ministry requirement				
f) It helps me to be promoted				
g) It helps me to update my skills and knowledge				

3. (a) How often have you, in person, been engaged in the following types of **informal PL** in the last 12 months and (b) how important have you found these? **Put a tick where applicable.**

The personal PL activity	(a) How often				(b) How Important		
	often	sometimes	rarely	never	Very important	important	Not important
a) discussion with colleagues on teaching and learning issues							
b) reading subject-related publications							
c) using the internet to update my subject's knowledge and skills							
d) reflection on my teaching practice							

4. How often do the following people/institutions contribute to your PL? (**Tick one option for each person/institution**):

	Very often	Often	sometimes	never
a) Your senior teacher				
b) Your inspector				
c) Your school head				
d) Your subject colleagues				
e) The Educational Office				
f) The ministry				

5. What kind of support have you received to help develop your PL (**tick the appropriate; you may tick more than one**):

a) release time from teaching	
b) scheduled time during the year	
c) stipend for PL activities outside work time	
d) full or partial reimbursement of college tuition	
e) reimbursement for conference or workshop fees	
f) reimbursement for travel and daily expenses	

6. Which of the following opportunities do you consider helpful for developing your PL?
For each PL opportunity (a-f) put a tick in the appropriate box:

PL opportunity	Very helpful	Some help	No help at all	Not applicable
a) monitoring and coaching				
b) training days in the school				
c) training days outside school but within the Educational Office				
d) training days in Muscat				
e) training abroad				
f) online training				

7. Please tick one number from 1-5 of each statement that most approximates your experience of Professional Learning. Add evidence or comment if you wish in the space provided following the table below.

Key. (1 (strongly disagree) - 2 (disagree) - 3 (not sure) - 4 (agree) - 5 (strongly agree))

As a teacher I feel that the current professional learning (PL) opportunities contained in the current strategic plan:

Possible reasons	1	2	3	4	5
1. Have helped me identify my teaching weaknesses and improve my skills, abilities, and interests					
2. Have helped me convey knowledge easily to my pupils					
3. Have helped me improve my relationships and communication with colleagues.					
4. Have helped me identify and articulate the core values, mission and vision of the ministry.					
5. Have helped me identify and understand the new role of teachers and the challenges that face education nationally, regionally and internationally.					
6. Have helped me understand my school's improvement priorities					
7. Have influenced positively my personal and professional development					
8. Have increased my subject/pedagogical knowledge base					

9.	Have helped me see the link between an improvement in my teaching practice and my pupils' achievements.					
10.	Have enabled me to realize how my pupils learn best					
11.	Have helped me become a more effective teacher					
12.	Had a positive impact on my classroom practice.					
13.	Have met my teaching practice needs.					
14.	Have not clashed with my daily school duties.					
15.	Have offered me opportunities to exchange my experience with teachers from other schools.					
16.	Have encouraged me to use the MOE online subjects' forums to develop my knowledge and improve my teaching practice.					
17.	Have encouraged me to use the training centre library to develop my knowledge and improve my teaching practice.					
18.	Have not provided me with time to develop my knowledge.					
19.	Have not provided me with colleagues' support.					
20.	Have not offered me school leadership support.					
21.	Have provided only theoretical knowledge and theories which cannot be implemented in practice in the classroom.					
22.	Have enabled me to locate PL resources which are available and easy to attain					
23.	Have been adequate for my professional development needs.					
24.	Have been of good quality overall.					
25.	Have reflected the perceptions of the policy makers more than the teachers					

If you would like to add any additional comment on any of the previous statements please write the number of the statement and your comment in front of it:

Part Three: Further questions

1. Which areas do you think that PL opportunities should focus on? (in sentences please)

2. Please, if you are able, give one or two examples of positive aspects you have experienced in a PL opportunity?

3. Please, if you are able, give one or two examples of negative aspects you have experienced in a PL opportunity?

➤ **Opportunity for further involvement:**

<p>❖ Would you like to be interviewed in the future (for nearly 40 minutes and in convenient time and place to you) to discuss the previously mentioned issues in more depth (please tick where appropriate).</p>	<p>Yes (<input type="checkbox"/>) Please provide the following information:</p>	<p>No (<input type="checkbox"/>) No contact information are required</p>
	<p>Name: Tel. number: Email:</p>	

Thank you

Appendix 5
The pilot study (Head teachers' questionnaire)

School Principals' Questionnaire

Dear School principal

Many thanks for agreeing to take part in my current research which has the following title: **“Teachers’ Professional Learning in the context of recent educational reforms in Oman”**. The following notes are: 1) to ensure that you are clear about the core terms used in the study and 2) to provide some details of your academic and professional background which will provide a helpful context.

Hilal Al-Shandudi

Definitions:

Professional Learning (PL): Any learning activity, formal or informal, that contributes to improving teachers’ skills, knowledge and practice in the classroom.

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Informal Professional Learning: Self-directed learning that derives from activities external to a structured learning context initiated by individuals, as well as groups of teachers working together, to improve their own skills, knowledge and classroom practice.

Part One: Background information

Status	Your response	Status	Your response
Educational Office		Overall experience as a head teacher (in years)	
Name of school		Experience as a head teacher in the current school (in years)	
Gender (M or F)		Teaching experience (in years)	
Age range: 22-25		Highest Qualification	
26-30		Number of teachers in the school	
31-35		Number of administrative staff in the school	
36-40		Number of students in the school	
41-45			
Above 45			

Part Two:

1. How frequently have you performed the following activities in your school in the last 12 months? **For each activity put a tick where appropriate.**

The activity	How often			
	Very often	often	sometimes	never
a) Made sure that teachers' professional learning activities are in accordance with the teaching goals of the school.				
b) Made sure that teachers' professional learning activities are in accordance with their pedagogical and subject-content development needs.				
c) Made sure that teachers professional learning activities are in accordance with the educational goals of the ministry.				
d) Encouraged teachers to update their skills and knowledge.				
e) Attended teachers' workshops.				
f) Delivered workshops to teachers on various aspects of PL.				
g) Arranged for underperforming teachers to observe lessons of well-performing teachers.				
h) Provided teachers with feedback on their teaching practice.				

2. How important are the following aspects in developing teachers' PL: (choose from 1 'very important', 2 'important', 3 'Little importance', to 4 'not important at all':

Aspects	1 very important	2 important	3 Little importance	4 not important at all
a) Feedback on teaching practice from experts like inspectors, senior teachers and school heads				
b) Observing other teachers' lessons				
c) Cooperation between subject's teachers and sharing experience				
d) Innovative teaching practice				
e) Teachers' update of their subject's content knowledge				

f) Teachers' development of their pedagogical skills				
g) Teachers own reflection on their teaching practice				
h) Teachers' commitments to developing their teaching practice				
i) Understanding of students' needs				

3. How often do you think that the following factors represent obstacles to teachers' PL?
For each obstacle put a tick where appropriate.

Obstacle to PL	How often			
	Very often	often	sometimes	never
a) Teaching load				
b) Extra school duties				
c) Classroom density (Students' number)				
d) Availability of PL resources				
e) Lack of incentives				

4. Roughly, how do you estimate the time you spend daily on the following activities (**in percentage please**):

The activity	Time spent (out of 100%)
a) school administrative issues	
b) curriculum and teaching issues	

5. To what extent do you agree with the following statements? Please tick one number from 1-5 of each statement. Add evidence or comment if you wish in the space provided following the table below.

Key. (1 (strongly disagree) - 2 (disagree) - 3 (not sure) - 4 (agree) - 5 (strongly agree))

The Statement	1	2	3	4	5
1. I believe the part of my job is to ensure that the ministry's plans and programmes are implemented as indicated by the ministry.					
2. Teacher's extra duties in the school are obstacles in their PL development.					
3. Part of my job is to ensure that teachers are updating their skills and knowledge in accordance to their students' needs.					
4. Part of my job is to inspire teachers to enhance their teaching practice.					
5. I have a big role in teachers' PL.					
6. Teachers in this school are proactive in their PL and they take the initiative of developing their teaching practice.					
7. Part of my role is to ensure that all teachers stick to the best practices recommended by the ministry in the formal PL opportunities.					
8. Part of my job is to create a learning environment in the school.					
9. I can't know whether teachers' practices are improving because I don't have enough time.					
10. Teachers' PL leads to positive school improvement.					
11. The operational plan of the school addresses teachers' teaching weaknesses.					
12. Teachers need to be more appraised by the ministry for their informal PL efforts.					
13. This school lacks enough resources for PL.					
14. I need training on how to assess teachers with their PL.					
15. Students learning is hindered by teacher' misunderstanding of their learning needs.					
16. Students learning is hindered by teacher' lack of suitable pedagogical skills.					
17. Students learning is hindered by teacher' lack of updated content knowledge.					

18. Teachers' PL opportunities contained in the current ministry plan are adequate.					
19. In this school we have a clear PL plan for teachers.					
20. I consider myself responsible for my teachers' PL.					
21. I have influence over the content of the PL offered to teachers in my school.					
22. Content presented in the formal PL opportunities should be used by teachers as it is with no modifications.					
23. In the current formal PL opportunities teachers are consulted on the content and way of delivery of these opportunities.					

If you would like to add any additional comment on any of the previous statements please write the number of the statement and your comment in front of it:

Part Three: Further questions

1. Which areas do you think that teachers' PL opportunities should focus on? (in sentences please)

2. Please, if you are able, give one or two examples of positive aspects you have observed as a result of teachers' PL opportunity.

3. Please, if you are able, give one or two examples of negative aspects you have observed as a result of teachers' PL opportunity.

➤ **Opportunity for further involvement:**

<p>❖ Would you like to be interviewed in the future (for nearly 40 minutes and in convenient time and place to you) to discuss the previously mentioned issues in more depth (please tick where appropriate).</p>	<p>Yes (<input type="checkbox"/>) Please provide the following information:</p>	<p>No (<input type="checkbox"/>) No contact information are required</p>
	<p>Name: Tel. number: Email:</p>	

Thank you

Appendix 6
The pilot study (Teachers' interview questions)

1. Questions for teachers:

1. What is the image that comes to your mind when speaking about teachers' professional learning?
2. How do you think that the current Professional Learning opportunities have influenced your teaching?
3. What is your top priority for further Professional Learning?
4. To what extent you think that Professional Learning opportunities have any negative aspects?
5. To what extent do you think you have any influence over the content of your formal PL?
6. To what extent do you think that the latest reforms in the MOE are communicated to you?

Appendix 7
The pilot study head teacher interview questions

1. What is the image that comes to your mind when speaking about teachers' professional learning?
2. How accountable are teachers for their own learning and developing their teaching practice?
3. To what extent do teachers who attend and involve in more Professional Learning opportunities develop better teaching practice?
4. What are the factors that foster or impede teachers' ability to acquire new knowledge, skills, and practices that meet their students' needs?
5. How do you see your role in developing teachers professionally?
6. To what extent do you believe that having attended a workshop on SP, you are a better principal who can understand and drive better school improvement, teachers' practices and students' achievement?
7. To what extent can it be said that the recent educational reforms in the MOE have led to better Teachers' Professional Learning?

Appendix 8
The pilot study inspector interview questions

1. What is the image that comes to your mind when speaking about teachers' professional learning?
2. To what extent do you believe that teachers' classroom practices have been enhanced due to their participation in PL opportunities?
3. How accountable are teachers for their learning and developing their teaching practice?
4. What are the factors that foster or impede teachers' ability to acquire and adapt new knowledge, skills, and practices that meet their students' needs?
5. To what extent can it be said the current reforms in the MOE have led to better Teachers' Professional Learning?
6. How effective, in your opinion, is the ministry in convincing the teachers of the importance of its latest reforms?

Appendix 9
The main study Teachers Questionnaire in Arabic & English

استبانة حول التعلم الانمائي للمعلم (المعلم)

الفاضل: المعلم/ المعلمة المحترم/ المحترمة

شكرا جزيلاً على موافقتك على المشاركة في دراستي البحثية هذه والتي تحمل عنوان: التعلم الانمائي للمعلم في ظل التطويرات التربوية الأخيرة وتهدف الملاحظات التالية الى: (1) ضمان فهمك للمفاهيم الأساسية المستخدمة في هذه الدراسة، (2) توفير بيانات علمية ومهنية حول المستجيب والتي تكون معينا في عملية التحليل والفهم.

هلال الشندودي

الجزء الأول: بيانات أولية

الإجابة	البيانات
	اسم المدرسة
	الجنس: ذ / أ
25-22	العمر:
30-26	
35-31	
40-36	
45-41	
أكثر من 45	
	الخبرة (بالسنوات)
	أعلى مؤهل
	اسم الجامعة التي حصلت منها على المؤهل
	المادة
	كم عدد المدارس التي عملت بها

الجزء الثاني

1. (أ) ما مدى مشاركتك في فرص تعلم إنمائي رسمية خلال ال 12 شهراً الماضية و(ب) وما مدى أهمية وجود هذه الفرص من وجهة نظرك؟ ضع علامة (✓) في المكان الأنسب لكل خيار.

(ب) الأهمية				(أ) التكرار				مكان الفرصة التعليمية
غير مهم	قليل الأهمية	مهم	مهم جدا	أبدا	نادرا	أحيانا	غالبا	
								أ- في المدرسة
								ب- في مدرسة أخرى
								ت- في مركز التدريب في المحافظة
								ث- في أماكن أخرى داخل السلطنة
								ج- خارج السلطنة

2. يعتبر التعلم الإنمائي مهم بسبب (اختر من بين الخيارات: 1 "مهم جدا"، 2 "مهم"، 3 "مهم نوعا ما"، 4 "غير مهم" وضع علامة (✓) في المكان الأنسب)

4	3	2	1	الأسباب المحتملة
				أ- لأنه يساعدني على تحسين ممارساتي التدريسية
				ب- لأنه يساعدني على ضبط سلوك الطلبة
				ت- لأنه يعزز من تقديري لذاتي وثقتي بنفسي.
				ث- لأنه يساعدني على فهم كيف يتعلم الطلبة.
				ج- لأنه متطلب من قبل الوزارة.
				ح- لأنه يساعدني على الحصول على ترقية وظيفية.
				خ- لأنه يساعدني على تحديث مهاراتي ومعارفي.

3. (أ) ما مدى قيامك، شخصيا، بالمشاركة في أنشطة التعلم الإنمائي الغير رسمية التالية خلال الاشهر ال 12 الماضية، و (ب) ما مدى أهمية هذه الأنشطة من وجهة نظرك؟ ضع علامة (✓) في المكان الأنسب لكل عبارة.

نشاط التعلم الإنمائي الغير رسمي				(أ) التكرار				(ب) الأهمية			
				أبدا	نادرا	أحيانا	غالبا	مهم جدا	مهم	قليل الأهمية	غير مهم
أ- النقاش مع الزملاء حول مواضيع تخص التعليم والتعلم.											
ب- قراءة منشورات تتعلق بالمادة.											
ت- استخدام الانترنت لتحديث المهارات والمعارف الخاصة بالمادة.											
ث- التفكير حول الممارسات التدريسية.											
ج- مشاهدة طريقة تدريس معلمين اخرين في الصف											

4. ما مدى مساهمة الأشخاص / المؤسسات التالية في تعلمك الإنمائي؟ ضع علامة (✓) على الإجابة الأنسب:

أبدا	نادرا	أحيانا	غالبا	
				أ- المعلم الأول
				ب- المشرف التربوي
				ت- مدير المدرسة
				ث- زملائك من معلمي نفس المادة
				ج- موظفي المديرية
				ح- موظفي الوزارة

5. أي من الفرص التنموية التالية تعتبر مهمة في تنمية تعلمك الإنمائي؟ ضع علامة (✓) في المكان الأنسب. (اختر من بين الخيارات: 1 "مهم جدا"، 2 "مهم"، 3 "مهم نوعا ما"، 4 "غير مهم" وضع علامة (✓) في المكان الأنسب):

4	3	2	1	فرصة التعلم الإنمائي
				أ- الاشراف والتوجيه المباشر داخل المدرسة
				ب- الأيام التدريبية داخل المدرسة
				ت- الايام التدريبية خارج المدرسة ولكن ضمن المحافظة
				ث- التدريب في مسقط
				ج- التدريب خارج السلطنة
				ح- التدريب عن طريق الانترنت
				خ- أخرى

أرجو كتابة مثال أو تعليق مبسط للفرص التي اعتبرتها مهمة جدا (لماذا هي مهمة جدا):

6. يتضمن التعلم الإنمائي على؟ ضع علامة (✓) على الخيار الذي يمثل رأيك:
المفتاح: (1) (أوافق بشدة)، 2 (أوافق)، 3 (غير متأكد)، 4 (لا أوافق)، 5 (لا أوافق بشدة).

5	4	3	2	1	الأسباب المحتملة
					26. التعرف على مواطن الضعف وتحسين المهارات والقدرات والإهتمامات.
					27. تحسين تعلم الطلبة
					28. تحسين العلاقات والتواصل مع الزملاء
					29. الاستجابة بطريقة ايجابية للتحديات التي تواجه المعلم اليوم
					30. تحسين المعرفة بالمادة وطرق التدريس الحديثة
					31. المساعدة على التكيف مع احتياجات وأساليب تعلم الطلبة
					32. اكتساب توجه ايجابي نحو عملية التغيير والخبرات الجديدة
					33. تغيير الممارسات وتبني طرق تدريس جديدة
					34. تغيير في طريقة تفكير المعلم

7. ضع علامة (✓) على أحد الأرقام المعطاة لكل عبارة والتي تصف رأيك في فرص التعلم الإنمائي التي مررت بها.
المفتاح: (1) (أوافق بشدة)، 2 (أوافق)، 3 (غير متأكد)، 4 (لا أوافق)، 5 (لا أوافق بشدة).

كمعلم، أعتقد أن فرص التعلم الإنمائي في الخطة الخمسية الحالية:

5	4	3	2	1	الأسباب المحتملة
					1. ساعدتني على التعرف على قيم ورؤية ورسالة الوزارة والعمل بها
					2. ساعدتني على فهم أولويات التطوير في مدرستي
					3. ساعدتني على رؤية العلاقة بين تحسن ممارساتي التدريسية ومستوى طلبتي
					4. لم تمكنني من إدراك كيف يتعلم الطلبة بشكل أفضل
					5. ساعدتني على أن أكون معلماً أكثر كفاءة
					6. وفرت لي فرص لتبادل الخبرات مع معلمين من مدارس أخرى.
					7. شجعتني على استخدام المنتدى التربوي الإلكتروني للوزارة لتطوير معارفي وتحسين ممارساتي التدريسية.
					8. شجعتني على استخدام مكتبة مركز التدريب لتطوير معارفي وتحسين ممارساتي التدريسية.
					9. لم توفر لي الوقت الكافي لتطوير معارفي.
					10. لم توفر لي دعم الزملاء من نفس المادة.
					11. لم توفر لي دعم الإدارة المدرسية.
					12. وفرت لي معارف نظرية فقط لا يمكن تطبيقها بشكل فعلي في غرفة الصف.
					13. شجعتني على استخدام مصادر تعلم إنمائي مختلفة
					14. لم تكن كافية لتلبية احتياجاتي من التنمية المهنية.
					15. كانت ذات جودة بشكل عام
					16. عكست آراء وتوقعات واضعي السياسة التربوية وليس آراء وتوقعات المعلم.
					17. نادرة وغير متاحة للجميع
					18. لم تساعدني على استخدام تكنولوجيا المعلومات في تدريسي بطريقة أكثر فاعلية
					19. ساعدتني على فهم كيفية تنمية مهارات القراءة والكتابة لدى الطلبة

الجزء الثالث: أسئلة أخرى

1. ما معنى التعلم الإنمائي للمعلم من وجهة نظرك؟

2. ما هي جوانب التطوير التربوي التي ينبغي أن تركز عليها فرص التعلم الإنمائي للمعلم؟ (مثلا: المناهج، تقنية المعلومات، ضبط الطلبة)

3. ما نوع الدعم المطلوب في المستقبل والذي تعتقد أنه سوف يساهم في تطور تعلمك الإنمائي؟

4. ماذا تعرف عن آخر التطويرات التربوية في وزارة التربية والتعليم؟ ما هي وعلى ماذا ركزت؟

➤ فرصة لمزيد من المشاركة في الدراسة:

لا () لا حاجة لكتابة أية بيانات	نعم () أرجو كتابة التالي:	❖ هل ترغب في المستقبل في الجلوس لمقابلة (تستغرق حوالي 45 دقيقة وفي الوقت والمكان الذي يناسبك) لمناقشة المواضيع التي تم طرحها في الإستبانة بمزيد من التفصيل. (أرجو وضع علامة (✓) على ما يناسبك).
	الإسم: رقم الهاتف: الإيميل:	

مع خالص الشكر والتقدير

The questioners in English

Teacher Questionnaire

Dear Teacher

Many thanks for agreeing to take part in my current research, which has the following title: **“Teachers’ Professional Learning in the context of recent educational reforms in Oman”**. The following notes are: 1) to ensure that you are clear about the core terms used in the study and 2) to provide some details of your academic and professional background which will provide a helpful context.

Hilal Al-Shandudi

Part One: Background information

Status	Your response
Name of school	
Gender (M or F)	
Age range:	22-25
	26-30
	31-35
	36-40
	41-45
	Above 45
Teaching experience in years	
Subject taught	
Highest level of Qualification	
Institution where this qualification was obtained	

Part Two:

1. (a) How often have you been engaged in **formal PL opportunities** in the last 12 months and (b) how important do you think are these? **Put a tick where applicable.**

The venue of the PL	(a) How often				(b) How important			
	often	sometimes	rarely	never	Very important	important	Little importance	Not important
f) in your school								
g) in another school								
h) in the training centre of the Educational Office								
i) in other parts of the Sultanate								
j) outside Oman								

2. PL is important to me because: (for each possible reason choose from 1 'very important', 2 'important', 3 'some importance', to 4 'not important' and tick the relevant box):

Possible reasons	1	2	3	4
h) It helps me to improve my teaching practice				
i) It helps me to manage students' behaviors				
j) It increases my self-esteem and self confidence				
k) It helps me to understand how students learn				
l) It is a ministry requirement				
m) It helps me to be promoted				
n) It helps me to update my skills and knowledge				

3. (a) How often have you personally been engaged in the following types of **informal PL** in the last 12 months and (b) how useful have you found these? **Put a tick where applicable.**

The personal informal PL activity	(a) How often				(b) How useful			
	often	sometimes	rarely	never	Very useful	useful	some useful	Not useful
e) discussion with colleagues on teaching and learning issues								
f) reading subject-related publications								
g) using the internet to update my subject's knowledge and skills								
h) reflection on my own teaching practice								
i) Observing other teachers teaching in the classroom								

4. How often do the following people/institutions contribute to your PL? choose from 1 'very often', 2 'often', 3 'sometimes', to 4 'never' **and tick the relevant box**):

	Very often	Often	sometimes	never
g) Your senior teacher				
h) Your inspector				
i) Your school head				
j) Your subject colleagues				
k) The Educational Office officials				
l) Ministry officials				

5. Which of the following opportunities do you consider helpful for developing your PL? choose from 1 'very helpful', 2 'helpful', 3 'some help', to 4 'no help at all' **and tick the relevant box**):

PL opportunity	Very helpful	helpful	some help	No help at all
g) mentoring and coaching				
h) training days in school				
i) training days outside school but within the Educational Office				
j) training days in Muscat				
k) training abroad				
l) online training				
m) Other				

For the opportunities that you considered very helpful, please give an example (a brief description) to explain why you think this way.

6. What do you think PL involves? Please tick one number from 1-5 of each statement that most approximates your opinion.

Key. (1 (strongly agree) - 2 (agree) - 3 (not sure) - 4 (disagree) - 5 (strongly disagree)

Possible reasons	1	2	3	4	5
35. Identifying teaching weaknesses and improving teachers' skills, abilities, and interests.					
36. Enhancing students' learning					
37. Improving relationships and communication between teachers.					
38. Responding positively to challenges that face teachers today.					
39. Increasing teachers' subject/pedagogical knowledge base.					
40. Helping teachers to adapt to their students learning needs and styles.					
41. Acquiring positive attitudes towards new experience.					
42. Changing practice and adopting new teaching techniques					
43. Changes in how teachers think					

7. Please tick one number from 1-5 of each statement that most approximates your experience of Professional Learning.

Key. (1 (strongly agree) - 2 (agree) - 3 (not sure) - 4 (disagree) - 5 (strongly disagree)

As a teacher I feel that the current professional learning (PL) opportunities:

Possible reasons	1	2	3	4	5
5. Have helped me identify and articulate the core values, mission and vision of the ministry.					
6. Have helped me understand my school's improvement priorities.					
7. Have helped me see the link between an improvement in my teaching and the quality of pupils' achievements.					
8. Have not enabled me to realize how my pupils learn best.					
9. Have helped me become a more effective teacher.					
10. Have offered me opportunities to discuss my experience with teachers from other schools.					
11. Have encouraged me to use the MOE online subjects' forums to develop my knowledge and improve my teaching practice.					

12. Have encouraged me to use the training centre library to develop my knowledge and improve my teaching practice.					
13. Have not provided me with time to develop my knowledge.					
14. Have not provided me with colleagues' support.					
15. Have not offered me school leadership support.					
16. Have provided only theoretical knowledge and theories which cannot be implemented in practice in the classroom.					
17. Have encouraged me to use different PL resources					
18. Have not been adequate for my professional development needs.					
19. Have been of good quality overall.					
20. Have reflected the perceptions of the policy makers more than the teachers.					
21. Are rare and not available for all.					
22. Have not helped me understand how to use ICT in my teaching more effectively					
23. Have helped me understand how to develop pupils literacy skills					

Part Three: Further questions

8. Please write briefly what you think Professional Learning means.

9. Which aspects of recent reform in education do you think that PL opportunities should focus on? (e.g. ICT, curriculum, classroom management)

10. What kind of support would you like to see in the future that you think will help you in improving your PL?

11. What do you know about the recent educational reforms in the MOE?

➤ **Opportunity for further involvement:**

<p>❖ Would you like to be interviewed in the future (for nearly 40 minutes and in convenient time and place to you) to discuss the previously mentioned issues in more depth (please tick where appropriate).</p>	<p>Yes (<input type="checkbox"/>) Please provide the following information:</p>	<p>No (<input type="checkbox"/>) No contact information are required</p>
	<p>Name: Tel. number: Email:</p>	

Thank you

Appendix 10
The main study Head teacher Questionnaire in Arabic & English

التعلم الإنمائي للمعلم (استبيان لمدير المدرسة)

الفاضل: مدير/ مديرة المدرسة المحترم/ المحترمة

شكرا جزيلاً على موافقتك المشاركة في دراستي البحثية هذه والتي تحمل عنوان: **التعلم الإنمائي للمعلم في ظل التطويرات التربوية الأخيرة**. وتهدف الملاحظات التالية الى: (1) ضمان فهمك للمفاهيم الأساسية المستخدمة في هذه الدراسة، (2) توفير بيانات علمية ومهنية حول المستجيب والتي تكون معينا في عملية التحليل والفهم.

هلال الشندودي

الجزء الأول: بيانات أولية

البيانات	الاجابة	البيانات	الاجابة
اسم المدرسة		مدة الخبرة في الإدارة المدرسية بشكل عام (بالسنوات)	
		مدة الخبرة في الإدارة المدرسية في المدرسة الحالية (بالسنوات)	
الجنس (ذكر / أنثى)		الخبرة التدريسية (بالسنوات)	
العمر	25-22	أعلى مؤهل أكاديمي	
	30-26	عدد المعلمين في المدرسة	
	35-31	عدد الطاقم الإداري في المدرسة	
	40-36	عدد الطلبة في المدرسة	
	45-41		
	أكثر من 45		

الجزء الثاني:

1. ما مدى قيامك بالأنشطة التالية في مدرستك خلال الأشهر الـ 12 الماضية؟ لكل من الأنشطة التالية ضع علامة (✓) في المكان الأنسب (1 "غالبا"، 2 "أحيانا"، 3 "نادرا"، 4 "أبدا").

التكرار				النشاط
4	3	2	1	
				أ- ضمان أن أنشطة التعلم الإنمائي للمعلمين تتماشى مع الأهداف التعليمية للمدرسة.
				ب- ضمان أن أنشطة التعلم الإنمائي للمعلمين تتماشى مع احتياجاتهم لتنمية معارفهم ومهاراتهم التدريسية.
				ت- ضمان أن أنشطة التعلم الإنمائي للمعلمين تتماشى مع الأهداف التعليمية للوزارة.
				ث- تشجيع المعلمين على تحديث مهاراتهم ومعارفهم.
				ج- حضور الورش التدريبية للمعلمين.
				ح- تقديم ورش عمل للمعلمين حول مواضيع مختلفة متعلقة بتعلمهم الإنمائي.
				خ- وضع برنامج زيارات تبادلية للمعلمين ضعيفي الأداء لحضور حصص لمعلمين جيدي الأداء.
				د- توفير تغذية راجعة للمعلمين حول ممارساتهم التدريسية.

2. ما أهمية العوامل الآتية في تطوير التعلم الإنمائي للمعلم (اختر من بين الخيارات: 1 "مهم جداً"، 2 "مهم"، 3 "مهم نوعاً ما"، 4 "غير مهم على الإطلاق" وضع علامة (✓) في المكان الذي تراه مناسباً):

4	3	2	1	العوامل
				أ- التغذية الراجعة المقدمة من قبل الخبراء مثل المشرف التربوي، أو المعلم الأول، أو مدير المدرسة.
				ب- حضور ومشاهدة حصص المعلمين الآخرين
				ت- التعاون بين الزملاء من نفس معلمي المادة وتبادل الخبرة بينهم.
				ث- الممارسات التدريسية المبتكرة.
				ج- تحديث المعلم لمعارفه المتعلقة بالمادة.
				ح- تطوير المعلم لمهاراته التدريسية.
				خ- تفكير المعلم حول ممارساته التدريسية.
				د- إلتزام المعلم بتطوير ممارساته التدريسية.
				ذ- فهم احتياجات الطلبة.

3. إلى أي مدى ترى أن العوامل الآتية تمثل عوائقاً في طريق تعلم المعلم الإنمائي؟ لكل عائق ضع علامة (✓) في المكان الأنسب (1 "غالباً"، 2 "أحياناً"، 3 "نادراً"، 4 "أبداً").

التكرار				العوائق
4	3	2	1	
				أ- العبئ التدريسي الثقيل
				ب- المهام المدرسية الإضافية
				ت- الكثافة الصفية
				ث- توفر مصادر التعلم الإنمائي
				ج- قلة التحفيز
				ح- قلة الدعم
				خ- مقاومة المعلم للتغيير

4. إلى أي مدى توافق مع العبارات التالية؟ أرجو وضع علامة (✓) تحت أحد الأرقام المعطاة (1-5) لكل عبارة، كما يمكنك كتابة أية ملاحظة أو أمثلة، إذا رغبت، في المكان المخصص بعد هذا الجدول مباشرة.
المفتاح: (1) (وافق بشدة)، (2) (وافق)، (3) (غير متأكد)، (4) (لا أوافق)، (5) (لا أوافق بشدة)).

5	4	3	2	1	العبارات
					1. أعتقد أنه يتطلب مني، كجزء من عملي، ضمان أن خطط الوزارة وبرامجها تطبق حسب ما هو مقرر من قبل الوزارة.
					2. أعتقد أنه يتطلب مني، كجزء من عملي، ضمان أن يقوم المعلم بتحديث معارفه ومهاراته تبعاً لإحتياجات الطلبة.
					3. أعتقد أنه يتطلب مني، كجزء من عملي، إلهام المعلم لتحسين ممارساتهم التدريسية.
					4. دوري كبير في التعلم الإنمائي للمعلم.
					5. المعلمون في هذه المدرسة مبادرون ويسعون لتطوير تعلمهم الإنمائي وتحسين ممارساتهم التدريسية.
					6. أعتقد أنه يتطلب مني، كجزء من عملي، ضمان أن يلتزم جميع المعلمين بالممارسات الأفضل الموصى بها من خلال فرص التعلم الإنمائي المقدمة من قبل الوزارة.
					7. أعتقد أنه يتطلب مني، كجزء من عملي، إيجاد بيئة تعليمية في المدرسة.
					8. لا أستطيع التعرف على مدى تحسن الممارسات التدريسية للمعلمين بسبب عدم توفر الوقت لدي.
					9. يؤدي التعلم الإنمائي للمعلم للتطور المدرسي.
					10. تعالج خطة المدرسة مواطن الضعف في الممارسات التدريسية للمعلمين.
					11. تفتقر هذه المدرسة للموارد اللازمة للتعلم الإنمائي.
					12. أحتاج شخصياً للتدريب في مجال تنمية التعلم الإنمائي للمعلم.
					13. يعيق عدم فهم المعلم للإحتياجات التعليمية لطلبة تعلم الطلبة.
					14. يعيق عدم تمكن المعلم من المهارات التدريسية المناسبة تعلم الطلبة.
					15. يعيق عدم تحديث معارف المعلم المتعلقة بمحتوى المادة تعلم الطلبة.
					16. فرص التعلم الإنمائي الحالية للمعلم المتضمنة في الخطة الخمسية الحالية للوزارة لا تناسب الإحتياجات الفعلية للمعلم.
					17. نمتلك في هذه المدرسة خطة واضحة لتطوير التعلم الإنمائي للمعلم.
					18. أعتبر نفسي شخصياً مسؤولاً عن التعلم الإنمائي لمعلمي.
					19. أعتقد أن لدي تأثير في محتوى التعلم الإنمائي المقدم للمعلمين في مدرستي.
					20. يجب استخدام المحتوى المقدم في فرص التعلم الإنمائي من قبل المعلم كما هو دونما أي تغيير.

					21. لا يؤخذ برأي المعلم حول محتوى وطريقة تقديم فرص التعلم الإنمائية الرسمية الحالية.
					22. تعكس فرص التعلم الإنمائي الحالية آراء وتوقعات واضعي السياسة التربوية وليس آراء وتوقعات المعلم.

الجزء الثالث: أسئلة أخرى

5. ما معنى التعلم الإنمائي للمعلم من وجهة نظرك؟

6. ما هي جوانب التطوير التربوي التي ينبغي أن تركز عليها فرص التعلم الإنمائي للمعلم؟ (مثلاً: المناهج، تقنية المعلومات، ضبط الطلاب)

7. ما نوع الدعم المطلوب في المستقبل الذي تحتاجه كمدير أو تحتاجه المدرسة والذي تعتقد أنه سوف يساهم في تطور التعلم الإنمائي للمعلم؟

Headteacher Questionnaire

Dear School principal

Many thanks for agreeing to take part in my current research which has the following title: **“Teachers’ Professional Learning in the context of recent educational reforms in Oman: teachers’ perception”**. The following notes are: 1) to ensure that you are clear about the core terms used in the study and 2) to provide some details of your academic and professional background which will provide a helpful context.

Hilal Al-Shandudi

Part One: Background information

Status	Your response	Status	Your response
Name of school		Overall experience as a head teacher (in years)	
		Experience as a head teacher in the current school (in years)	
Gender (M or F)		Teaching experience (in years)	
Age range:	22-25		
	26-30	Number of teachers in the school	
	31-35	Number of administrative staff in the school	
	36-40	Number of students in the school	
	41-45		
	Above 45		
Highest level of Qualification			

Part Two:

1. How frequently have you performed the following activities in your school in the last 12 months? **For each activity put a tick where appropriate.**

The activity	How often			
	Very often	often	sometimes	never
i) Made sure that teachers' professional learning activities are in accordance with the teaching goals of the school.				
j) Made sure that teachers' professional learning activities are in accordance with their pedagogical and subject-content development needs.				
k) Made sure that teachers professional learning activities are in accordance with the educational goals of the ministry.				
l) Encouraged teachers to update their skills and knowledge.				
m) Attended teachers' workshops.				
n) Delivered workshops to teachers on various aspects of PL.				
o) Arranged for underperforming teachers to observe lessons of high-performing teachers.				
p) Provided teachers with feedback on their teaching practice.				

2. How important are the following aspects in developing teachers' PL: (choose from 1 'very important', 2 'important', 3 'Little importance', to 4 'not important at all':

Aspects	1 very important	2 important	3 Little importance	4 not important at all
j) Feedback on teaching practice from experts like inspectors, senior teachers and school heads				
k) Observing other teachers' lessons				
l) Cooperation between subject's teachers and sharing experience				
m) Innovative teaching practice				
n) Teachers' update of their subject's content knowledge				

o) Teachers' development of their pedagogical skills				
p) Teachers own reflection on their teaching practice				
q) Teachers' commitments to developing their teaching practice				
r) Understanding of students' needs				

3. How often do you think that the following factors represent obstacles or challenges to teachers' PL? **For each obstacle put a tick where appropriate.**

Obstacle to PL	How often			
	Very often	often	sometimes	never
f) An excessive teaching load				
g) Extra school duties				
h) Classroom density (Students' number in class)				
i) Availability of PL resources				
j) Lack of incentives				
k) Lack of support				
l) Teachers' resistance to any changes				

4. To what extent do you agree with the following statements? Please tick one number from 1-5 of each statement. Add evidence or comment if you wish in the space provided following the table below.

Key. (1 (strongly agree) - 2 (agree) - 3 (not sure) - 4 (disagree) - 5 (strongly disagree))

The Statement	1	2	3	4	5
1. I believe that part of my job is to ensure that the ministry's plans and programmes are implemented.					
2. Part of my job in my school is to ensure that teachers are updating their skills and knowledge in accordance to their students' needs.					
3. Part of my job is to inspire teachers to enhance the quality of their teaching.					
4. I have a significant role in teachers' PL.					
5. Teachers in this school are proactive in their PL and they take the initiative in developing their own teaching skills.					
6. Part of my role is to ensure that all teachers stick to the practices recommended by the ministry in the formal PL opportunities.					
7. Part of my job is to create a learning environment in the school.					
8. I do not know whether teachers' practices are improving because I don't have enough time.					
9. I would agree that teachers' PL leads to positive school improvement.					
10. My school's development plan addresses teachers' teaching weaknesses.					
11. This school lacks the resources to encourage teachers' PL.					
12. I need training on how to assess teachers with their PL.					
13. Students' learning is hindered by teachers' misunderstanding of their learning needs.					
14. Students' learning is hindered by teacher' lack of suitable pedagogical skills.					
15. Students learning is hindered by teacher' lack of up-to-date subject knowledge.					
16. Teachers' current PL opportunities do not meet actual teachers' professional needs.					
17. In this school we have a clear PL plan for teachers.					
18. I do not consider myself responsible for my teachers' PL.					

19. I have considerable influence over the content of the PL offered to teachers in my school.					
20. Content presented in the formal PL opportunities should be used by teachers as it is with no modifications.					
21. Teachers are not consulted on the content and way of delivery of their PL opportunities.					
22. Current PL opportunities reflect the perceptions of policy makers more than teachers.					

Part Three: Further questions

5. Please write briefly what you think teachers' Professional Learning means.

6. Which aspects of recent reform in education do you think that PL opportunities should focus on? (e.g. ICT, curriculum, classroom management)

7. What kinds of support/ requirements do you or your school need to better contribute to teachers' professional enhancement in the future?

8. What do you know about the recent educational reforms in the MOE?

➤ Opportunity for further involvement:

❖ Would you like to be interviewed in the future (for nearly 40 minutes and in convenient time and place to you) to discuss the previously mentioned issues in more depth (please tick where appropriate).	Yes (<input type="checkbox"/>) Please provide the following information:	No (<input type="checkbox"/>) No contact information are required
	Name: Tel. number: Email:	

Thank you

Appendix 11

The main study (Teachers' interview questions)

(FQ: follow-up question)

Questions for the teacher:

- 1) What does '**teachers' PL**' mean to you?
- 2) Which types of PL would you consider more effective in improving your practice in the classroom? And why?
- 3) To what extent do you think that the current PL activities fit your professional needs?
 - a. FQ: How do you think the needs in these activities are identified?
- 4) To what extent do you think that the current PL activities have affected your teaching practice? In what way?
- 5) Do you think acquiring knowledge is an individual or group effort?
 - a. FQ: How available are these two types in your school?
- 6) What do you think is your role in developing your teaching practice?
- 7) How often do you change your teaching style? And based on what?
- 8) What are the obstacles that limit the effects of teachers' PL in your opinion?
- 9) Which skills and areas do you think that the future-PL activities should focus on?
 - a. Prompts:
 - i. ICT Subject knowledge(e.g. literacy)
 - ii. ICT
 - iii. Special Educational Needs
 - iv. Pedagogy (e.g. teaching skills, use of technology)
 - v. Behaviour management
 - vi. Leadership and management skills
 - vii. Personal development
 - viii. Curriculum coordination and development
 - ix. Assessment
 - x. More time to reflect, implement new ideas
- 10)What are the latest developments in the MOE related to teachers' PL?

1. ماذا يعني لك "التعلم الانمائي/ المهني" للمعلم؟ (تحديث في طرق التدريس، التعرف على كيفية التعامل مع الطلبة، زيادة في المادة العلمية، استخدام التكنولوجيا، تغيير في طريقة التفكير...)
2. ما هي أنواع التعلم الانمائي التي تعتبرها أكثر فاعلية في تطوير ممارساتك التدريسية وتعاملك مع الطلبة؟ (الإشراف والمتابعة داخل الصف، حضور الورش، حضور حصص معلمين آخرين، نقاشات). ولماذا بعض هذه الأنواع أكثر أهمية من الأخرى؟ وما العوامل التي تؤثر في قرارك المشاركة في نشاط مهني معين وعدم المشاركة في آخر؟
3. الى اي مدى تعتقد أن طريقة اعداد أنشطة التعلم الإنمائي المتاحة حاليا والمهارات والخبرات التي تقدمها تناسب مع الاحتياجات المهنية الفعلية للمعلم؟ كيف تعتقد أنه يتم تحديد احتياجات المعلم في هذه الأنشطة؟
4. إلى اي مدى ترى أن التعلم الانمائي الحالي (الانماء المهني) أثر في طريقة تدريسك؟ وبأي شكل؟ أية أمثلة؟ زاد من المادة العلمية ، أثرى طرق التدريس، زاد من مهارات ضبط الصف، مهارات القيادة، الثقة بالنفس، القدرة على التقييم الذاتي، أحدث تغيير في طريقة تفكير المعلمين، ...)
5. هل ترى أن بناء المعرفة هو مجهود فردي أم جماعي؟ وما مدى توافر هاذين النوعين في مدرستك؟
6. ما هو من وجهة نظرك دور المعلم في تنمية ممارساته التدريسية؟
7. ما مدى قيامك بتغيير أسلوب تدريسك؟ وعلى ما يعتمد ذلك إن حصل؟
8. ما هي التحديات التي تحد من فاعلية التعلم الانمائي للمعلم من وجهة نظرك؟ التركيز على أجندة الوزارة عوضا عن احتياجات المعلم، قلة الدعم المادي والمعنوي، ضعف جودة الأنشطة الحالية، الوقت، ضعف ارتباطها بالمعلم، قلتها من حيث العدد، ...)
9. ما هي المهارات والخبرات التي يفترض أن يركز عليها التعلم الانمائي والتي يفترض أن تلقى المزيد من التركيز؟ المادة العلمية، تقنية المعلومات، الطلاب ذوو الاحتياجات الخاصة، استخدام التكنولوجيا وطرق ومهارات التدريس، ضبط سلوك الطلبة، مهارات القيادة والادارة، التطوير الشخصي، المناهج، التقويم، التقييم الذاتي)
10. ما هي التطورات والأفكار والتحديات الأخيرة في وزارة التربية والتعليم؟ وماذا تعرف عنها؟

Appendix 12

The main study (Head teachers' interview questions)

Questions for the School head:

- 1) What does '**teachers' PL**' mean to you?
- 2) Which types of PL would you consider more effective in improving teachers' practice in their classrooms? And why?
- 3) To what extent do you think that the current PL activities fit teachers' professional needs?
 - a. FQ: How are the needs in these activities identified?
- 4) To what extent do you think that the current PL activities have affected your teachers' teaching practice? In what way?
- 5) What kind of support do you think is needed to promote the effectiveness of teachers' PL?
 - a. FQ: Which skills and areas should future-PL activities focus on?
 1. Prompts:
 2. Subject knowledge (e.g. literacy)
 - ICT
 - Special Educational Needs
 - Pedagogy (e.g. teaching skills, use of technology)
 - Behaviour management
 - Leadership and management skills
 - Personal development
 - Curriculum coordination and development
 - Assessment
 - More time to reflect, implement new ideas
- 6) To what extent are teachers committed to developing themselves professionally?
 - a. FQ: What do you think affects this commitment?
- 7) What are, in your opinion, the factors that increase teachers' ability to acquire and apply new knowledge, skill or practice that suit their students?
- 8) How do you see your role in developing teachers' teaching practice? In which areas specifically? Examples.
- 9) To what extent are there learning communities in your school?
 - a. FQ: What is your role in these communities?
- 10) How familiar are you with the latest developments in the MOE related to teachers' PL?

1. ماذا يعني لك "التعلم الإنمائي/ المهني" للمعلم؟ وتحديث في طرق التدريس، التعرف على كيفية التعامل مع الطلبة، زيادة في المادة العلمية، استخدام التكنولوجيا، تغيير في طريقة التفكير...)
2. ما هي أنواع التعلم الإنمائي التي لاحظت من خلال تفاعلك اليومي مع المعلمين أنها أكثر فاعلية في تطوير ممارسات المعلم التدريسية وتعامله مع الطلبة؟ (الإشراف والمتابعة داخل الصف، حضور الورش، حضور حصص معلمين آخرين، نقاشات). ولماذا؟
3. الى اي مدى تعتقد أن التعلم الإنمائي المتاح حاليا يتوافق مع الاحتياجات المهنية للمعلم؟ كيف يتم تحديد احتياجات المعلم في هذه الأنشطة؟ وما هي المعوقات التي تحد من فاعلية التعلم الإنمائي؟ التركيز على أجندة الوزارة عوضا عن احتياجات المعلم، قلة الدعم المادي والمعنوي، ضعف جودة الأنشطة الحالية، الوقت، ضعف ارتباطها بالمعلم، قلتها من حيث العدد، ...)
4. من خلال تفاعلك اليومي مع معلميك، ألى اي مدى ترى أن التعلم الإنمائي الحالي أثر في ممارسات المعلمين التدريسية؟ وبأي شكل؟ أية أمثلة؟ زاد من المادة العلمية ، أثرى طرق التدريس، زاد من مهارات ضبط الصف، مهارات القيادة، الثقة بالنفس، القدرة على التقويم الذاتي، أحدث تغيير في طريقة تفكير المعلمين، ...)
5. ما مدى التزام المعلمين بتنمية أنفسهم مهنيا؟ وما هي العوامل التي تؤثر في هذا الاهتمام؟ وما الذي يؤدي إلى أن يغير المعلم من أسلوب تدريسه؟
6. ما نوع الدعم المطلوب الذي قد يزيد من فاعلية التعلم الإنمائي للمعلم من وجهة نظرك؟ وما هي المهارات والخبرات التي يفترض أن تركز عليها أنشطة التعلم الإنمائي؟
7. ما هي من وجهة نظرك العوامل التي تزيد من قدرة المعلم على اكتساب معرفة ومهارة وممارسات جديدة تناسب احتياجات طلبته؟
8. كيف ترى دورك في تنمية المعلمين مهنيا؟ وفي أي جانب؟ هل من أمثلة؟
9. ما مدى وجود مجتمعات تعليمية داخل مدرستك؟ وما مدى تشجيعك لتكوين مثل هذه المجتمعات؟
10. ما هي آخر التطورات والأفكار والتحديثات في وزارة التربية والتعليم؟ وماذا تعرف عنها؟

Appendix 13

The main study (Inspectors' interview questions)

Questions for the Inspector:

- 1) How do you understand teachers' PL?
- 2) Which types of PL would you consider more effective in improving teachers' practice in their classrooms? And why?
- 3) To what extent do you think that the current PL activities fit teachers' professional needs?
 - a. FQ: How are teachers' PL activities planned, evaluated and modified?
- 4) To what extent do you think that the current PL activities have affected your teachers' teaching practice? In what way?
 - a. FQ: any evidence, follow-up or evaluation?
- 5) What kind of support do you think is needed to promote the effectiveness of teachers' PL?
 - a. FQ: Which skills and areas should future-PL activities focus on?
 1. Prompts:
 2. Subject knowledge (e.g. literacy)
 - ii. ICT
 - iii. Special Educational Needs
 - iv. Pedagogy (teaching skills, use of technology)
 - v. Behaviour management
 - vi. Leadership and management skills
 - vii. Personal development
 - viii. Curriculum coordination and development
 - ix. Assessment
 - x. More time to reflect, implement new ideas
- 6) To what extent are teachers committed to developing themselves professionally?
 - a. FQ: What do you think affects this commitment?
- 7) What kind of obstacles do you think limit the effectiveness of the current PL activities?
 - a. Prompts: (shortage in financial support, focusing on policy-makers agenda, inadequate motivation, irrelevance to teachers' needs, unavailability of time, ...)
 - b. FQ: What is needed in future-PL activities?
- 8) How do you see your role in developing teachers' teaching practice? In which areas specifically? Examples.
- 9) What is the mechanism used to identify teachers' professional needs?
- 10) How familiar are you with the latest developments in the MOE related to teachers' PL?
 - a. FQ: To what extent the ministry's policy regarding teachers' PL (importance, types, aims, and availability) is conveyed to teachers? How?

أسئلة للمشرف التربوي

1. ماذا يعني لك "التعلم الانمائي/ المهني" للمعلم؟ (تحديث في طرق التدريس، التعرف على كيفية التعامل مع الطلبة، زيادة في المادة العلمية، استخدام التكنولوجيا، تغيير في طريقة التفكير...)
2. ما هي أنواع التعلم الانمائي التي لاحظت من خلال اشرافك على المعلمين أنها أكثر فاعلية في تطوير ممارسات المعلم التدريسية وتعامله مع الطلبة؟ (الاشراف والمتابعة داخل الصف، ورش، حضور حصص معلمين آخرين، نقاشات).
3. الى اي مدى تعتقد أن التعلم الإنمائي المتاح حاليا يتوافق مع الاحتياجات المهنية للمعلم؟ وكيف يتم تحديد هذه الاحتياجات؟
4. من خلال تفاعلك اليومي مع معلميك، ألى اي مدى ترى أن التعلم الانمائي الحالي أثر في ممارسات المعلمين التدريسية؟ وبأي شكل؟ أية أمثلة؟ وما الذي يزيد من فاعليته؟ وهل هناك تقييم لأثر هذه الفرص؟ زاد من المادة العلمية ، أثرى طرق التدريس، زاد من مهارات ضبط الصف، مهارات القيادة، الثقة بالنفس، القدرة على التقييم الذاتي، أحدث تغيير في طريقة تفكير المعلمين،...)
5. ما مدى التزام المعلمين بتنمية أنفسهم مهنيا؟ وما أشكال هذا الاهتمام؟ وما هي العوامل التي تؤثر في هذا الاهتمام؟ وما الذي يؤدي إلى أن يغير المعلم من أسلوب تدريسه؟
6. ما هي المعوقات التي تحد من فاعلية التعلم الانمائي للمعلم من وجهة نظرك؟ التركيز على أجندة الوزارة عوضا عن احتياجات المعلم، قلة الدعم المادي والمعنوي، ضعف جودة الأنشطة الحالية، الوقت، ضعف ارتباطها بالمعلم، قلتها من حيث العدد، ...)
7. كيف ترى دورك في تنمية المعلمين مهنيا؟ وفي أي جانب؟ هل من أمثلة؟
8. ما هي آخر التطورات والأفكار والتحديثات في وزارة التربية والتعليم؟ وماذا تعرف عنها؟ وما مدى قيام الوزارة بتعريف الحقل التربوي بها وبأهدافها؟
9. ما هي الألية المتبعة في الاعداد للتعلم الانمائي للمعلم وتقييمه وتطويره؟
10. ما مدى والية إطلاعك وإطلاع المعلمين على آخر المستجدات والتطورات في وزارة التربية؟ الى أي مدى تقوم الوزارة بتعريف الحقل التربوي بالسياسة المتبعة في التنمية المهنية للمعلمين (أهميتها، أنواعها، أهدافها، توافرها)؟

Appendix 14

The quantitative data from teachers' questionnaire

Conceptualising PL

Statement	Agree		Not sure		Disagree		Total (missing data)
	n	%	n	%	n	%	
10. Identifying teaching weaknesses and improving teachers' skills, abilities and interests.	142	89.9	14	8.9	2	1.2	159 (1)
11. Changing practice and adopting new teaching techniques	142	89.9	13	8.2	3	1.9	159 (1)
12. Increasing teachers' subject/pedagogical knowledge base	140	88.6	15	9.5	3	1.9	159 (1)
13. Acquiring positive attitudes towards new experience	140	88.1	16	10.1	3	1.9	159
14. Improving relationships and communication between teachers	136	85.5	16	10.1	7	4.4	159
15. Helping teachers to adapt to their students' learning needs and styles	130	81.8	24	15.1	5	3.1	159
16. Enhancing students' learning	127	79.9	26	16.4	6	3.7	159
17. Responding positively to challenges that teachers face today	125	79.6	23	14.6	9	5.7	159 (2)
18. Changes in how teachers think	122	78.2	24	15.4	10	6.4	159 (3)

Importance of PL

Statement	Very important		Important		Little importance		Not important		Total (missing data)
	n	%	n	%	n	%	n	%	
8. It helps me to improve my teaching practice	95	59.7	42	26.4	19	11.9	3	1.9	159
9. It helps me to update my skills and knowledge	80	50.6	51	32.3	21	13.3	6	3.8	158 (1)
10. It increases my self-esteem and self-confidence	75	47.5	47	29.7	25	15.8	11	7	158 (1)
11. It helps me to understand how students learn	63	39.9	54	34.2	35	22.2	6	3.8	158 (1)
12. It helps me to manage students' behaviour	39	24.7	66	41.8	38	24.1	15	9.5	158 (1)
13. It is a ministry requirement	36	22.9	44	28	48	30.6	29	18.5	157 (2)
14. It helps me to be promoted	23	14.6	40	25.3	37	23.4	58	36.7	158 (1)

Frequency and value of PL in various locations

Statement	Agree		Not sure		Disagree		Missing data
	n	%	n	%	n	%	
PL opportunities are rare and not available for all.	69	44.5	36	23.2	50	32.3	4

Statement	Often		Sometimes		Rarely		Never		Total (missing data)
	n	%	n	%	n	%	n	%	
6. PL in the school	64	42.1	63	41.4	22	14.5	3	2	152 (7)
7. PL in another school	1	7	28	19.6	52	36.4	62	43.4	143 (16)
8. PL in the training centre	23	15.5	55	37.2	40	27	30	20.3	158 (11)
9. PL in other parts in Oman	3	2.1	15	10.5	32	22.4	93	65	143 (16)
10. PL outside Oman	6	4.2	4	2.8	10	7	122	85.9	142 (17)

Statement	Very important		Important		Little importance		Not important		Total (missing data)
	n	%	n	%	n	%	n	%	
6. Value of PL in the school	50	34.7	76	52.8	18	12.5			144 (15)
7. Value of PL in another school	15	11.7	71	55.5	36	28.1	6	4.7	128 (31)
8. Value of PL in the Training Centre	42	29.6	70	49.3	22	15.5	8	5.6	142 (17)
9. Value of PL in other parts in Oman	45	33.8	60	45.1	21	15.8	7	5.3	133 (26)
10. Value of PL outside Oman	49	38	52	40.3	17	13.2	11	8.5	129 (30)

Involvement of others in PL

Statement	Agree		Not sure		Disagree		Missing data
	n	%	n	%	n	%	
2. Have reflected the perceptions of the policy makers more than the teachers.	72	46.5	53	34.2	30	19.3	4

Self-directed informal PL

Statement	Often		Sometimes		Rarely		Never		Total (missing data)
	n	%	n	%	n	%	n	%	
6. Discussion with colleagues	93	58.9	53	33.5	10	6.3	2	1.3	158 (1)
7. Using the internet	84	53.8	61	39.1	10	6.4	1	0.6	156 (3)
8. Self-reflection	68	43.9	70	45.2	17	11	0	0	155 (4)
9. Reading subject-related publications	50	32.3	76	49	22	14.2	7	4.5	155 (4)
10. Observing others	50	32.1	78	50	25	16	3	1.9	156 (3)

Value of Self-directed informal PL

Statement	Very useful		Useful		Some useful		Not useful		Total (missing data)
	n	%	n	%	n	%	n	%	
6. Value of discussion with colleagues	85	60.3	50	35.5	6	4.3	0	0	141 (18)
7. Value of using the internet	80	57.6	52	37.4	7	5.0	0	0	139 (20)
8. Value of reading subject-related publications	69	48.9	58	41.1	14	9.9	0	0	141 (18)
9. Value of observing others	66	47.1	64	45.7	7	5.0	3	2.1	140 (19)
10. Value of self-reflection	65	45.8	64	45.1	11	7.7	2	1.4	142 (17)

Methods used to promote PL

Statement	Very helpful		Helpful		Some help		No help at all		Total (missing data)
	n	%	n	%	n	%	n	%	
7. Mentoring and coaching	94	59.5	42	26.6	16	10.1	6	3.8	158 (1)
8. Training days in the school	45	28.8	79	50.6	27	17.3	5	3.2	156 (3)
9. Training days outside the school but within the district	50	31.6	72	45.6	24	15.2	12	7.6	158 (1)
10. Online training	54	34.2	62	39.2	30	19.0	12	7.6	158 (1)
11. Training abroad	70	45.2	33	21.3	17	11.0	35	22.6	155 (4)
12. Training days in Muscat	55	35.3	42	26.9	30	19.2	29	18.6	156 (3)

Benefits of engagement in PL

Statement	Agree		Not sure		Disagree		Missing data
	n	%	n	%	n	%	
3. Have helped me identify and articulate the core values, mission and vision of the ministry.	91	57.6	38	24.1	29	18.3	1
4. Have helped me understand my school's improvement priorities.	108	68.8	32	20.2	17	11	2

Statement	Agree		Not sure		Disagree		Missing data
	n	%	n	%	n	%	
24. Have helped me become a more effective teacher.	113	73.9	29	19.0	11	7.1	6
25. Have been of good quality overall.	90	58.4	42	27.3	22	14.3	5
26. Have not been adequate for my professional development needs.	73	48	41	27	38	25	7
27. Have not provided me with time to develop my knowledge.	47	30.3	48	31	60	38.7	4

Statement	Agree		Not sure		Disagree		Missing data
	n	%	n	%	n	%	
4. Have offered me opportunities to discuss my experience with teachers from other schools.	103	66	28	17.9	15	16.1	3
5. Have not provided me with colleagues' support.	35	22.7	47	30.5	72	46.8	5
6. Have not offered me school leadership support.	35	23.2	43	28.5	73	48.3	8

Statement	Agree		Not sure		Disagree		Missing data
	n	%	n	%	n	%	
4. Have encouraged me to use different PL resources	111	71.2	32	20.5	13	8.3	3
5. Have encouraged me to use the MOE online subjects' forums to develop my knowledge and improve my teaching practice.	80	51.3	36	23.1	40	25.6	3
6. Have encouraged me to use the Training Centre Library to develop my knowledge and improve my teaching practice.	57	37	41	26.6	56	36.4	5

Statement	Agree		Not sure		Disagree		Missing data
	n	%	n	%	n	%	
6. Have helped me see the link between an improvement in my teaching and the quality of pupils' achievements.	110	70.5	35	22.4	11	7.1	3
7. Have not enabled me to realise how my pupils learn best.	44	28	39	24.8	74	47.2	2
8. Have provided only theoretical knowledge and theories that cannot be implemented in practice in the classroom.	73	47.1	36	23.2	46	29.7	4
9. Have not helped me understand how to use ICT in my teaching more effectively	57	36.8	42	27.1	56	36.1	4
10. Have helped me understand how to develop pupils' literacy skills.	81	52.3	40	25.7	34	22	4

Appendix 15

The quantitative data from head teachers' questionnaire

Perception about head teachers' role

The activity	How often								Total number of responses; Missing data in brackets
	Very often		often		sometimes		Never		
	N	%	N	%	N	%	N	%	
q) Made sure that teachers' professional learning activities are in accordance with the teaching goals of the school.	9	75	3	25	0	0	0	0	12 (0)
r) Made sure that teachers' professional learning activities are in accordance with their pedagogical and subject-content development needs.	10	83.3	2	16.7	0	0	0	0	12 (0)
s) Made sure that teachers professional learning activities are in accordance with the educational goals of the ministry.	6	50	6	50	0	0	0	0	12 (0)
t) Encouraged teachers to update their skills and knowledge.	9	75	3	25	0	0	0	0	12 (0)
u) Attended teachers' workshops.	7	58.3	4	33.3	1	8.4	0	0	12 (0)
v) Delivered workshops to teachers on various aspects of PL.	1	8.3	9	75	2	16.7	0	0	12 (0)
w) Arranged for underperforming teachers to observe lessons of high-performing teachers.	7	58.3	4	33.3	1	8.4	0	0	12 (0)
x) Provided teachers with feedback on their teaching practice.	10	83.3	2	16.7	0	0	0	0	12 (0)

The various aspects of teachers' PL

Aspects	1 very important		2 important		3 Little importance		4 not important at all		Total number of responses; Missing data in brackets
	N	%	N	%	N	%	N	%	
s) Feedback on teaching practice from experts like inspectors, senior teachers and school heads	10	83.3	2	16.7	0	0	0	0	12 (0)
t) Observing other teachers' lessons	9	75	2	16.7	1	8.3	0	0	12 (0)

u) Cooperation between subject's teachers and sharing experience	11	91.7	0	0	1	8.3	0	0	12 (0)
v) Innovative teaching practice	10	83.3	2	16.7	0	0	0	0	12 (0)
w) Teachers' update of their subject's content knowledge	10	83.3	2	16.7	0	0	0	0	12 (0)
x) Teachers' development of their pedagogical skills	9	75	3	25	0	0	0	0	12 (0)
y) Teachers own reflection on their teaching practice	8	66.7	4	33.3	0	0	0	0	12 (0)
z) Teachers' commitments to developing their teaching practice	9	75	3	25	0	0	0	0	12 (0)
aa) Understanding of students' needs	9	75	3	25	0	0	0	0	12 (0)

The challenges that face teachers' PL

Obstacle to PL	How often								Total number of responses; Missing data in brackets
	Very often		Often		sometimes		never		
	N	%	N	%	N	%	N	%	
m) An excessive teaching load	12	100	0	0	0	0	0	0	12 (0)
n) Extra school duties	7	58.3	5	41.7	0	0	0	0	12 (0)
o) Classroom density (Students' number in class)	7	58.3	5	41.7	0	0	0	0	12 (0)
p) Availability of PL resources	7	63.6	3	27.3	1	9.1	0	0	11 (1)
q) Lack of incentives	8	66.7	3	25	1	8.3	0	0	12 (0)
r) Lack of support	8	66.7	3	25	1	8.3	0	0	12 (0)
s) Teachers' resistance to any changes	8	66.7	3	25	1	8.3	0	0	12 (0)

Overall perceptions of head teachers' role and formal PL impact

The Statement	Strongly agree		agree		Not sure		disagree		Strongly disagree		Total number of responses; Missing data in brackets
	N	%	N	%	N	%	N	%	N	%	
1. I believe that part of my job is to ensure that the ministry's plans and programmes are implemented.	8	66.7	4	33.3	0	0	0	0	0	0	12 (0)
2. Part of my job in my school is to ensure that teachers are updating their skills and knowledge in accordance to their students' needs.	5	41.7	6	50	1	8.3	0	0	0	0	12 (0)
3. Part of my job is to inspire teachers to enhance the quality of their teaching.	6	50	4	33.3	2	16.7	0	0	0	0	12 (0)
4. I have a significant role in teachers' PL.	8	66.7	3	25	1	8.3	0	0	0	0	12 (0)
5. Teachers in this school are proactive in their PL and they take the initiative in developing their own teaching skills.	6	50	5	41.7	1	8.3	0	0	0	0	12 (0)
6. Part of my role is to ensure that all teachers stick to the practices recommended by the ministry in the formal PL opportunities.	6	50	5	41.7	0	0	0	0	1	8.3	12(0)
7. Part of my job is to create a learning environment in the school.	9	75	3	25	0	0	0	0	0	0	12(0)
8. I do not know whether teachers' practices are improving because I don't have enough time.	3	25	3	25	2	16.7	3	25	1	8.3	12(0)
9. I would agree that teachers' PL leads to positive school improvement.	9	75	3	25	0	0	0	0	0	0	12(0)
10. My school's development plan addresses teachers' teaching weaknesses.	7	58.3	5	41.7	0	0	0	0	0	0	12(0)
11. This school lacks the resources to encourage teachers' PL.	2	16.7	4	33.3	2	16.7	1	8.3	3	25	12(0)
12. I need training on how to assess teachers with their PL.	2	16.7	5	41.6	2	16.7	3	25	0	0	12(0)
13. Students' learning is hindered by teachers' misunderstanding of their learning needs.	6	50	6	50	0	0	0	0	0	0	12(0)
14. Students' learning is hindered by teacher' lack of suitable pedagogical skills.	6	50	5	41.7	1	8.3	0	0	0	0	12(0)
15. Students learning is hindered by teacher' lack of up-to-date subject knowledge.	7	58.3	4	33.4	1	8.3	0	0	0	0	12(0)
16. Teachers' current PL opportunities do not meet actual teachers' professional needs.	2	16.7	3	25	3	25	4	33.3	0	0	12(0)

17. In this school we have a clear PL plan for teachers.	6	50	5	41.7	0	0	1	8.3	0	0	12(0)
18. I do not consider myself responsible for my teachers' PL.	4	33.3	5	41.7	1	8.3	0	0	2	16.7	12(0)
19. I have considerable influence over the content of the PL offered to teachers in my school.	7	58.3	4	33.4	0	0	0	0	1	8.3	12(0)
20. Content presented in the formal PL opportunities should be used by teachers as it is with no modifications.	2	16.7	2	16.7	3	25	2	16.6	3	25	12(0)
21. Teachers are not consulted on the content and way of delivery of their PL opportunities.	2	16.7	3	25	4	33.3	1	8.3	2	16.7	12(0)
22. Current PL opportunities reflect the perceptions of policy makers more than teachers.	5	41.7	1	8.3	2	16.7	3	25	1	8.3	12(0)

Appendix 16

A teachers' interview transcript sample before being reviewed

R. Would you like to introduce yourself briefly first?

I. My name is XXX I'm a Math teacher in XXX school. I started teaching in year 2000 and I had 15 years of teaching experience and I have a master in Math curricula and teaching techniques. I started teaching grade 6 and now I am teaching grades 11 and 12.

R. What does teachers' PL mean to you?

I. It is a renovation in education that teachers need to be familiar with which can be either related to knowing the new rules and the latest things in the MOE which can take the form of discussions, meetings or workshops in the school, Education Office or even the MOE. It is also related to knowing new teaching techniques which cannot be simply conveyed to teachers through meetings or simple workshop... What is needed is a well-qualified trainer or presenter who himself/herself do use these techniques in practice not only in theory otherwise this presenter will only be able to introduce the new techniques but not to help teachers adapt to it or use it in their own classrooms. My opinion is that anyone can take materials from the internet and present it to teachers, but only specialists who have experience can present the practical side of new things and help teachers to use them in practice. I also think that the most effective forms of PL is exchanging classrooms visits between teachers and the discussion that take place between subject teachers like Math teachers for example, but, some kinds of PL in which one or two periods a week are allocated to deliver a workshop, these do not often serve the purpose and have no results in practice because the teachers will have many things in his mind which will not allow him to focus on the workshop. Add to this if the presenter himself is not qualified enough or if he has no real experience in what he is presenting, then, this presenter can argue that he has presented something new, but he cannot claim that teachers learn anything from him. What can be presented in the short period workshops is something like the latest updates in the ministry but not often something related to the subject or teaching strategies.

R. You mentioned discussion between teachers, when do these occur and why?

I. These might take place in any time especially when the teachers needs to know something or when he is not sure of something in his subject. Here he seeks the advice of his subject colleagues or to the senior teacher.... This is why discussion is more effective form of PL because the teachers attends something that he needs instead of attending something that he does not really need. PL means to develop myself and I think I'm the most familiar with my needs. Also when I seek the help of my colleagues, this can be more useful than meeting the inspector because the inspector discusses more general things with colleagues discuss specific things that concern me in their daily life and that touches my real needs and which I benefit directly from in my teaching ... in my classroom.

R. What do you mean by 'benefit'?

I. I mean by 'benefit' is to take and use in my own classroom by adapting what I learn to my situation and develop it so that it fits my class. Therefore, as I have said, discussion is the most effective form of PL. If I lack the skill of class management, I can seek the advice of a teacher who is well-known for his class management and I can observe this management in practice in real lesson not only in theory. PL is

a practice not theory in my opinion. I benefit more from a new teaching strategy which is presented before me in practice or which is presented by someone who does use this strategy and who knows why it works or might not work, not everyone who presents something new can use it in practice...PL is a reality not a theory.

R. You actually slightly answered the next question which asks about the most effective forms of PL

I. Indeed, as I said thoughtful discussions and exchanging classroom visits are most effective forms of PL in my opinion. Also the discussions that are organized at the level of the educational office and that contain teachers and senior teachers from different schools and inspectors of the subject who can add something of value. Also the presenters who present studies they have conducted themselves ... those are the specialists who have practical experience and who introduce things they have experienced themselves and been through in curriculum or teaching strategies instead of presenting concepts and ideas that anyone can find in books. Another point is that the person who attends the PL activity should be willing to join and not only nominated by others.

R. What is the situation when it comes to nominating teachers to attend formal PL activities?

I. Most of the ... teachers are nominated by inspectors, which is understood because the idea is to include most teachers in these training sessions instead of giving the chance for those who have the desire and who are very few. But still it is good idea that teachers are consulted on which training sessions they want to attend instead of attending the same PL activity more than one time or attending a session that they are not interested in. I also think that the more general training sessions should be open to whoever have the desire and should be out of the working hours. I, myself, attended a workshop in Sur (another educational office) on a friday (the weekend) which was based on my own desire and not being forced to attend... There I had the idea that I can meet new teachers, inspectors and hear new ideas.

R. How flexible and easy is it to get released to attend a PL activity?

I. It is very a very hard and difficult to get released to study or attend a PL activity in another school or abroad. Many teachers do want to develop themselves professionally but they are restricted by the outdated rules and the very limited allocations. What is more, although there is now the Specialized Training Centre, which started this year, but still teachers who attend training session in this Centre get one day release from work which is not adequate due to the over load teachers have in their schools. Instead, I think it would be much better if teachers are released for a whole semester or a whole year. It is difficult to focus on two major things at the same time. I don't think there is any flexibility or fairness when it comes to PL. What happens when there is a chance for PL activity, especially abroad, is that those who have influence get most of these because the names are nominated by people who sit behind their desks and the nomination is also not based on clear criteria for the selection...I'm not saying it is done deliberately but I'm saying there are no clear criteria and based on what qualifications!. Another point is that when someone gets a chance to attend a PL activity, it is often required from him/her to present what they have attended to their colleagues, but how can we be sure that this person has learned all the presented materials or most of it especially if the presented materials were very vivid and presented by a very qualified trainer, of course the trainee won't be able to transfer all the training material back to his school. In such situation, were teachers are being forced to convey what they learn exactly to the others, there might be a negative training impact where these teachers might convey wrong ideas based on their own understanding and lead other teachers astray What happens is that training materials which needs to be delivered in one week is delivered in one day instead ...people are

different when it come to comprehension and often see things according to their needs and understanding.

R. What attracts you to attend or discourage you from attending a PL activity?

I. First, I attracted to new things which I'm not familiar with; something I like and can use in my work, and something that help me to develop and improve professionally like using technology in Math or using new teaching strategy, ... something I need and have the desire to get. This of course cannot be in some events which I'm forced to attend like attending a workshop on lesson preparation which I'm very familiar with and fed with and I don't need. On other hand, if I'm teaching grade 11 and invited to attend a workshop on how to teach some topics for grade 12 and I have the desire to teach grade 12 next year, I will be motivated to attend this workshop to know about something that I will face in my work in the near future and that will help me to be a better teacher. Also if I have a voice in deciding which session to attend I will be more convinced and benefit more and go to the session with clear mind instead of being forced to attend a session for two weeks, for example, while my mind is back in the school ...occupied by how can I finish the curriculum and the lessons that my students will miss. The positive thing this year is that the professional development week was at the beginning of the school year before students started their study not like last year where I have many training session during the school day and at the middle and towards the end of the semester which led me to confusion and created many difficulties to me in finishing the curriculum. This led me to have a negative attitude towards these training sessions although they were useful to me. Also this semester I had a three weeks leave to go to pilgrimage in Makka, but when I came back I found that I was nominated for a training workshop for one week which I had to apologize from attending although I was very interested in that workshop. Here timing of the workshop is very crucial because might create me a confusion...when I attend a workshop, all my work in the school is kept for me to do when I come back. In my opinion the solution is to give the PL activities at the beginning of the school year and at the exams times.

R. What about other forms of PL activities?

The most PL type I really benefited from is the self PL, to search through the internet, to read books; this is the most important thing if teachers want to improve their practice is to search and look for what they need which can either be related to their subject knowledge, teaching strategies or even new rules and regulation in their work. Of course before attending or even thinking about attending a PL activities I should know my weaknesses... by reading, asking and reflecting on my work. For example I felt that I need to motivate my students so that they like me and my subject and therefore I searched for books that help me to do so and make my communication with the students easier and actually it was very fruitful.... I didn't attend any formal PL event to help me improve my communication with my students but I worked myself to find solution to my problem and it worked.

R. How available are PL resources?

I. Of course there is now the internet which can provide you access to almost every knowledge but there is still the desire of the teachers to know and to spend some time in searching for new things. Books also are available now in many bookshops around and there are now many book fairs that provide varieties of books, in addition to cooking and fashion books especially in teaching strategies. I believe that nowadays people's preferences are more on books that are related to their professions. For teachers it is of particular importance because if we think about our students ... their ideas changed a lot and they are more familiar with new technology than when we were at their age. We do need, as teachers, to

know how our students think, what they like, what are their preferences ... so that we can communicate better with them.

R. You mentioned that many PL activities do not actually meet the needs of teachers. Can you explain more?

I. This is a point of a particular importance for those who prepares these PL activities. If there is the possibility that teachers can choose what they attend it would be much better.

R. How are these needs identified?

I. Teachers needs are identified by the inspectors and rarely teachers are asked if they need the workshop.

R. Do you think that the inspector can identify these needs?

I. I don't think so except if it is something related to the subject knowledge or the rules and regulations of the ministry, but the other psychological needs and the needs relate to teaching strategies cannot be identified through two or three visits to the teacher. I believe that senior teachers and school administration are more capable of identifying these needs although there is still the issue of our social relations and culture which prevent us from critically evaluate our friends and colleagues. We often prefer to keep good relations at the cost of work efficiency.

R. To what extent has the current PL influenced your teaching?

I. I think that it depends on the kind and length of the PL activity; if it lasts for one week for example it will have an effect, but if it was only for two hours the impact will be very limited. Of course the practical side in the one week PL will be more than in the two hours' workshop. Generally speaking I think that the influence of the current PL events can reach up to 30% only and for me it can reach up to 50% sometimes when the workshop is related to the subject knowledge. I attended my workshops which I actually didn't need and I believe that I even felt asleep during these workshops. I regret that I wasted a whole day attending these useless workshops. These time-wasted workshops were not actually of any importance to me, like attending a workshop which was about the cleanliness competition between schools... something I didn't want or like.

R. Can you remember a PL activity in which you have benefited?

I. There was a workshop called 'TRAIZE' which was about teaching Math and being a creative thinker in Muscat. This workshop was important because it helped me to be creative in Math and finding new solutions and I used what I have learned from this workshop in developing my students performance and in helping them to be creative especially in one of the competitions between schools where students have to come up with creative solutions to some problems in Math, science and Geographical concepts... it benefited us and was at the core of my job.

R. You have mentioned two types of learning group and individual learning? Can you comment on these and how available are they in your school?

I. I think that teachers' PL is more a personal responsibility to identify your need where they have to develop themselves and improve their practice and knowledge and then they can share and benefit from the experience of others by exchanging their ideas and experience and see how others implement new ideas. On other hand the formal workshops provide opportunities to meet other people, know

about their ideas and experience and discuss with them what might or might not work and why. I prefer to search myself for new things first and then see what others are using and successful are they and whether their ideas suit me. Here I see the combination of two things theoretical knowledge by reading and listening to others and practical knowledge by trying new things in practice and observing how others implement things in practice.

R. How available is group work in your school?

I. We do use 'WhatsApp' to discuss Math problems with other teachers and inspectors and students sometimes. Also in workshops where there are variety of experience, teachers and inspectors, we often find it useful to discuss subject related issues, but in the more general meetings, more than one subjects, there discussed issues are more general and not specifically related to our taught subject. But I don't use online discussion groups because I don't have time and most of these groups are in English which is I am not competent with and also these groups might discuss things different from those used in Oman.

R. How often do you change your teaching style and based on what?

I change my teaching style based on my experience and my students' weaknesses and ability. I also benefit from observing other teachers teaching and how they overcome problems and from my own reading as well when I come across a new teaching strategy to introduce some concepts in Math for example. When I attend a workshop I might know about a new teaching strategy, but this does not necessarily fit my situation in my classroom, therefore I should decide myself whether I need this new strategy and what changes do I need to consider. I sometimes change my teaching style when I feel that my students do not understand during the lesson; I might use group work for example, or I might use another technique to introduce a new concept in another class because I felt that the one I used in the previous lesson was not very effective... but time might restrict this because we don't have much time.. Only 45 minutes.

R. What makes PL ineffective? What are the obstacles?

I. I think most of the PL activities are imposed on teachers by the ministry and here I ask how able are the teachers to prepare and deliver a workshop which can be of benefit to their colleagues! What happens is the teachers might prepare something below their colleagues' level or he might introduce a new teaching techniques which himself have no experience in and never used and cannot implement in practice. Such workshops, which usually last for one period, introduce new things for teachers, but they do not help them to use these in their own classrooms. On the other hand, if the presenter of the workshop was an expert who himself have used the suggested technique, this will be more useful and he will be able to help teachers to adapt the new techniques to suit their own situation.

R. What kind of support is needed in future PL?

I. I think the focus should be on students' evaluation and it should be 'real' and I think that the ministry officials should dare to have a real student's assessment instead of trying to pass all students through to the next level. Teachers needs to be trained on how to evaluate students accurately. There is also the need to focus on how to help teachers to implement new teaching techniques instead of introducing these to them and leaving them lost. What should happen in training workshops is that these should be viewed as classrooms with students (the teachers) and a teacher (the trainer) so that the teachers can observe how the new teaching techniques are used in practice. What is needed is teaching and learning not only lecturing and theories. In our school we have teachers with very long experience who find it

very difficult to deal with new technology and they should not be forced to use new technology if they are not competent with. If they have to use these technology, they should first be trained how to use the technology themselves and then how to use it in their classrooms. Also the load of the other non-teaching things should be reduced...no need for useless competitions like the cleanliness competition ...and I think that science subjects should be given more PL opportunities compared to Arts subjects. There should be also focus on new teachers at their early teaching years. Also when new changes take place in the ministry, like introducing new teaching technique, there should be adequate training for teachers so that they are familiar with the new introduced technique and not left confused, teachers feel lost if they don't understand what they should implement, how or why and they will end up running away from implementing the new technique. Moreover, when teachers are nominated to attend a workshop, the conditions should be provided for them to benefit from these workshops, what happens is that teachers go to these workshops with loads of teaching duties, non-teaching responsibilities and many other tasks that occupy their minds... teachers are not satisfied!!! These workshops should be well planned so that they do not conflict with teachers basic duties and do not appear like imposed things on teachers.

R. What do you know about the latest developments in the MOE?

I. I don't know much, but I know that in the recent years students' performance has dropped and the ministry solved this with very ineffective solutions like using remedial plans which was more of paying attention to the outcome instead of the process that led to this outcome. There was also that idea of considering senior teachers as inspectors in their schools, but are they capable to do so and do they have the skills?!!! And how feasible is that idea taking into consideration our culture which prefer keeping good relations over accuracy especially if it is with someone you meet every day. There is also the new launched Specialized Centre which is still at its beginning and things do not appear clear yet and it seems very floating especially on how teachers are evaluated in this Centre or the kind of activities it provides. But still I have to say this Center might be very promising especially with the online communication with the participants and the continuous follow up it provides after the training. ...We have to wait and see what will happen especially with the current drop in oil prices, may be it will be closed down who knows.

R. What about the aims of these big projects, to what extent are they conveyed to schools?

I. Frankly speaking I am not sure what is the overall goal of the MOE is, to create students who are well educated and who can seek successful life in Oman or abroad and face the present challenges?! This is what is often said but I believe we are not in the right direction especially with the current students' assessment system and I don't believe that any kind of PL activity will change anything if the rules remain the same. Eventually we find that a student who have spent 12 years of learning, moving from one seat to another, will graduate with almost nothing that enable him to lead a successful life and will end up in joining the Army or working in a factory and here we ask why did he spent so many years and end up in having a job that does not require much skills or knowledge?!!! To me I feel due to this automatic pass from one school level to the other, my teaching ability is deteriorating because I have to deal with students who lack the lowest levels of knowledge or desire. If this is the situation, then I don't need any PL because what I have is more than enough to help me teach the kind of students I have who cannot discuss me and do not challenge me to improve my teaching standards... this is what I think and it can be arguable and open to debate.

Appendix 17

A head teachers' interview transcript sample before being reviewed

R. Would you like to introduce yourself first?

I. My name is XXX I have a BA in education in science/Maths from IBri College which I obtain in 2004. I started my teaching career in a school in Rustaq in Batinah South Educational Office and then I move to a school in AlDhahira Educational Office and then to another school for two years. After that I chosen as an acting school assistant and then as a school assistant and now I'm a school headmistress in this school. I receive many recognitions and certificates like 'distinguished teacher' in 2006 and I was honored as a 'distinguished school head assistant' in 2009. I was honored also by the parents and last year I was chosen by the Alroyah Newspaper as 'the best educational character'. I also received a prize for the best presented paper during a conference I participated in in Nizwa University which was about the values of patriotism.

R. How do you understand teacher' PL?

I. It is a process that include many sides from developing the teacher's personal skills to improving his/her academic skills related to teaching and his/her interpersonal skills like dealing with his/her colleagues, superiors and students. It is an improvement in the experience and skills of teachers so that their performance is improved and their teaching practice is enhanced and it aims at improving teaching proficiency. It makes teaching techniques diversified and useful for students.

R. Is it the responsibility of the teacher or the ministry?

I. It is shared responsibility. If any area is not covered by the formal PL then teachers should seek to develop themselves personally in that area. If teachers do not have positive attitudes towards the formal PL provided for them it won't change anything in their practice. PL is something that should come from the teachers themselves basically and formal PL should be seen as supplementary activities to teachers' efforts. But what is happening now is just the opposite...most of the PL comes from the ministry or the school and teachers little invest in their PL. I think teachers should be responsible for 80% of their PL otherwise they won't be able to meet the requirements of the current age and won't be in line with the advancement around the world. If teachers depend just on formal PL activities provided for them these are often repeated and most of the time do not provide much to the teachers.

R. Why?

I. because the PL plans are prepared by people ... based on their perception ... who are far behind in their knowledge compared to newly graduated teachers and therefore their knowledge and the way the create these plans does not meet the real needs of these teachers. I often hear from teachers after they comes from a PL event that they have gained nothing because what was presented was a repetition of what they already know and what they have learned in the university before. There is a gap between what teachers have learned recently and between what is presented in PL to develop them. There is a big gap which I clearly can see. Most teachers say to me they have benefited nothing when they attend a PL event and I make sure to ask them what they have gained from any workshop and I always hear the same answer 'nothing'. I was one of the school heads who criticized and opposed these PL plans but unfortunately we still suffer from the same problem.

R. Are teachers consulted when PL plans are made?

I. The ministry take sample of teachers as I know from different teachers which can be randomly selected or based on inspectors' nominations to be involved in creating plans and PL programmes. But I have a teacher who was one time selected to be among these teachers invited to participate in designing the PL plan but she was surprised to discover that the plan was already made and nothing changed from the previous plan. If the invitation of those teachers is just to say that we have consulted teachers then there is no need for it at all.

R. Which PL forms are more effective in enhancing teachers practice in your opinion?

I. In the school, what I observed to be very effective, and what we used a lot in our school, is microteaching. In this micro teaching a good teacher teaches a lesson and his colleagues who might lack something or have a particular weakness attend like students but there are no students. The teacher teaches like if there are students in the class instead of teachers. These micro teaching lessons are remedial action plans I prepared for teachers who have certain weaknesses and thanks God I have noticed improvement in their teaching strategies and subject knowledge. We also have discussions group session which are run by a competent teacher. I think any group work and sharing ideas between teachers will pay off in improving teachers' practice. Most of the PL activities provided by the ministry are events of attending, lecturing and listening, but recently some presenters use questioning and activities to make these events less boring. There was a one week workshop I recently attended which required us when we go home every day to implement what we have learned... this is the kind of activities that I belief in its ability to make a difference... that include implementing what is being learned in workplace or the classroom.

R. To what extent has the current formal PL influenced teachers' practice?

I. Teachers convictions is the most difficult thing to change and sometime I think that teachers are sometimes the ones who make obstacles on their way of professional development. But I can say confidently that nearly 50% of the PL activities that come from the ministry have no effect at all. Recently, some newly introduced programmes like those offered by the Specialised Centre, the Educational Visitor Programmes and the Academic Programme in coordination with SQU have had real positive effects on teachers' practice and convictions. This might be because these programmes pay more attention to the practical side of learning and provide teachers with many activities. They also pay attention to what teachers really need and teaching them something and ask them to implement what they have learn in their own classrooms, teachers in these programmes seen in practice how experts teach and then they try the technique themselves before using it with their students ... this what made much difference and change.

R. But how teachers' professional needs are identified in PL activities?

I. We receive a checklist form of teachers' professional needs that should be filled by the senior teachers and then it go to the inspectors to identify the needs but I think school heads and their assistants should be involved since they are close to the teachers and know better about their performance. We have our own evaluation forms but they differ a bit from teachers' and inspectors' forms ... for example senior teachers' form includes evaluation items related to the subject content but we don't have these in our evaluation form and sometimes we have to evaluate many aspects under one item only like classroom control and use of appropriate language.

R. How suitable are the evaluation checklist items of this form?

I. They are not suitable because it denies school heads from evaluating important areas in teacher performance and it gives senior teachers more authority in evaluating specific areas that they might not be well aware of especially if they are newly selected as senior teachers. I think the old form for evaluation which was the same for school heads and senior teachers was more suitable because it enabled us to discuss and justify our evaluation decisions and have common criteria. For example the evaluation form we are using currently for English teachers has only five items which make it difficult for use to evaluate the teacher fairly enough because these points are too general and important points like the soundness of the language and the personality of the teacher are missing. Another thing is also that we have to evaluate all the given points in every lesson which is not practical because some points cannot be achieved in one particular lessons ... like if the lesson doesn't require the use of continuous assessment but in the checklist there is an item to evaluate the use of continuous assessment. These things need to be revised.

R. How accountable are teachers in your school to their PL?

I. Self-directed PL is something that we alot encourage in our school and I can say it clearly that if the school administration adopted this encouragement as a basic mission for them teachers will improve and PL will be developed. What we do in our school is that we make sure that active and hardworking teachers are mixed up ... intelligently ... with lazy teachers and spend time together in the school and even outside while coming or leaving the school ... this has led the good teachers to have influence on the lazy ones. Of course, we have the agreement of the good teacher but we make sure that the other teacher is not aware of what is happening. I can say that nearly 60 to 65% teachers in this school try their best to be better teachers... but there are teachers who do not. What helps self-development in this school is our resources centre which is full of many books and we make sure to update it with the latest books' titles whenever there is a book fair nearby ... we do what we can. We also in the school facilitate and help teachers to attend PL opportunities even if it is during school working hours but this happens without taking the permission of the Educational Office ... in coordination between the school and the teacher only... I'm the queen in my school... If I wait to get permission from the Education Office then the PL event will be finished before I can get this permission. Getting such permission is one of the obstacles to teachers' PL.

R. But what makes a teacher works hard to develop herself and another doesn't?

I. This depend on the personality of the teacher and the environment she grew up in or her ambition if the teacher doesn't have ambition to develop then she will remain the same teacher with the same techniques and experience.

R. Are hardworking teachers more motivated by the Educational Office?

I. No, there is no difference when it come to motivation or promotion between teachers who work hard and those who don't... and this is what is disappointing.

R. Any other obstacle?

Yes, there is lack of flexibility from the Education Office, lack of motivation... the only difference between teachers seems clear only in the performance evaluation at the end of the year but this still is

not that important when it comes to promotion and it is also influenced by personal relations. I have a teacher in my school who transferred from another school and got there 90% in her performance evaluation report but I think she only deserved 68 % no more... what criteria was the evaluation based on!!! ...these evaluation reports are based on inspectors and head teachers own evaluation ... there are no guidelines. Another obstacle to PL effectiveness is the time in which PL activities happen which is most of the time contradicts with teachers teaching duties. The overload teaching and non-teaching load influence negatively teachers' effort in their PL. Another obstacle is not engaging the educational field in selecting and preparing PL activities. We have in the school the School Performance Development System which we use to know the priorities for development, to evaluate the performance of teachers, school administration and parents and to prepare the necessary PL activities.... I don't know why this system isn't used by the ministry when preparing PL activities. Why doesn't the ministry finds out the priorities for development through this system and through schools heads' and senior teachers' evaluations... it is like if it only concerns schools only and we are made accountable for it but not the ministry... and what happens is that when PL activities come from the Ministry they are very different from what we recommended. In my school we found out... through this system... that some teachers are not giving feedback to their students and so we offered them workshop on this area which had positive impact on those teachers.... If we know what is wrong then only we can find the best solution for it, but most formal PL activities do not correspond to the real weaknesses teachers' have and are not up to the expectations...disappointing.

R. What is needed in the future PL in your opinion?

I. No PL activity will be effective if it lacks financial support and currently the sums we receive are very small. In my school which has 70 teachers the amount we receive for PL is 175 rial... can you believe it?! We received 200 rials for maintenance... it seems like more important than developing teachers. I know that the total budget for PL in the MOE is very big but why it is so small when it comes to schools.... What can 175 rial change?sorry I might speak a lot but It is something that concerns me a lot... and what is more ... this little money have to be spent based on strict guidance of the MOE with no flexibility at all. I have observed weaknesses in my teachers in using active learning strategies and as a remedial plan the only thing I can do is to ask one of the good teachers to present some paper for her colleagues, but if I have the money then I can find a well-qualified trainer to conduct a workshop in the school for all teachers. Last year we conducted a workshop presented by a good trainer but it costs us 700 rials which was collected from the teachers and the other requirements were provided by the school administration. But most of the time schools do whatever available only. I think also that promotion should be linked to PL and teachers should present their PL profile when they want to compete for certain positions like senior teacher or school administration. I sometimes meet school heads who were very weak as teachers but who have passed the exams and become school heads ...the current used criteria is not fair at all. The same thing can be said about teachers ... how they can be fair to their students if they are not able to meet their requirements by developing themselves. There is also a need for coordination between the MOE and the ministry of higher Education on the kind of courses given to students and teachers which are often descried as repeated and add nothing to their knowledge. Things have changed around us by still curriculum and courses in the colleges remain the same. We should seek the latest updates in psychology, child education and technology and many other things.

R. How do you deal with teachers who lack the conviction and resist PL?

I. I think the key to change teachers' conviction is in motivation. In our school we have many forms of motivations for teachers. One example is that when a teachers comes back from a PL activity we provide

her with a welcoming letter which teachers appreciate a lot. We also ask those teachers who attend PL events to convey the impact to their colleagues in the school and this gives them a kind of responsibility when they attend the PL event. Conviction do not change in one day ... they need a lot of efforts but we are trying our best. ... Actually convictions rarely change.

R. What increases teachers' ability to acquire knowledge?

I. We have mentioned the motivation factor and the teaching and non-teaching load teachers have if it is reasonable do help. These two things are significance factors on how teachers develop themselves. If teachers have time in the school to meet and discuss things with their colleagues this will of course help them to develop but if they verily can find little time just to move from one classroom to another of course this will affect them. There is also the family circumstances and conditions and responsibilities ... some teachers just give up to these surrounding conditions and believe they cannot improve... it mostly go around self-efficacy and beliefs.

R. How do you see your role in teachers' PL?

I. The school head's role in teachers' PL is very crucial. This can be through the School Performance Evaluation System where I can find out what my teacher's needs. As a school administration we sit together with the senior teachers in the school towards the end of the school year to evaluate teachers' performance and find what the main areas that need to be developed and prioritized and we come up with the main areas that concern all subjects and those specific to each subject and based on this we prepare our PL plan for next year. One of the school administration roles is also to motivate the teachers and to facilitate their professional development by providing them with whatever can be available and I have mentioned some kinds of motivation we use in our school without waiting for motivation from the MOE.

R. You have mentioned some kinds of group learning that happen in the school. Are there any online forms of group learning?

I. We have WhatsApp groups in each subject and between teachers and parents as well. Mothers are no more those mothers who leave their kids in the school for teachers to teach... they communicate with the teachers and they want to know about what their kids are learning. We have a Twitter account as well for the school, which we use to spread the teaching techniques we use and as a means of motivation and communication with other teachers in other schools. There is also the Educational Forum of the ministry but I think teachers nowadays are more interested in things like Twitter and Facebook because we observe that the number of followers in Twitter is much more than in the traditional educational forums.

R. And what is needed in the school to make PL more effective?

I. There should be a specific room for PL in the school which should be connected to the internet and facilitated with different types of educational technology that can be used in PL... we actually worked hard to get such a room... Training can be done online if such room is provided.... Teachers can use the YouTube to watch well-known trainers for example. The provision of this room in schools, if accompanied with well internet connectivity, will provide the necessary environment for learning. In our school we allocated a room for PL but it isn't formally allocated ... Hopefully we won't need it in the future as a classroom if we have more students...and we bought an interactive board and planning to provide nice furniture. I think if this hall is found formally in the school this would attract teachers and have positive attitudes towards PL.

R. One last question, what do you know about the latest reforms related to PL in the MOE? And how did you know about these?

I. There is the Specialized Centre, it was introduced to me by the Educational Office, which is really a very clever idea because it gives participants intensive training and there is always continuous communication and follow-up from the trainers during the training or even online. Second teachers are trained on using different teaching techniques in the Centre and when they come back to their schools they have to shoot their lessons on videos and send these back to the trainers to get feedback... so there is training, follow-up and implementation... this is what makes training in this Centre different from traditional workshops. There are also the Educational Visitor Programme which allows teachers to know about education in other countries and fammilirize them with new teaching techniques and there is the Academic Programme in coordination with SQU which aims at developing teachers' subject knowledge. If these three PL forms can be integrated they would have great influence on teachers' practice if they are willing to change. But if you ask me how far have we improved in preparing the PL plan I would say we haven't because the plan comes ready from the ministry as something imposed on teachers and far away from what they need.

R. To what extent does the MOE clarify the aims and rationale of its changes to the schools?

I. The ministry ask us to write our observations and comments on the curriculum but it doesn't try to convince the schools of the need or rationale for the changes. Also we receive sometimes instructions, which are imposed, from the Educational Office or from some Subject departments in the ministry to use a particular teaching technique for example but they don't justify the reasons behind their decisions and the same thing happens in workshops where teachers are asked to use particular teaching techniques and if they don't ask why no one would explain to them the reason behind using these particular techniques...actually this is how things go in our honorable ministry.

R. Anything to add?

I. Thanks a lot for selecting this very important topic.

What surprised me recently is one of the minister's decisions to form a committee which should study and evaluate the ways teachers are prepared and trained and the strange thing is that all the members of this committee were from the ministry and it contained no one from schools. I think the ministry is still taking the same approach which considers schools a field of implementing ideas which come from the top.

Appendix 18

An inspectors' interview transcript sample before being reviewed

R. Would you like to introduce yourself first?

I. My name XXX I'm an Arabic Language inspector in XXX Educational Office and I have 19 years of experience and I think this is my 20th year. I have 8 years of experience in teaching and I'm a Ph.D. holder.

R. How do you understand teachers' PL?

I. PL include many things: teaching strategies, using educational technology, new vision to evaluation, and vision on how one can improve and develop himself but I think the most important thing in PL is conviction and how the teacher is able to change his convictions and way of thinking to be more positive. If the teacher can change his convictions to be more positive then these will drive him to positive attitude which will lead him to use new teaching techniques, technologies and whatever related to PL. PL in my opinion is a development in convictions and beliefs which means that if we can change the teacher's beliefs or reduce his negative beliefs then we can say that we have developed him professionally and then we can say that we created the desire in this teacher for self-development and to accept external PL. This is because PL differ now from how it was in the past. In the past the teacher used more external PL either offered by his institute, his colleagues or his inspector, but nowadays PL resources are available for everyone... communication devices are available but if the conviction and desire is not there the teacher will not develop professionally. Therefore, I believe that PL is development in the convictions, attitudes and desire to change and improve.

R. But how easy is it to change convictions and what mechanism do you use to do so?

I. Changing teachers' convictions is very difficult process. I can say the mechanisms we use in changing convictions are traditional ones because our current role does not allow us to have real creative mechanisms to change such convictions. The reason for this is that teachers are living in society where they are influenced by its culture and as an inspector I might visit the teacher once or twice a year which is not enough to change these convictions and beliefs. I think changing teachers' convictions and beliefs need the cooperation of all efforts from the inspector to the wider society.

R. And what do you think are the reasons of negative convictions?

I. I think the secret is in PL itself because it doesn't meet the needs of teachers. Many programmes and workshops we have do not reflect the real teachers' professional needs. We often hear from teachers after these programmes phrases like: I have taken this before, there is nothing new, what is new in this programme, this cannot be implemented, what does this has to do with me? so I think that the secret behind the negative convictions towards PL is in the PL activities themselves and the problem with these is that they are created without identifying teachers' needs and I can say that we don't have a real mechanism to identify these needs. You might laugh if I tell you about how professional needs are identified. These needs are identified by holding meetings between the inspectors and some senior teachers ... the total number of us and the senior teaches might not exceed seven. Then these seven people discuss and choose what PL activities should be there, but actually we have more than 800 teachers! How can these seven people decide what the 800 teachers need? What the seven have come

up with might suit their PL needs only but not the needs of all the teachers... this is my opinion. And therefore what started by mistake will end up with a mistake. We have no mechanism to identify professional needs and I always think about what mechanism can be used. This year I conducted a study to identify Arabic teachers' needs and I used a survey but even surveys might not provide us with the exact needs of teachers... it is a problem. The other problem with PL activities also is that many of these activities are done in a very traditional way. Many inspectors and senior teachers conduct workshops for teachers who might be more experienced than them. Another problem is that we are not open to other's experience, outside our Educational Office and abroad, in PL. I wish I have the chance to visit another country to see how they conduct workshops and how they identify teachers' needs and then compare it to what we have. Why should all the workshops we have to be inside the Sultanate, why don't we attend workshops in the UK for example? I want to know what is there. PL is not limited to lecturing ... where is the practical side? It is also missing... this is the problem.

R. Through your work which PL forms have you observed to be more effective in enhancing teachers' practice?

I. Most of PL we have now takes the forms of workshops but I think the most effective form of PL is 'practical lessons'. This means that I visit the teacher in his school after I identify his professional needs and put him in a real ideal situation by taking his role and by myself teaching the lesson instead of him in his classroom. This teacher will observe and look at this lesson as a model. Workshops still important but they are not that effective because teachers got used to them and some of them consider them a waste of time and some even refuse to attend suggested workshops and prefer to stay in their schools because as they say they are more comfortable and of course they don't want to be engaged in discussions or to develop themselves professionally. My opinion is that practical lessons and observing others' teaching and ... any PL activity that is linked to a practical skill, to the school, to the teacher, to the classroom or to students will be more effective than isolated workshops that take place away from the school.

R. How would you describe the impact of the current PL on teachers' practice?

I. This question has two sides. First there are no studies that measure such an impact. We don't have any study that has indicated that workshops have an impact in improving teachers' practice and so I cannot answer the question by yes or no because there is no proof. This in itself is a problem and an indication of the need for a study. Second, let's go to the first point ... the teacher will not develop unless he has the desire to do so regardless of how good the PL he receives. Teachers' desire is based on their attitude and their attitude is based on their convictions and convictions are linked to many factors in the society; how people look to the teacher and how the teacher looks at the teaching career: as an Arabic teacher for example how do I look to the Arabic language, do I appreciate this language, do I appreciate teaching this language, do I have the belief that I can change the curriculum of my subject and improve my lesson, do I believe that the teaching career is a mission I'm delivering. All these points are linked to various factors psychological, and ideological or religious which as an inspector I can do nothing to change. To change these beliefs we need the cooperation and coordination of many people and factors. But does PL affect teachers' practice, I cannot say no and neither can I say yes because of the lack of studies. But there is another question: how can I measure the impact? The ministry does evaluate the training impact but they do it in the wrong way in my opinion. Usually the training impact is measured using surveys at the end of workshops, but actually the impact cannot be measured directly after the PL activity. It should be measured in the school, in the classroom and after some time. The survey will reveal teachers' ideas about the PL activity or workshop or about the trainers only but not how

successful this PL activity was in developing teachers' practice and improving their skills. Teachers have two sides: technical (skills) and scientific (subject content). Our workshops aim at developing skills because we trust that when this teacher graduated from the university he was competent in his subject content, but the survey at the end of the workshop does not measure these skills!!! We can measure the training impact... but not by the current used method .not through a survey!!

R. How committed are teachers to their self-development?

I. I can say clearly and confidently that teachers' self-development is very weak and rare among teachers and the reason is the lack of desire.

R. But why there is a lack of desire?

I. There is no desire because there is no motivation from the ministry. As an inspector I do not have tools for accountability or reinforcement for those who do or don't seek self PL and the ministry lacks the tools to measure such self-development and at the end everyone is equal when it comes to promotion. Self-development is there but it is weak and there are teachers who develop themselves professionally and it is more among female teachers than male teachers. It is weak although our schools are equipped well with libraries and internet, but the issue in my opinion is with the availability of motivation which encourages those who are not doing well in their PL to do better and those who are active to continue with their hard work... but I think when everyone is equal whatever they do then there will be disappointment of course!!!

R. You have mentioned obstacles to the effectiveness of PL like the lack of motivation and the fact that the PL activities do not meet teachers' needs and because the PL plans are not based on studies that reveal the real needs or the effects of these activities. Any other obstacles?

I. PL plans are not based on teachers' professional needs. Also there is the issue of measuring the training impact... there is no real follow-up or measurement of the impact of training. Also the PL activities we have are not diversified and we are not exposed to foreign experience in PL... Usually the trainer and the trainees are Omani and rarely there are trainers from abroad. The number of the offered PL activities for each teacher is not enough and the problem is often with the content of what is offered although large sums of money are spent on training but the PL activities are not directed properly on what they should really focus on... I don't think the problem is in the timing of the PL activities.

R. How do you see your role in teachers' PL?

I. My basic role is to develop teachers and to train them and usually I use techniques, I cannot say creative, but I can say they are full of action and movement like arranging lesson exchange visits, or to conduct a workshop by myself in the school or to ask the senior teachers to conduct a workshop for his teachers or to do some kind of competitions in the school which make teachers active and be a kind of change for them. And sometimes I have other activities with those teachers who are more active in their PL like reading a specific book and discussing it or suggesting a particular issue to be discussed with them.

R. But how do you deal with teachers who do not develop themselves professionally?

I. Dealing with such teacher is very difficult and often I have had situations where I tried to deal with such teachers and improve them like asking them to join me in visiting another school but they refused by claiming that they will feel shy and that they don't want to be embarrassed. And even the visited school

say the same things that the teacher might be embarrassed and often ask if the teacher is weak... so there is this negative view. I might succeed with some teachers but in many cases I have to admit that I fail to change such teachers... changing beliefs is very difficult.

R. You mentioned how PL activities are decided which you described as traditional and how the needs are identified. What is your opinion on the evaluation form used to decide the current professional needs of teachers?

I. I think that this evaluation form is part of the problem. This form is same for three or four subjects area... the same form is used for these subjects. Now the question is how possible is it to use the same evaluation form to evaluate a lesson in Arabic and another in Social Studies? These are two different subjects and each one has its own specialty and therefore the evaluation form does not reflect really what is going on in the lesson... it is wrong... it doesn't measure what it should measure and therefore many inspectors leave some items in this forms as 'unevaluated'. So this form has many mistakes. Let me give you an example. In an Arabic language lesson we might have a lesson the focuses on grammar or on reading and these require two different skills. In a grammar lesson the teacher needs to use short examples, to link to the previous lesson or what students have learned previously, to explain the new grammar rule, to write the rule on the white board, and to give students enough time to practice the new rule....all these skills are not included in the evaluation form. In the reading lesson the teacher should start by silent reading and use general questions, and to follow this by another silent reading and more deep questions and then loud reading and comprehension questions, to ask about new vocabulary and to ask students to use the new vocabulary in new sentences. All these specific skills are not found in the current evaluation form which is used to identify the needs of the teachers and most of the time the feedback we offer to our teachers is far away from the items of this evaluation form. In my opinion we cannot use this form to identify the specific needs of teachers...it might identify some needs... but for sure not a clear picture of the specific professional needs.

R. What do you know about the latest reforms in the MOE related to teachers' PL? And to what extent does the ministry communicate its visions and rationale for these reforms to schools and teachers?

I. The latest reform as I know is the setting up of the Specialized Centre for training of teachers and the ministry communicated the idea of this Centre through committees from the Centre itself which visited all the Educational Offices and met samples of teachers and school heads and told them about the idea behind this Centre and its aims . This Centre also have an electronic site and information about it can be found also in the Educational Portal of the ministry. But a question needs to be asked here: are the programmes in the Centre differ from the programmes offered in the training centres in the educational offices? Why aren't these programmes integrated? I know that the programmes offered by the Specialized Centre are good ones because I'm attending one of these programmes. The programmes are translated from other English programmes but the execution is good and the trainers are competent and the programmes are very useful. But still we need to ask are these programmes based on identified teachers' needs? The people in the Specialized Centre didn't say so and the ministry didn't say anything. We don't know but I think the answer is no because these programmes are unified for all teachers. There is also the problem of measuring the training impact... it is not there although the Centre is a new idea.

R. What about changes in the curriculum. How these are handled and communicated?

I. It depend.... If the changes are not major then the ministry does not consult anyone. We often receive a correspondence from the ministry telling us that particular topics were omitted and others were added to the textbooks, but if the changes are major then I think the ministry usually forms a committee to decide on the changes and it consults schools and teachers but I believe after all changes are ready. Major changes in the curriculum are carried out by a committee made up of officials and experts from various departments and it might include very few good teachers (the total number usually does exceed ten people).

R. Anything to add?

I. The issue of PL is urgent issue in education and it is very important. PL is similar in my opinion to our personal needs... I don't know if I'm right! In the past we needed light so we invented the light, we needed to move faster so we invented the car... this means that life is based on our needs and these needs should suit our time and therefore we need to know exactly what our needs are to satisfy them. The Sultanates spends large sums of money on training people and in my opinion the key to be on the right track and achieve this goal is by identifying the real needs and to use the correct way to do so... it is the cornerstone. This also takes us to the role of higher education institutions in identifying the correct needs and building their courses based on the needs of our current changing time. We receive many new teachers who start their teaching career knowing nothing about the MOE or about the curriculum used in the schools and so we have to train them from the beginning to meet their new needs. I remember once when I was teaching one of the courses in Nizwa University I head from the students that we –teachers coming from schools- are teaching much better than the teachers of the university because we based our teaching on the needs we know that these students will meet when they start teaching in schools and we try to link them to the environment in the schools and what will be required from them when they start they teaching... but the teachers in the university teach based on theories only. Identifying teachers' professional needs is the keystone in my opinion.

Appendix 19

A reviewed teachers' interview transcript sample

Date of the interview: 11-10-2015

Teacher/ Hilal (a male Maths teacher, City School)

Time: 47:25

R. Would you like to introduce yourself briefly first?

I. My name is I'm a Math teacher in ... school. I started teaching in the year 2000 and I have 15 years of teaching experience and I have a master in Math curricula and teaching techniques. I started teaching grade 6 and now I am teaching grades 11 and 12.

R. What does teachers' PL mean to you?

I. It is an update in education that teachers need to be familiar with which can be either related to knowing new rules and the latest updates in the MOE, which can take the form of discussions, meetings or workshops in the school, Education Office or even the MOE. It is also related to knowing new teaching techniques, which cannot be simply conveyed to teachers through meetings or simple workshop ... What is needed is a well-qualified trainer or presenter who himself/herself does use these techniques in practice, not only in theory, otherwise this presenter will only be able to introduce the new techniques but not to help teachers adapt to it or use it in their own classrooms. My opinion is that anyone can take materials from the internet and present it to teachers, but only specialists who have experience can present the practical side of new things and help teachers to use/adapt them in practice. I also think that the most effective forms of PL is exchanging classrooms visits between teachers and the discussion that take place between subject teachers, like Maths teachers for example. However, some kinds of PL where one or two periods a week are allocated to deliver a workshop, these do not often serve the purpose and have no results in practice because the teachers will have many things in his mind, the thing which will not allow them to focus on the workshop. We can add to this that if the presenter himself is not qualified enough or if he has no real experience in what he is presenting, then, he can argue that he has presented something new, but he cannot claim that the teachers have learned anything from him. What can be presented in short workshops is something like the latest updates in the ministry but not often something related to the subject or teaching strategies.

R. You mentioned discussion between teachers, when do these occur and why?

I. These might take place at any time, especially when the teacher needs to know something or when he is not sure about something in his taught subject. Here, he would seek the advice of his subject colleagues or senior teacher.... This is why discussion is a more effective form of PL, because the teacher attends something that he needs instead of attending something that he does not really need. PL means 'to develop myself' and I think I'm the most familiar with my needs. Also when I seek the help of my colleagues, this can be more useful than meeting the inspector because the inspector discusses more general things, while with colleagues I discuss specific things that concern me in my daily life and that touches my real needs and which I benefit directly from in my teaching ... in my classroom.

R. What do you mean by 'benefit'?

I. I mean by 'benefit' is to gain something that I can take and use in my own classroom by adapting what I learn to my situation and develop it so that it fits my class. Therefore, as I have said, discussion is the most effective form of PL. If I lack the skill of class management, I can seek the advice of a teacher who is well-known for his class management and I can observe this classroom management in practice in real lesson not only in theory. PL is a practice not theory in my opinion. I benefit more from a new teaching strategy which is presented before me in practice or which is presented by someone who does use this strategy and who knows why it works or might not work, not everyone who presents something new can use it in practice... PL is a reality not a theory.

R. You actually slightly answered the next question which asks about the most effective forms of PL

I. Indeed, as I have said, thoughtful discussions and exchanging classroom visits are the most effective forms of PL in my opinion. Also, the discussions that are organized at the level of the educational office and that include teachers and senior teachers from different schools and inspectors of the subject who can add something of value. In addition, presenters who present studies they have conducted themselves ... those are the specialists who have practical experience and who introduce things they have experienced themselves and been through in curriculum or teaching strategies instead of presenting concepts and ideas that anyone can find in books. Another point is that the person who attends a PL activity should be willing to join it and not only nominated by others.

R. How then teachers are nominated to attend formal PL activities?

I. Most of the ... teachers are nominated by inspectors, which can be understood because the idea is to include most teachers in these training sessions instead of giving the chance for those who have the desire, those are very few. But still it is a good idea that teachers are consulted on which training sessions they want to attend, instead of attending the same PL activity more than one time or attending a session that they are not interested in. I also think that the more general training sessions should be open to whoever has the desire and should be out of the working hours. I, myself, attended a workshop in Sur [another educational office] on a Friday [the weekend] which was based on my own desire and not being forced to attend ... I had the idea that I can meet new teachers, inspectors and hear new ideas.

R. How flexible and easy is it to get released to attend a PL activity?

I. It is very hard and difficult to get released to study or attend a PL activity in another school or abroad. Many teachers do want to develop themselves professionally, but they are restricted by the outdated rules and the very limited allocations. What is more, although there is now a Specialized Training Centre, which started this year, but still teachers who attend training session in this Centre get one day release from work, which is not adequate due to the excessive load teachers have in their schools. Instead, I think it would be much better if teachers are released for a whole semester or a whole year. It is difficult to focus on two major things at the same time. I don't think there is any flexibility or fairness when it comes to PL. What happens when there is a chance for a PL activity, especially abroad, is that those who have influence get most of these because the names are nominated by people who sit behind their desks and the nomination is also not based on clear criteria for the selection ... I'm not saying it is done deliberately but I'm saying there are no clear criteria and not based on qualifications!. Another point is that when someone gets a chance to attend a PL activity, it is often required from him/ her to present what they have attended to their colleagues, but how can we be sure that this person has learned all the presented materials or most of it, especially if the presented materials were very vivid and presented by a very qualified trainer. Of

course the trainee won't be able to transfer all the training material back to his school. In such a situation, where teachers are being forced to convey what they learn exactly to the others, there might be a negative training impact because these teachers might convey wrong ideas based on their own understanding and mislead other teachers What happens is that training materials which should be delivered in one week is delivered in one day instead ...people are different when it comes to comprehension and often see things according to their needs and understanding.

R. What attracts you to attend or discourage you from attending a PL activity?

I. First, I'm attracted to new things which I'm not familiar with, something I like and can use in my work, and something that helps me to develop and improve professionally, like using technology in Maths or using a new teaching strategy ... something I need and have the desire to get. This of course cannot happen in some events which I'm forced to attend like attending a workshop on lesson preparation which I'm very familiar with and fed up with and don't need. On the other hand, if I'm teaching grade 11 and invited to attend a workshop on how to teach some topics for grade 12, and I have the desire to teach grade 12 next year, I will be motivated to attend this workshop to know about something that I will face in my work in the near future, and that will help me to be a better teacher. Also if I have a voice in deciding which session to attend, I will then be more convinced and benefit more and go to the session with clear mind instead of being forced to attend a session for two weeks, for example, while my mind is back in the school occupied by how I can finish the curriculum and the lessons that my students would miss. The positive thing this year is that the professional development week was at the beginning of the school year before students started their school, not like last year where I have many training sessions during the school day and at the middle and towards the end of the semester, which led me to confusion and created many difficulties in delivering the curriculum to my students. This led me to have a negative attitude towards these training sessions, although they were useful to me. Also this semester I had a three weeks leave to go to pilgrimage in Makka, but when I came back I found that I was nominated for a training workshop for one week, which I had to apologize for not attending, although I was very interested in that workshop. Thus, the timing of the workshop is very crucial because it might create me a confusion... especially if I attend a workshop and all my work in the school is kept for me to do when I come back. In my opinion the solution is to plan for the PL activities to take place at the beginning of the school year and at the exams times.

R. What about other forms of PL activities?

The most PL type I really benefited from is the self-directed PL; to search through the internet, to read books; this is the most important thing. If teachers want to improve their practice, they should search and look for what they need, which can either be related to their subject knowledge, teaching strategies or even new rules and regulations in their work. Of course before attending or even thinking about attending a PL activity, I should know my weaknesses ... by reading, asking and reflecting on my work. For example I felt that I need to motivate my students so that they like me and my taught subject and therefore I searched for books that might help me to do so and enhance my communication with students ... actually it was a very fruitful technique I didn't attend any formal PL event to help me improve my communication with my students, but I worked out myself to find solution to my problem and it worked.

R. How available are PL resources?

I. Of course there is now the internet which can provide you access to almost every knowledge, but still the desire of the teachers to know and to spend some time in searching for new things is crucial. Books also are available now in many bookshops around the town and there are now many book fairs that provide varieties of books, in addition to cooking and fashion books, especially in teaching strategies. I believe that nowadays people's preferences are more on books that are related to their professions. For teachers it is of particular importance because if we think about our students ... their ideas changed a lot and they are more familiar with new technology than when we were at their age. We do need, as teachers, to know how our students think, what they like, what are their preferences ... so that we can communicate better with them.

R. You mentioned that many PL activities do not actually meet the needs of teachers. Can you explain more?

I. This is a point of a particular importance for those who prepare these PL activities. If there is the possibility that teachers can choose what they attend it would be much better.

R. How are these needs identified?

I. Teachers' needs are identified by the inspectors and rarely teachers are asked if they need the workshop.

R. Do you think that the inspector can identify these needs?

I. I don't think so, except if it is something related to the subject knowledge or the rules and regulations of the ministry, but the other psychological needs and the needs related to teaching strategies cannot be identified by two or three visits to the teacher. I believe that senior teachers and school administration are more capable of identifying these needs, although there is still the issue of our social relations and culture which prevent us from critically evaluate our friends and colleagues. We often prefer to keep good relations at the cost of work efficiency.

R. To what extent has the current PL influenced your teaching?

I. I think it depends on the kind and length of the PL activity; if it lasts for one week for example it would have an effect, but if it was only for two hours the impact would be very limited. Of course the practical side in the one week PL would be more than in the two hours' workshop. Generally speaking, I think that the influence of the current PL events can reach up to 30% only and for me it can reach up to 50% sometimes when the workshop is related to the subject knowledge. I attended my workshops that I actually didn't need and I believe that I even felt asleep during these workshops. I regret that I wasted a whole day attending these useless workshops. These time-wasted workshops were not actually of any importance to me, like attending a workshop that was about the cleanliness competition between schools... something I didn't want or like.

R. Can you remember a PL activity in which you have benefited?

I. There was a workshop called 'TRAIZE' which was about teaching Maths and being a creative thinker that took place in Muscat. This workshop was important because it helped me to be creative in my taught subject and in finding new solutions to some of the problems I faced, and I used what I have learned from this workshop in developing my students' performance and in helping them to be creative especially in one of the competitions between schools where students have to come up with creative solutions to some problems in Math, science and Geographical concepts... it benefited us and was at the core of my job.

R. You have mentioned two types of learning group and individual learning? Can you comment on these and how available are they in your school?

I. I think teachers' PL is more a personal responsibility, to identify their needs because they have to develop themselves and improve their practice and knowledge and then they can share and benefit from the experience of others by exchanging their ideas and experience and see how others implement new ideas. On the other hand, the formal workshops provide opportunities to meet other people, know about their ideas and experience and discuss with them what might or might not work and why. I prefer to search myself for new things first and then I see what others are using and how successful they are and whether their ideas suit me. Thus, I see the combination of the two things, theoretical knowledge by reading and listening to others and practical knowledge by trying new things in practice and observing how others implement things in classroom.

R. How available is group work in your school?

I. We do use 'WhatsApp' to discuss Mathematical problems with other teachers and inspectors, and students sometimes. Also, in workshops where there are a variety of experience, teachers and inspectors, we often find it useful to discuss subject-related issues, but in the more general meetings, where there are different subjects teachers, the discussed issues are more general and not specifically related to our taught subject. But I don't use online discussion groups because I don't have time and most of these groups are in English, which is I am not competent in, and also these groups might discuss things different from those used in Oman.

R. How often do you change your teaching style and based on what?

I change my teaching style based on my experience and my students' weaknesses and ability. I also benefit from observing other teachers teaching and how they overcome problems, and from my own reading as well when I come across a new teaching strategy that might help me to introduce some Mathematical concepts to students for example. When I attend a workshop I might know about an new teaching strategy, but this does not necessarily fit my students' needs in my classroom, therefore I should decide myself whether I need this new strategy and what changes do I need to consider. I sometimes change my teaching style when I feel that my students do not understand during the lesson; I might use group work for example, or I might use another technique to introduce a new concept in another class because I feel that the one I used in the previous lesson was not very effective. However, we might be restricted because we don't have much time during the lesson ... only 45 minutes.

R. What makes PL ineffective? What are the obstacles?

I. I think most of the PL activities are imposed on teachers by the ministry and thus I would ask how able are teachers to prepare and deliver a workshop which can be of benefit to their colleagues! What happens is that teachers might prepare something that is below their colleagues' competence level or they might introduce a new teaching technique which they themselves have not experienced in and never used and cannot implement in practice. Such workshops, which usually last for one lesson, introduce new things for teachers, but they do not help them to use these in their own classrooms. On the other hand, if the presenter of the workshop was an expert who himself have used the suggested technique, this would be more useful and he would be able to help teachers to adapt the new techniques to suit their own situation.

R. What kind of support is needed in future PL?

I. I think the focus should be on students' evaluation and this should be 'real', and I think that the ministry officials should target implementing real student's assessment instead of trying to ensure that all students pass to the next level. Teachers need to be trained on how to evaluate students accurately. There is also the need to focus on how to help teachers to implement new teaching techniques instead of introducing these to them and leaving them lost. What should happen in training workshops is that these should reflect the situation of classrooms with students and a teacher so that the teachers can observe how the new teaching techniques are used in practice. What is needed is teaching and learning not only lecturing and theories. In our school we have teachers with very long experience who find it very difficult to adapt new technology in their classrooms, but they should not be forced to use new technology if they are not competent with it. If they have to use such technology, they should first be trained how to use the technology themselves and then how to use it in their classrooms. Also, the load of the other non-teaching things should be reduced ... no need for useless competitions like the cleanliness competition ... and I think that science subjects' teachers should be given more PL opportunities compared to Arts subjects' teachers. There should be also focus on new teachers at their early teaching years. Also, when new changes take place in the ministry, like introducing new teaching technique, there should be adequate training for teachers so that they are familiar with the new introduced technique and are not left confused. Teachers feel lost if they don't understand what they should implement, how or why and they will end resisting implementing the new technique. Moreover, when teachers are nominated to attend a workshop, the conditions should be provided for them to benefit from these workshops. What happens is that teachers go to these workshops with loads of teaching duties, non-teaching responsibilities and many other tasks that occupy their minds ... teachers are not satisfied!!! These workshops should be well planned so that they do not conflict with teachers' basic duties and do not appear like imposed tasks on teachers.

R. What do you know about the latest developments in the MOE?

I don't know much, but I know that in recent years, students' performance has dropped and the ministry solved this by using very ineffective solutions, like creating remedial plans, which was more of paying attention to the outcome instead of what has caused this outcome. There was also that idea of considering senior teachers as inspectors in their schools, but are they capable to do so?!!! and do they have the skills?!!! And how feasible is this idea?!! taking into consideration our culture which prefer keeping good relations over accuracy especially if it is with someone you meet every day. There is also the new launched Specialized Centre, which is still at its beginning and things do not appear clear yet. It seems very floating especially on how teachers are evaluated in this Centre or the kind of activities it provides. But still I have to say this Center might be very promising, especially with the online communication with the participants and the continuous follow up it provides after the training. We have to wait and see what will happen especially with the current drop in oil prices, may be it will be closed down who knows!!.

R. What about the aims of these big projects, to what extent are they conveyed to schools?

I. Frankly speaking I am not sure what the overall goal of the MOE is, to aim at graduates who are well educated and who can seek successful life in Oman or abroad and face the present challenges?!! This is what is often said but I believe we are not going in the right direction, especially with the current students' assessment system. I don't believe that any kind of PL activity will change anything if the rules remain the same. Eventually we find that a student who has spent 12 years of learning, moving from one educational grade to another, will graduate with almost nothing that enables him to lead a successful life and will end up in joining the Army or working in a factory. Therefore, we should ask why has he spent so many years and ended up in having a job that did not require much skills or knowledge?!!! For me, I think this is a result

of the automatic pass from one school level/grade to the other. Because of this, my teaching ability is deteriorating, because I have to deal with students who lack the lowest levels of knowledge or desire. If this is the situation, then I don't need any PL because what I have is more than enough to enable me teach the kind of students I have, who cannot discuss and are not able to challenge me, because of their low performance, to improve my teaching competence. This is what I think, but it can be arguable and open to debate.

Appendix 20

A reviewed head teachers' interview transcript sample

Date of the interview: 13-11-2015

Head teacher: Reem (Rural School head teacher)

Time: 33:19

R. Would you like to introduce yourself first?

I. My name is I have a BA in education in science/Maths from IBri College, which I obtained in 2004. I started my teaching career in a school in Rustaq in Batinah South Educational Office and then I moved to a school in AlDhahira Educational Office and then to another school for two years. After that I was chosen as an acting school assistant and then as a school assistant. Now I'm a school headmistress in this school. I received many recognitions and certificates like the 'distinguished teacher' in 2006 and I was honored as a 'distinguished school head assistant' in 2009. I was honored also by the parents and was chosen last year by the Alroyah Newspaper as 'the best educational character'. I also received a prize for the best presented paper during a conference I participated in in Nizwa University, which was about the values of patriotism.

R. How do you understand teacher' PL?

I. It is a process that includes many aspects, from developing the teacher's personal skills to improving his/her academic skills that are related to teaching, and his/her interpersonal skills like dealing with his/her colleagues, superiors and students. It is an improvement in the experience and skills of teachers so that their performance is improved and their teaching practice is enhanced, and it aims at improving teaching proficiency. It makes teaching techniques diversified and useful for students.

R. Is it the responsibility of the teacher or the ministry?

I. It is a shared responsibility. If any area is not covered by the formal PL then teachers should seek to develop themselves personally in that area. However, if teachers do not have positive attitudes towards the formal PL provided for them, it won't change anything in their practice. PL is something that should come from the teachers, themselves basically, and formal PL should be seen as supplementary to teachers' efforts. Nevertheless, what is happening now is just the opposite ... most of the PL comes from the ministry or the school and teachers invest little in their PL. I think teachers should be responsible for 80% of their PL, otherwise they won't be able to meet the requirements of the current age and won't be in line with the advancements around the world. If teachers depend just on formal PL activities provided for them, these are often repeated and most of the time do not provide much to the teachers.

R. Why?

I. Because the PL plans are prepared by people ... based on their perceptions ... who are far behind in their knowledge compared to newly graduated teachers and therefore their knowledge and the way they create these plans does not meet the real needs of these teachers. I often hear from teachers after they attend a PL event that they have gained nothing because what was presented was a repetition of what they already knew and what they learned in the university before. There is a gap between what teachers have learned recently and between what is being presented in PL to develop them. There is a big gap which I clearly can

see. Most teachers say to me they have benefited nothing when they attend a PL event. I make sure to ask them what they have gained from any workshop and I always hear the same answer 'nothing'. I was one of the school heads who criticized and opposed these PL plans, but unfortunately we still suffer from the same problem.

R. Are teachers consulted when PL plans are made?

I. The ministry takes a random sample of teachers, as I know, or based on inspectors' nominations to be involved in creating PL plans and programmes. But I have a teacher who was once selected to be among those teachers who were invited to participate in designing the PL plan. She was surprised to discover that the plan was already made and nothing changed from the previous plan. If the invitation of those teachers is just to say that the ministry has consulted teachers, then there is no need for it at all!!!.

R. Which PL forms are more effective in enhancing teachers practice in your opinion?

I. In the school, what I have observed to be very effective, and what we use a lot in our school, is micro-teaching. In these micro teaching lessons, a good teacher teaches a lesson and his colleagues who might lack something or have a particular weakness attend, like students, but there are actually no students. The teacher teaches like if there are students in the class instead of teachers. These micro teaching lessons are remedial action plans I prepare for teachers who have certain weaknesses and thanks God I have noticed improvement in their teaching strategies and subject knowledge. We also have discussions group sessions, which are run by competent teachers. I think any group work and sharing ideas between teachers will pay off in improving teachers' practice. Most of the PL activities provided by the ministry are events of attending, lecturing and listening, but recently some presenters use questioning and interacting activities to make these events less boring. There was a one week workshop, I recently attended, which required us, when we go home every day, to implement what we have learned ... this is the kind of activities that I believe in its ability to make a difference ... that includes implementing what is being learned in workplace or the classroom.

R. To what extent has the current formal PL influenced teachers' practice?

I. Teachers convictions is the most difficult thing to change and sometime I think that teachers are the ones who make obstacles on their way of improving their professional development. But I can say confidently that nearly 50% of the PL activities that come from the ministry have no effect at all. Recently, some newly introduced programmes, like those offered by the Specialized Centre, the Educational Visitor Programme and the Academic Programme in coordination with SQU, have had real positive effects on teachers' practice and convictions. This might be because these programmes pay more attention to the practical side of learning and provide teachers with many activities. They also pay attention to what teachers really need and teach them something, ask them to implement what they have learn in their own classrooms. Teachers in these programmes see in practice how experts teach and then they try the technique themselves before using it with their students ... this what makes much difference and change.

R. But how teachers' professional needs are identified in PL activities?

I. We receive a form with a checklist of teachers' professional needs, that should be filled by the senior teachers. Then this form goes to the inspectors to identify the needs, but I think school heads and their assistants should be involved since they are close to the teachers and know better about their performance. We have our own evaluation forms, but they differ a bit from teachers' and inspectors' forms ... for example senior teachers' form includes evaluation items related to the subject content but we don't have these in

our evaluation form and sometimes we have to evaluate many aspects under one item only, like classroom control and the use of appropriate language.

R. How suitable are the evaluation checklist items of this form?

I. They are not suitable because they deny school heads from evaluating important areas in teachers' performance and they give senior teachers more authority in evaluating specific areas that they might not be well aware of especially if they are newly selected. I think the old form for evaluation, which was the same for school heads and senior teachers, was more suitable because it enabled us to discuss and justify our evaluation decisions and have common criteria. For example, the evaluation form we are using currently for English teachers has only five items, which make it difficult to evaluate the teacher fairly enough because these points are too general and important points like the soundness of the language and the personality of the teacher are missing. Another thing is also that we have to evaluate all the given points in every lesson, which is not practical because some points cannot be achieved in every particular lesson ... like if the lesson doesn't require the use of continuous assessment, but in the checklist there is an item to evaluate the use of continuous assessment which we have to fill!!!. These things need to be revised.

R. How accountable are teachers in your school to their PL?

I. Self-directed PL is something that we greatly encourage in our school and I can say it clearly that if the school administration adopted this encouragement as a basic mission for them teachers would improve and PL would be developed. What we do in our school is that we make sure that active and hardworking teachers are mixed up ... intelligently ... with lazy teachers and spend time together in the school and even outside while coming or leaving the school ... this has led the good teachers to have influence on the lazy ones. Of course, we have the agreement of the good teacher but we make sure that the other teacher is not aware of what is happening. I can say that nearly 60 to 65% teachers in this school try their best to be better teachers... but there are teachers who do not. What helps self-development in this school is our resources centre, which is full of many books and we make sure to update it with the latest books' titles whenever there is a book fair nearby ... we do what we can. We also in the school facilitate and help teachers to attend PL opportunities even if it is during school working hours, but this happens without taking the permission of the Educational Office ... in coordination between the school and the teacher only... I'm the queen in my school... If I wait to get permission from the Education Office then the PL event will be finished before I can get this permission. Getting such permission is one of the obstacles to teachers' PL.

R. But what makes a teacher works hard to develop herself and another doesn't?

I. This depends on the personality of the teacher and the environment she has grown up in or her ambition, if the teacher doesn't have ambition to develop then she would remain the same teacher with the same techniques and experience.

R. Are hardworking teachers more motivated by the Educational Office?

I. No, there is no difference when it comes to motivation or promotion between teachers who work hard and those who don't ... and this is disappointing.

R. Any other obstacle?

Yes, there is the lack of flexibility from the Education Office, lack of motivation ... the only difference between teachers seems clear only in the performance evaluation at the end of the year, but this still is not that important when it comes to promotion and it is also influenced by personal relations. I have a teacher in my school who was transferred from another school and there she got 90% in her performance evaluation report, but I think she only deserved 68 % no more ... what criteria was the evaluation based on!!! ...these evaluation reports are based on inspectors' and head teachers' own evaluation ... there are no guidelines!!!. Another obstacle to PL effectiveness is the time in which PL activities happen, which most of the time contradicts with teachers teaching duties. The excessive teaching and non-teaching load influence negatively teachers' effort in their PL. Another obstacle is related to not engaging the educational field in selecting and preparing PL activities. We apply the School Performance Development System in our school which we use to identify the priorities for development, to evaluate the performance of teachers, school administration and parents and to decide the necessary PL activities I don't know why this system isn't used by the ministry when preparing PL activities!!!. Why doesn't the ministry finds out the priorities for development through this system and through schools heads' and senior teachers' evaluations!!! It is like if it only concerns schools and we are made accountable for it but not the ministry. What happens is that when PL activities come from the ministry they are very different from what we recommended. In my school we found out ... through this system... that some teachers are not giving feedback to their students and so we offered them a workshop on this area, which had positive impact on those teachers. If we knew what is wrong then only we would find the best solution for it, but most formal PL activities do not correspond to the real weaknesses that teachers' have and are not up to the expectations ... disappointing!!!.

R. What is needed in the future in your opinion?

I. No PL activity would be effective if it lacks financial support. Currently the sums we receive are very small. In my school, which has 70 teachers, the amount we receive for PL is 175 rial ... can you believe it?! We received 200 rials for maintenance... it seems like as if it is more important than developing teachers. I know that the total budget for PL in the MOE is very big, but why it is so small when it comes to schools?!!! What can 175 rial change?! Sorry I might speak a lot but it is something that concerns me a lot. What is more ... this little money have to be spent based on strict guidance of the MOE with no flexibility at all. I have observed weaknesses in my teachers in using active learning strategies and as a remedial plan the only thing I could do was to ask one of the good teachers to present some paper for her colleagues, but if I have the money then I can find a well-qualified trainer to conduct a workshop in the school for all teachers. Last year we conducted a workshop, which was presented by a good trainer but it costed us 700 rials, which was collected from the teachers while the other requirements were provided by the school administration. However, most of the time schools do whatever available only. I think also that promotion should be linked to PL and teachers should present their PL profile when they want to compete for certain positions, like senior teacher or an administrative job. I sometimes meet school heads who were very incompetent as teachers, but who have passed the nominations exams and become school heads ... the current used criteria is not fair at all. The same thing can be said about teachers ... how they can be fair to their students if they are not able to meet their requirements by developing themselves?!!! There is also a need for coordination between the MOE and the ministry of higher Education on the kind of courses given to students and teachers, which are often descrided as repeated and add nothing to their knowledge. Things have changed around us but still the curriculum and courses in the colleges remain the same. We should seek the latest updates in psychology, child education and technology and many other things.

R. How do you deal with teachers who lack positive attitudes and resist PL?

I. I think the key to change teachers' convictions is in motivation. In our school we have many forms of motivations for teachers. One example is that when a teacher comes back from a PL activity we provide her with a welcoming letter, which teachers appreciate a lot. We also ask those teachers who attend PL events to convey the impact to their colleagues in the school and this gives them a kind of responsibility when they attend the PL event. Attitudes and convictions do not change in one day ... they need a lot of efforts but we are trying our best. .. actually convictions rarely change.

R. What increases teachers' ability to acquire knowledge?

I. We have mentioned the motivation factor, and the teaching and non-teaching load teachers have, if reasonable, might do help. These two things are significant factors on how teachers develop themselves. If teachers have time in the school to meet and discuss things with their colleagues, this will of course help them to develop, but if they verily can find little time just to move from one classroom to another of course this will affect them negatively. There is also the family circumstances, conditions and responsibilities ... some teachers just give up to these surrounding conditions and believe they cannot improve... it mostly go around self-efficacy and beliefs.

R. How do you see your role in teachers' PL?

I. The school head's role in teachers' PL is very crucial. This can be through the School Performance Evaluation System, where I can find out what my teachers need. As a school administration, we sit together with the senior teachers in the school towards the end of the school year to evaluate teachers' performance and find what the main areas that need to be developed and prioritized. We then come up with the main areas that concern all subjects and those specific to each subject and based on this we prepare our PL plan for next year. One of the school administration roles is also to motivate the teachers and to facilitate their professional development by providing them with whatever can be available and I have mentioned some kinds of motivation techniques we use in our school, not just waiting for motivation from the MOE.

R. You have mentioned some kinds of group learning that happen in the school. Are there any online forms of group learning?

I. We have WhatsApp groups in each subject area department and between teachers and parents as well. Mothers are no more those mothers who leave their kids in the school for teachers to teach... they communicate with the teachers and they want to know about what their kids are learning. We have a Twitter account as well for the school, which we use to spread the teaching techniques we use and as a means of motivation and communication with other teachers in other schools. There is also the Educational Forum of the ministry, but I think teachers nowadays are more interested in things like Twitter and Facebook because we observe that the number of followers in Twitter is much more than in the traditional educational forums.

R. And what is needed in the school to make PL more effective?

I. There should be a specific room for PL in the school which should be connected to the internet and facilitated with different types of educational technology that can be used in PL ... we actually worked hard to get such a room ... Training can be done online if such room is provided Teachers can use YouTube to watch well-known trainers for example. Providing this room in schools, if accompanied with well internet

connectivity, will provide the necessary environment for learning. In our school we have allocated a room for PL, but it isn't formally allocated, hopefully we won't need it in the future as a classroom if we have more students, and we bought an interactive board and we are planning to provide it with nice furniture. I think if this room is found formally in the school this would attract teachers and have positive attitudes towards PL.

R. One last question, what do you know about the latest reforms related to PL in the MOE? And how did you know about these?

I. There is the Specialized Centre, it was introduced to me by the Educational Office, which is really a very clever idea because it gives participants intensive training and there is always continuous communication and follow-up from the trainers during the training or even online. Teachers are trained on using different teaching techniques in the Centre and when they come back to their schools they have to shoot their lessons on videos and send these back to the trainers to get feedback ... so there is training, follow-up and implementation ... this is what makes training in this Centre different from traditional workshops. There is also the Educational Visitor Programme, which allows teachers to know about education in other countries and familiarize them with new teaching techniques. There is as well the Academic Programme in coordination with SQU which aims at developing teachers' subject knowledge. If these three PL forms can be integrated, they would have great influence on teachers' practice, if they are willing to change. But if you ask me how far we have improved in preparing the PL plan, I would say we haven't because the plan comes ready from the ministry as something imposed on teachers and far away from what they need.

R. To what extent does the MOE clarify the aims and rationale of its changes to the schools?

I. The ministry asks us to write our observations and comments on the curriculum but it doesn't try to convince the schools of the need or rationale for the changes. Also we receive sometimes instructions, which are imposed, from the Educational Office or from some Subject departments in the ministry to use a particular teaching technique for example, but they don't justify the reasons behind their decisions. The same thing happens in workshops where teachers are asked to use particular teaching techniques, but if they don't ask why no one would explain to them the reason behind using these particular techniques ... actually this is how things go in our honorable ministry.

R. Anything to add?

I. Thanks a lot for selecting this very important topic.

What surprised me recently is one of the minister's decisions to form a committee which should study and evaluate the ways by which teachers are prepared and trained, and the strange thing is that all the members of this committee were from the ministry and it contained no one from schools. I think the ministry is still taking the same approach, which considers schools a field for implementing new ideas that come from the top.

Appendix 21

A reviewed inspectors' interview transcript sample

Date of the interview: 19-11-15

Inspector: Fahad (an Arabic language inspector)

Time: 30:55

R. Would you like to introduce yourself first?

I. My name is ... I'm an Arabic Language inspector in ... Educational Office and I have 19 years of experience, I think this is my 20th year. I have 8 years of experience in teaching and I'm a Ph.D. holder.

R. How do you understand teachers' PL?

I. PL includes many things: teaching strategies, using educational technology, new vision to evaluation, and vision on how one can improve and develop himself, but I think the most important thing in PL is convictions and how the teacher is able to change his convictions and way of thinking to be more positive. If the teacher can change his convictions to be more positive then these will drive him to positive attitudes that would lead him to use new teaching techniques, technologies and whatever related to PL. PL in my opinion is a development in convictions and beliefs, which means that if we can change the teacher's beliefs or reduce his negative attitudes then we can say that we have developed him professionally and then we can say that we have created the desire in this teacher for self-development and drive him/her to accept external PL. This is because PL differs now from how it used to be in the past. In the past the teacher used more external PL, either offered by his institute, his colleagues or his inspector, but nowadays PL resources are available for everyone ... communication devices are available but if convictions and desire are missing the teacher will not develop professionally. Therefore, I believe that PL is a development in convictions, attitudes and desire to change and improve.

R. But how easy is it to change convictions and what mechanism do you use to do so?

I. Changing teachers' convictions is a very difficult process. I can say the mechanisms we use in changing convictions are traditional ones because our current role does not allow us to have real creative mechanisms to change such convictions. The reason for this is that teachers are living in a society where they are influenced by its culture and, as an inspector, I might visit the teacher once or twice a year, which is not enough to change these convictions and beliefs. I think changing teachers' convictions and beliefs need the cooperation of all efforts from the inspector to the wider society.

R. And what do you think are the reasons behind negative convictions?

I. I think the secret is in the PL itself, because it doesn't meet the needs of teachers. Many programmes and workshops we have do not reflect the real teachers' professional needs. We often hear from teachers after these programmes phrases like: I have taken this before, there is nothing new, what is new in this programme, this cannot be implemented, what does this has to do with me? So I think that the secret behind the negative convictions towards PL is in the PL activities themselves. The problem with these is that they are created without identifying teachers' needs and I can say that we don't have a real mechanism to identify these needs. You might laugh if I tell you about how professional needs are identified. These

needs are identified by holding meetings between the inspectors and some senior teachers ... the total number of us and the senior teachers might not exceed seven. Then these seven people discuss and choose what PL activities should be there, but actually we have more than 800 teachers! How can these seven people decide what the 800 teachers need? What the seven have come up with might suit their PL needs only but not the needs of all the teachers... this is my opinion. And therefore, what started by mistake will end up with a mistake. We have no mechanism to identify professional needs and I always think about what mechanism can be used. This year I conducted a study to identify Arabic teachers' needs and I used a survey, but even surveys might not provide us with the exact needs of teachers... it is a problem. The other problem with PL activities also is that many of these activities are done in a very traditional way. Many inspectors and senior teachers conduct workshops for teachers who might be more experienced than them. Another problem is that we are not open to other's experience, outside our Educational Office and abroad, in PL. I wish I have the chance to visit another country to see how they conduct workshops and how they identify teachers' needs, and then compare it to what we have here. Why should all the workshops be inside the Sultanate, why don't we attend workshops in the UK for example? I want to know what is there. PL is not limited to lecturing ... where is the practical side?!!! It is also missing... this is the problem.

R. Through your work which PL forms have you observed to be more effective in enhancing teachers' practice?

I. Most of the PL we have now takes the form of workshops but I think the most effective form of PL is 'practical lessons'. This means that I visit the teacher in his school after I identify his professional needs and put him in a real ideal situation by taking his role and by myself teaching the lesson instead of him in his classroom. This teacher will observe and look at this lesson as a model. Workshops are still important, but they are not that effective because teachers got used to them and some of them consider them a waste of time, while others even refuse to attend suggested workshops and prefer to stay in their schools. This is because, as they say, they are more comfortable, but of course they don't want to be engaged in discussions or to develop themselves professionally. My opinion is that practical lessons and observing others' teaching and ... any PL activity that is linked to a practical skill, to the school, to the teacher, to the classroom or to students will be more effective than isolated workshops that take place away from the school.

R. How would you describe the impact of the current PL on teachers' practice?

I. This question has two sides. First there are no studies that measure such an impact. We don't have any study that has indicated that workshops have an impact in improving teachers' practice and so I cannot answer the question by 'yes' or 'no' because there is no proof. This in itself is a problem and an indication of the need for a study. Second, let's go to the first point ... the teacher would not develop unless he has the desire to do so regardless of how good the PL he receives. Teachers' desire is based on their attitude and their attitude is based on their convictions and convictions are linked to many factors in the society, how people look to the teacher and how the teacher looks at the teaching career. As an Arabic teacher, for example, how do I look to the Arabic language, do I appreciate this language, do I appreciate teaching this language, do I have the belief that I can change the curriculum of my subject area and improve my lesson, do I believe that the teaching career is part of a moral mission I'm delivering. All these points are linked to various psychological, and ideological or religious factors that, as an inspector, I can do nothing to change. To change these beliefs we need the cooperation and coordination of many people and factors. But does PL affect teachers' practice, I cannot say 'no' and neither can I say 'yes' because of the lack of studies. But there is another question: how can I measure the impact? The ministry does evaluate the training impact

but they do it in the wrong way, in my opinion. Usually the training impact is measured using surveys at the end of workshops, but actually the impact cannot be measured directly after the PL activity. It should be measured in the school, in the classroom and after some time. The survey will reveal teachers' ideas about the PL activity or workshop or about the trainers only but it will not show how successful this PL activity is in developing teachers' practice and improving their skills. Teachers have two sides: technical (skills) and scientific (subject content). Our workshops aim at developing the skills because we trust that when this teacher graduated from the university he was competent in his subject content, but the survey at the end of the workshop does not measure these skills!!! We can measure the training impact... but not by the current used method, surely not by a survey!!

R. How committed are teachers to their self-development?

I. I can say clearly and confidently that teachers' self-development is very low and rare among teachers and the reason is the lack of desire.

R. But why there is a lack of desire?

I. There is no desire because there is no motivation from the ministry. As an inspector, I do not have any tool to reinforce or hold those who do or don't seek self-directed PL accountable. The ministry lacks any mechanism to measure such self-development, and at the end everyone is equal when it comes to promotion. Self-development is there, but it is weak. There are teachers who develop themselves professionally, it is more among female teachers than male teachers. It is weak although our schools are equipped well with libraries and internet, but the issue in my opinion, is in the availability of motivation, which would encourage those who are not doing well in their PL to do better and those who are active to continue with their hard work... but I think that when everyone is equal, whatever they do, then there would be disappointment of course!!!

R. You have mentioned obstacles to the effectiveness of PL like the lack of motivation and the fact that the PL activities do not meet teachers' needs and because the PL plans are not based on studies that reveal the real needs or the effects of these activities. Any other obstacles?

I. PL plans are not based on teachers' professional needs. Also there is the issue of measuring the training impact... there is no real follow-up or measurement of the impact of training. Moreover, the PL activities we have are not diversified and we are not exposed to foreign experience in PL ... Usually the trainer and the trainees are Omani and rarely there are trainers from abroad. The number of the offered PL activities for each teacher is not enough and the problem is often with the content of what is offered. Although large sums of money are spent on training, the PL activities are not directed properly on what they should really focus on ... I don't think the problem is in the timing of the PL activities.

R. How do you see your role in teachers' PL?

I. My basic role is to develop teachers and to train them. Usually I use techniques, I cannot say creative, but I can say they are full of action and movement, like arranging lesson exchange visits, or conducting a workshop by myself in the school or asking senior teachers to conduct a workshop for their teachers or by doing some kind of competitions in the school, that make teachers active and look as a kind of change for them. Sometimes I have other activities with those teachers who are more active in their PL, like reading a specific book and discussing it or suggesting a particular issue to be discussed with them.

R. But how do you deal with teachers who do not develop themselves professionally?

I. Dealing with such teachers is very difficult and I often have had situations where I tried to deal with such teachers and improve them, by asking them to join me in visiting another school, but they refused by claiming that they would feel shy and that they don't want to be embarrassed. Even the visited school would say the same things, that the teacher might be embarrassed and often ask if the teacher is incompetent ... so there is this negative view. I might succeed with some teachers but in many cases I have to admit that I fail to change such teachers ... changing teachers' beliefs is very difficult.

R. You mentioned how PL activities are decided which you described as traditional and how the needs are identified. What is your opinion on the evaluation form used to decide the current professional needs of teachers?

I. I think that this evaluation form is part of the problem. This form is the same for three or four subjects area ... the same form is used for these subjects. Now the question is, how possible is it to use the same evaluation form to evaluate a lesson in Arabic and another in Social Studies? These are two different subjects and each one has its own specialty. Therefore the evaluation form does not reflect really what is going on in the lesson... it is wrong... it doesn't measure what it should measure and hence many inspectors leave some items in this form as 'unevaluated'. So this form has many mistakes. Let me give you an example. In an Arabic language lesson we might have a lesson the focuses on grammar or on reading, and these require two different skills. In a grammar lesson, the teacher needs to use short examples, to link today's lesson to the previous lesson or what students have learned previously, to explain the new grammar rule, to write the rule on the white board, and to give students enough time to practice the new rule ... all these skills are not included in the evaluation form. In the reading lesson, the teacher should start by silent reading and use general questions. This should be followed by another silent reading and more deep questions. Then loud reading and comprehension questions can be used, to ask about new vocabulary and to ask students to use the new vocabulary in new sentences. All these specific skills are not found in the current evaluation form, which is used to identify the needs of the teachers. In fact, most of the time the feedback we offer to our teachers is far away from the items of this evaluation form. In my opinion we cannot use this form to identify the specific needs of teachers ... it might identify some needs ... but surely it does not provide a clear picture of the specific professional needs of teachers.

R. What do you know about the latest reforms in the MOE related to teachers' PL? And to what extent does the ministry communicate its visions and rationale for these reforms to schools and teachers?

I. The latest reform, as I know, is the setting up of the Specialized Centre for training of teachers and the ministry communicated the idea of this Centre through committees from the Centre itself, which visited all the Educational Offices and met samples of teachers and school heads to tell them about the idea behind this Centre and its aims. This Centre also has an electronic site and information about it can be found also in the Educational Portal of the ministry. But a question needs to be asked here: do the programmes in the Centre differ from the programmes offered in the training centres in the educational offices? Why aren't these programmes integrated? I know that the programmes offered by the Specialized Centre are good ones, because I'm attending one of these programmes. The programmes are translated from other English programmes but the execution is good and the trainers are competent, the programmes are also very useful. But still, we need to ask if these programmes are based on identified teachers' needs? The people in the Specialized Centre have not said so and the ministry has said nothing. We don't know, but I think the answer is 'no' because these programmes are unified for all teachers. There is also the problem of measuring the training impact ... it is not there although the Centre is a new initiative.

R. What about changes in the curriculum. How these are handled and communicated?

I. It depends, if the changes are not major, then the ministry does not consult anyone. We often receive a correspondence from the ministry telling us that particular topics were omitted and others were added to the textbooks. But, if the changes are major, then, I think the ministry usually forms a committee to decide on the changes and it consults schools and teachers, however, I believe this is done after all changes are ready and been decided. Major changes in the curriculum are carried out by a committee made up of officials and experts from various departments, it might include very few good teachers (the total number usually does not exceed ten people).

R. Anything to add?

I. The issue of PL is an urgent issue in education and it is very important. PL is similar, in my opinion, to our personal needs ... I don't know if I'm right! In the past we needed light, so we invented the lamp and we needed to move faster so we invented the car. This means that life is based on our needs and these needs should suit our time and therefore we need to know exactly what our needs are to satisfy them. The Sultanate spends large sums of money on training people and, in my opinion, the key to be on the right track and achieve this goal is by identifying the real needs by using the correct way to do so, it is the cornerstone. This also takes us to the role of higher education institutions in identifying the correct needs and designing their courses based on the needs of our current changing time. We receive many new teachers who start their teaching career knowing nothing about the MOE or about the curriculum used in the schools. So we have to train them from the scratch, to meet their new needs. I remember once while I was teaching one of the courses in Nizwa University, I heard from the students that we –teachers coming from schools- are teaching much better than the lecturers of the university. This was because our teaching was based on the needs we knew that these students would meet when they start teaching in schools and we tried to familiarize them with the environment in the schools and what will be required from them when they start teaching. In contrast, university lecturers teach based on the theories they know only. Identifying teachers' professional needs is the keystone for improving their professional learning in my opinion.

Appendix 22
The coding process of the qualitative data

Examples of quotes used	first round codes	second round codes	Final codes/ Themes
<ul style="list-style-type: none"> • <i>A collection of many things but the most important is increasing subject knowledge and knowledge about teaching techniques.</i> • <i>...an improvement in the experience and skills of teachers so that their performance is improved and their teaching practice is enhanced</i> • <i>PL in my opinion is a development in convictions and beliefs</i> • <i>PL in our Educational Office takes two forms: the individual part which usually takes place in the school, where teachers exchange experience and discuss issues related to teaching their subjects, and there is the part that is done by the inspector who visits the school and is supposed to conduct PL activities based on the professional needs of his teachers.</i> • <i>.....knowing new teaching techniques ... cannot be simply conveyed to teachers through meetings or simple workshop...</i> • <i>It [PL] makes teaching techniques diversified and useful for students</i> • <i>If we think about our students ... their ideas changed a lot and they are more familiar with new technology than when we were at their age. We do need, as teachers, to know how our students think, what they like, what are their preferences ... so that we can</i> 	<ul style="list-style-type: none"> • enhancing their teaching practice • improving their students' performance • input focus • output focus • know-how • changes in thinking • never-ending • one-off sessions • teachers' beliefs • Advances in knowledge and technology • Social and moral pressure • Changes in students' learning • Internal desire 	<ul style="list-style-type: none"> • Change in ability to practice • change in practice • Continuous process • one-off events • student-focused • teacher-focused • Externally imposed • internally motivated improvements to PL • Individual responsibility • collective responsibility 	<p style="text-align: center;">Conceptualization of PL</p>

<p><i>communicate better with them.</i></p> <ul style="list-style-type: none">• <i>PL is similar in my opinion to our personal needs... I don't know if I'm right! In the past we needed light so we invented the light, we needed to move faster so we invented the car... this means that life is based on our needs and these needs should suit our time and therefore we need to know exactly what our needs are to satisfy them.</i>• <i>...it doesn't exceed 60%...</i>			
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<ul style="list-style-type: none"> • <i>Many programmes and workshops we have do not reflect the real teachers' professional needs</i> • <i>Yes, PL is more effective in the school, because the senior teachers are closer to the teachers and know that not all of them have the same needs or the same weaknesses</i> • <i>In the school, we have many PL forms like microteaching, where a teacher delivers a lesson and the other teachers attend and work as students. We also have a plan of exchanging visits to each other's classrooms to see how others are doing things</i> • <i>Any PL activity that aims at improving teachers' knowledge and skills or increasing their experience and enhancing their teaching can be useful and effective</i> • <i>I think for those poorly performing teacher what is more effective is practical lessons where they attend a lesson delivered by the inspector or by a good teacher and then they try to teach the lesson in their own classroom as they have seen</i> • <i>In the school, what I have observed to be very effective, and what we use a lot in our school, is microteaching</i> • <i>They indirectly convince teachers of the need to change without hurting their feelings, because they have a particular weakness in their teaching or that they lack a particular skill or that they are old-fashioned teachers</i> • <i>Recently, some newly introduced programmes like those offered by the Specialised Centre, the Educational Visitor Programmes and the Academic Programme in coordination with SQU have had real positive effects on teachers' practice and convictions</i> • <i>I think most of the PL activities are imposed on teachers by the ministry</i> • <i>We found no coordination between different departments in the Educational Office.... we offered training for teachers and discovered later on that some of them were nominated at the same time by other departments for other tasks</i> 	<ul style="list-style-type: none"> • nothing new • negative attitudes • poor quality • better aligned to contexts • time saved • senior teachers' role • closeness to the teachers • particular attention each teacher receive • interactions • more diversified and practical experience • <i>discussion and interaction with others</i> • Observation of other teachers • Self-directed learning • Practical elements • improvement in formal PL • student focused • links to taught subjects • follow-up 	<ul style="list-style-type: none"> • Formal PL • PL in the school • Impact of PL types • Recognition of improvement • Barriers to effectiveness 	<p>Perception of PL Impact</p>
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<ul style="list-style-type: none">• <i>There is no real follow-up or measurement of the impact of training</i>• <i>There is still the issue of our social relations and culture, which prevent us from critically evaluate our friends and colleagues. We often prefer to keep good relations at the cost of work efficiency</i>			
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<ul style="list-style-type: none"> • <i>There is a lack of communication and if there is communication it happens only occasionally when there is a need to nominate teachers for a particular PL activity.</i> • <i>We have a Twitter account as well for the school, which we use to spread the teaching techniques we use and as a means of motivation and communication with other teachers in other schools.</i> • <i>PL plans are not based on teachers' professional needs</i> • <i>Teachers' PL needs are identified through the observations of those who supervise teachers, like senior teachers, school heads and inspectors, and also through analysing the evaluation forms used in the School Performance Development System, which is conducted by these people, and coming up with the areas that need to be developed ... When we have all these observations and evaluations we sit together and suggest the necessary kinds of PL activities and prepare our PL plan.</i> • <i>Most of the ... teachers are nominated by inspectors, which can be understood because the idea is to include most teachers in these training sessions instead of giving the chance for those who have the desire and who are very few.</i> • <i>Not engaging teachers means that the ministry does not trust them</i> • <i>Because they see no benefit in attending PL events... Will it be added to their CVs? What will it add to them?</i> 	<ul style="list-style-type: none"> • external motivation • internal motivation • influence of the context and culture • family commitment • availability of support • financial support • Time and the accessibility of PL • Accountability • Relevance to classrooms and students • teachers' preferences • quality of the PL event • quality of the trainer 	<ul style="list-style-type: none"> • Communicating with teachers • PL plans • Identifying teachers' professional needs • Nomination for PL events • Factors affecting commitment to change • 	<p>Involvement in the change process</p>
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<ul style="list-style-type: none"> • <i>If I wait to get permission from the Education Office then the PL event will be finished before I can get this permission. Getting such permission is one of the obstacles to teachers' PL.</i> • <i>Many teachers do want to develop themselves professionally but they are restricted by the discouraging outdated rules</i> • <i>What is missing is following up to see whether this teacher has benefited from what was offered to him</i> • <i>The missing thing is the follow-up.... after any PL activity there should be implementation in the classroom and follow-up by those who conducted the PL activity, which could take the form of a classroom visit or online follow-up by sending something like a project.</i> • <i>We have just one interactive whiteboard which is kept in the Physics lab and only Science teachers are allowed to use it as instructed by the education office... although it would be of great benefit to all subjects areas and might help in improving students' learning ... if permitted to be used by other subject teachers, of course!</i> • <i>It isn't flexible at all</i> • <i>I'm the queen in my school.</i> • <i>Last year we conducted a workshop presented by a good trainer but it cost us 700 riyals, which was collected from the teachers and the other requirements were provided by the school administration</i> • <i>One session conducted by an expert can convince teachers who might not be convinced by their colleagues even if they attended tens of PL activities run by them</i> • <i>Also the presenters who present studies they have conducted themselves ... those are the specialists who have practical experience and who introduce things</i> 	<ul style="list-style-type: none"> • MOE-based PL • Education office-based PL • School-based PL • Limited authority of school leadership • Lack of coordination • Lack of follow-up • Inadequate funding for PL in schools • Controlling guidelines • No flexibility • Clashes with teachers' daily work • Strategies commonly used by all head teachers • Individual strategies used by some head teachers • School infrastructure • External experience • Collective learning and shared experience • Informal collective learning opportunities 	<ul style="list-style-type: none"> • PL opportunities available to teachers • Existing regulations and structures • Head teachers' role • Existence of a learning environment 	<p>System and school support</p>
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they have experienced themselves and been through in curriculum or teaching strategies instead of presenting concepts and ideas that anyone can find in books

Appendix 23

Statistical tests

Mann Whitney Tests

Comparison based on gender

Test Statistics^{a,b}

	PL in the school	PL in another school	PL in the Training Centre	PL in other parts in Oman	PL outside Oman
Mann-Whitney U	2676.500	2198.500	2308.000	2055.000	2330.000
Wilcoxon W	6162.500	4544.500	4586.000	4333.000	4676.000
Z	-.750	-1.530	-1.631	-2.353	-1.257
Asymp. Sig. (2-tailed)	.453	.126	.103	.019	.209

a. Grouping Variable: gender

Test Statistics^{a,b}

	contribution of senior teachers	contribution of inspector	contribution of school head	contribution of subject colleagues	contribution of the Educational Office Officials	contribution of the ministry officials
Mann-Whitney U	2607.500	2941.500	2838.000	2571.000	2623.500	2858.500
Wilcoxon W	5163.500	5497.500	5394.000	6399.000	6451.500	6686.500
Z	-1.524	-.555	-.674	-2.004	-1.740	-.942
Asymp. Sig. (2-tailed)	.127	.579	.500	.045	.082	.346

a. Grouping Variable: gender

Kruskal Wallis Tests

Comparison based on school

Test Statistics^{a,b}

	PL in the school	PL in another school	PL in the Training Centre	PL in other parts in Oman	PL outside Oman
Chi-Square	7.554	18.870	14.545	18.666	17.676
df	11	11	11	11	11
Asymp. Sig.	.753	.063	.204	.067	.089

a. Kruskal Wallis Test

b. Grouping Variable: name of school

Test Statistics^{a,b}

	Values of PL in the school	Value of PL in other schools	Value of PL in the Training Centre	Value of PL others parts of Oman	Value of PL abroad
Chi-Square	15.667	17.313	11.386	12.813	14.559
df	11	11	11	11	11
Asymp. Sig.	.154	.099	.412	.306	.204

a. Kruskal Wallis Test

b. Grouping Variable: name of school

Test Statistics^{a,b}

	contribution of senior teachers	contribution of inspector	contribution of school head	contribution of subject colleagues	contribution of the Educational Office Officials	contribution of the ministry officials
Chi-Square	21.430	11.447	18.214	28.157	21.492	12.111
df	11	11	11	11	11	11
Asymp. Sig.	.029	.407	.077	.003	.029	.355

a. Kruskal Wallis Test

b. Grouping Variable: name of school

Kruskal Wallis Tests

Comparison based on experience

Test Statistics^{a,b}

	PL in the school	PL in another school	PL in the Training Centre	PL in other parts in Oman	PL outside Oman
Chi-Square	2.237	12.810	4.091	10.800	3.797
df	4	4	4	4	4
Asymp. Sig.	.692	.012	.394	.029	.434

- a. Kruskal Wallis Test
b. Grouping Variable: experience

Test Statistics^{a,b}

	Values of PL in the school	Value of PL in other schools	Value of PL in the Training Centre	Value of PL others parts of Oman	Value of PL abroad
Chi-Square	1.379	3.984	3.547	5.388	5.918
df	4	4	4	4	4
Asymp. Sig.	.848	.408	.471	.250	.205

- a. Kruskal Wallis Test
b. Grouping Variable: experience

Kruskal Wallis Tests

Comparison based on subject area

Test Statistics^{a,b}

	PL in the school	PL in another school	PL in the Training Centre	PL in other parts in Oman	PL outside Oman
Chi-Square	8.399	2.038	10.603	8.263	11.505
df	4	4	4	4	4
Asymp. Sig.	.078	.729	.031	.078	.021

- a. Kruskal Wallis Test
b. Grouping Variable: taught subject

Test Statistics^{a,b}

	Values of PL in the school	Value of PL in other schools	Value of PL in the Training Centre	Value of PL others parts of Oman	Value of PL abroad
Chi-Square	2.819	9.112	7.523	6.566	11.665
df	4	4	4	4	4
Asymp. Sig.	.588	.058	.111	.161	.020

a. Kruskal Wallis Test

b. Grouping Variable: taught subject

Test Statistics^{a,b}

	contribution of senior teachers	contribution of inspector	contribution of school head	contribution of subject colleagues	contribution of the Educational Office Officials	contribution of the ministry officials
Chi-Square	2.578	14.052	8.067	9.284	6.540	3.969
df	4	4	4	4	4	4
Asymp. Sig.	.631	.007	.089	.054	.162	.410

a. Kruskal Wallis Test

b. Grouping Variable: taught subject

Test Statistics^{a,b}

	discussion with colleagues	reading subject-related publications	using the internet	self-reflection	observing others
Chi-Square	4.029	6.029	6.362	9.936	5.586
df	7	7	7	7	7
Asymp. Sig.	.776	.536	.498	.192	.589

a. Kruskal Wallis Test

b. Grouping Variable: number of schools worked in

Appendix 24

Consent forms and information sheets



الفاضلة الدكتورة/ سعاد الفورية المحترمة

مدير المكتب الفني للدراسات والتطوير

الموضوع: طلب السماح بتنفيذ دراسة

أتقدم اليكم بطلب تسهيل مهمة بحث بعنوان "التعلم الانمائي للمعلم في ضوء التطورات التربوية الأخيرة" والذي يهدف الى تطوير ممارسات المعلم وتعلمة الانمائي. حيث سيتم تطبيق البحث في محافظة تعليمية واحدة، على جميع المدارس التي تحوي الصفين 11 و 12. كما سيتم تقديم معلومات عن البحث لكل المستهدفين من معلمين ومديري مدارس ومشرفين تربويين (مرفق). وفي حال الحصول على الاذن بتطبيق الدراسة سيتم تطبيق أدوات البحث وهي استبانة للمعلم ولمدير المدرسة ومقابلات مع معلمين ومديري مدارس ومشرفيين تربويين (مرفق الاستبانات وأسئلة المقابلة). كما أن بيانات المشاركين في الدراسة ستعامل بسرية تامة وسيتم الاستيعاض بأسماء مستعارة في أية مواد يتم نشرها سواء في الرسالة أو أية مقالات يتم نشرها أثناء أو بعد إنتهائها.

ختاما فانني أقدر لكم موافقتكم على تطبيق الدراسة وأمل أن تساهم في تطوير العملية التعليمية في السلطنة.

هذا وتقبلوا فائق التقدير والاحترام

هلال الشندودي

إسم الباحث: هلال الشندودي

البريد الإلكتروني: h.alshandudi@pgr.reading.ac.uk

اسم المشرف الأكاديمي: كريس تيرنر ، ريتشرد هاريس

اليد الإلكتروني: c.k.turner@reading.ac.uk r.j.harris@reading.ac.uk

استمارة الموافقة على السماح بتطبيق الدراسة

عنوان البحث: التعلم الانماني

- لقد قرأت استمارة معلومات البحث وحصلت على نسخة منها
- لقد فهمت هدف البحث والمطلوب من المشاركين فيه
- أرجو وضع علامة صح في المكان الأنسب
- أوافق على تطبيق هذا البحث في مدارس السلطنة
- أوافق على تسجيل المقابلات
- أوافق على استخدام عبارات مشفرة في حال النشر

الاسم:

التاريخ:

التوقيع:

معلومات عن الدراسة لمدير المدرسة

عنوان البحث: التعلم الانمائي

المشرفون الاكاديميون: كريس تيرنر و ريتشرد هاريس

الفاضل مدير المدرسة المحترم

أود دعوتك للمشاركة في بحثي هذا حول التعلم الانمائي للمعلم.

ما هي الدراسة؟

هذا البحث هو جزء من متطلبات رسالة الدكتوراة في كلية التربية بجامعة ردنغ بالمملكة المتحدة. وهو يهدف الى استقصاء مدى فاعلية الفرص التدريبية المقدمة للمعلم في تنمية تعلمة الانمائي/المهني وتحسين ممارساته التدريسية. ومن المأمول أن يساهم البحث في تطوير الممارسات التدريسية للمعلم بشكل عام وتعلمة الانمائي بشكل خاص حيث سيقدم اطاراً يمكن من خلاله تطوير التعلم الانمائي للمعلم.

يستهدف البحث معلمين ومدراء مدارس ومشرفين تربويين، حيث سيطلب من المعلمين ومدراء المدارس الاجابة على استبيان والجلوس لعمل مقابلة، أما المشرفيين التربويين فيطلب منهم الجلوس للمقابلة فقط (بناء على الرغبة). وسيتم تسجيل المقابلات وكتابتها وتشفيرها قبل البدء بعملية التحليل.

لماذا تم اختياري واختيار هذه المدرسة؟

• تم اختيار المدرسة بشكل عشوائي لتمثل المدارس التي يحوي الصفين 11 و12.

- أهمية الدور الذي تلعبه كمدير في التعلم الانمائي للمعلم.
- أهمية رأيك كمدير مدرسة لهذه الدراسة.

هل يتوجب على المدرسة المشاركة في الدراسة؟

الأمر متروك تماماً لك للموافقة على مشاركة مدرستك في هذه الدراسة، كما يمكن سحب موافقتك على المشاركة في الدراسة في أي وقت أثناء التطبيق أو بعده، بدون الحاجة لتوضيح الأسباب وذلك من خلال التواصل مع الباحث هلال الشندودي على رقم الهاتف: 92901002، أو البريد الالكتروني: h.alshandudi@pgr.reading.ac.uk.

ماذا سوف يحدث في حال مشاركة المدرسة في الدراسة؟

في حال موافقتك، سيطلب منك تعبئة استبيان حول رأيك الشخصي في التعلم الانمائي للمعلم، والذي لن يزيد على 25 دقيقة، كما سيطلب من معلم واحد من كل مادة أساسية (علوم، رياضيات، لغة عربية، لغة انجليزية، دراسات اجتماعية) - يتم اختياره عشوائيا، تعبئة استبيان مماثل، كما سيطلب منك ومن بعض المعلمين، في حال موافقتكم، الجلوس لعمل مقابلة لمدة 45 دقيقة في وقت يتم الاتفاق عليه لاحقا، لتوضيح وبحث بعض النقاط بشكل أعمق والحصول على بعض الامثلة.

ما هي مخاطر وفوائد المشاركة في هذا البحث؟

سيتم معاملة المعلومات التي تقدمها بشكل سري ولن يطلع عليها أحد غير الباحث، كما سيحرص الباحث على عدم ظهور الأسماء الحقيقية في أية مواد يتم نشرها لاحقا، ولن يتم مشاركة البيانات التي تقدمها لأي جهة سواء المدرسة أو المديرية أو الوزارة.

من المتوقع أن تساهم نتائج هذا البحث في تحسين الممارسات التدريسية للمعلم وتحسين طرق وضع وتنفيذ خطط وبرامج التنمية المهنية، حيث سأحرص شخصيا على نشر نتائج البحث ووصولها للمسؤولين والمعنيين في المديرية وفي الوزارة.

ماذا سوف يحدث للبيانات التي أقدمها؟

سوف تحفظ جميع المعلومات التي يتم جمعها بشكل سري ولن تظهر أية أسماء لأي مشاركين في البحث سواء في الرسالة أو أية مواد يتم نشرها بعد انتهاء الدراسة، حيث سيتم الاستعاضة بأسماء بديلة لكل مشارك ولكل مدرسة لضمان عدم امكانية التعرف على هوية المشاركين، وسيتم حفظ جميع المواد في خزائن مغلقة وفي ملفات الكترونية مشفرة حتى الانتهاء من عملية التحليل ومن ثم سيتم إتلاف جميع البيانات من قبل البحث نفسه، كما سيتم نشر نتائج الدراسة في مؤتمرات وورش ومقالات دولية لاحقا، ويمكنك الحصول على نسخة من هذه المنشورات لو رغبت.

ماذا سيحصل لو غيرت رأي حول المشاركة؟

يمكنك تغيير رأيك حول المشاركة في أي وقت من دون أية تبعات، فأثناء تطبيق الدراسة يمكنك التوقف عن استكمال أية أنشطة متعلقة بالدراسة، وفي حال غيرت رأيك بعد انتهاء التطبيق سأحرص شخصيا على حذف أية بيانات أو معلومات قمت بتقديمها.

من الذي قام بمراجعة هذه الدراسة؟

تم مراجعة هذه الدراسة بناء على الاجراءات المتبعة من قبل اللجنة الأخلاقية البحثية المختصة بجامعة ردنج وتم منحها اذن الموافقة على التطبيق، حيث تحتفظ الجامعة بكافة الضمانات اللازمة، وتوجد التفاصيل في حال الطلب.

ماذا سوف يحصل اذا حصل خطأ ما؟

في حال حدوث أي خطأ، وهو أمر مستبعد، يمكنك التواصل مع الدكتور/ كريس تيرنر،
جامعة ردنج، على البريد الإلكتروني: c.k.turner@reading.ac.uk

كيف يمكنني الحصول على مزيد من المعلومات؟

في حال رغبتك في الحصول على مزيد من المعلومات، أرجو التواصل مع الدكتور/
ريتشارد هاريس، جامعة ردنج، على البريد الإلكتروني: j.harris@reading.ac.uk.

ما يتطلبه مني الآن؟

أتمنى الحصول على موافقتك على المشاركة في هذه الدراسة، وفي حال ذلك، أرجو
كتابة موافقتك الخطية في استمارة الموافقة المرفقة وارسالها للباحث على
البريد الإلكتروني: h.alshandudi@pgr.reading.ac.uk.

مع فائق التقدير والاحترام

الباحث

هلال الشندودي

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البريد الالكتروني: h.alshandudi@pgr.reading.ac.uk

الهاتف: 92901002

استمارة الموافقة على المشاركة في الدراسة – الأستبانة (مدير المدرسة)

عنوان البحث: التعلم الانماني

- لقد قرأت استمارة معلومات البحث وحصلت على نسخة منها
- لقد فهمت هدف البحث والمطلوب من المشاركين فيه
- أرجو وضع علامة صح في المكان الأنسب
- أوافق على تطبيق هذا البحث في مدرستي
- أوافق على تعبئة الاستبيان
- أوافق على استخدام اقتباسات من كلامي في حال النشر

الاسم: -----

المدرسة: -----

التاريخ: -----

التوقيع: -----

اسم الباحث: هلال الشندودي

البريد الالكتروني: h.alshandudi@pgr.reading.ac.uk

الهاتف: 92901002

استمارة الموافقة على المشاركة في الدراسة - المقابلة (مدير المدرسة)

عنوان البحث: التعلم الاتماني

- لقد قرأت استمارة معلومات البحث وحصلت على نسخة منها
 - لقد فهمت هدف البحث والمطلوب من المشاركين فيه
- أرجو وضع علامة صح في المكان الأنسب

- أوافق على تطبيق هذا البحث في مدرستي
- أوافق على الجلوس للمقابلة
- أوافق على تسيل المقابلة وكتابتها
- أوافق على استخدام اقتباسات من كلامي في حال النشر

الاسم: -----

المدرسة: -----

التاريخ: -----

التوقيع: -----

معلومات عن الدراسة للمعلم

عنوان البحث: التعلم الانمائي

المشرفون الاكاديميون: كريس تيرنر و ريتشرد هاريس

الفاضل مدير المدرسة المحترم

أود دعوتك للمشاركة في بحثي هذا حول التعلم الانمائي للمعلم.

ما هي الدراسة؟

هذا البحث هو جزء من متطلبات رسالة الدكتوراة في كلية التربية بجامعة رندج بالمملكة المتحدة. وهو يهدف الى استقصاء مدى فاعلية الفرص التدريبية المقدمة للمعلم في تنمية تعلمة الانمائي/المهني وتحسين ممارساته التدريسية. ومن المأمول أن يساهم البحث في تطوير الممارسات التدريسية للمعلم بشكل عام وتعلمه الانمائي بشكل خاص حيث سيقدم اطار يمكن من خلاله تطوير التعلم الانمائي للمعلم.

يستهدف البحث معلمين ومدراء مدارس ومشرفين تربويين، حيث سيطلب من المعلمين ومدراء المدارس الاجابة على استبيان والجلوس لعمل مقابلة، أما المشرفين التربويين فيطلب منهم الجلوس للمقابلة فقط (بناء على الرغبة). وسيتم تسجيل المقابلات وكتابتها وتشفيرها قبل البدء بعملية التحليل.

لماذا تم اختياري للمشاركة في هذه الدراسة؟

- تم اختيارك بشكل عشوائي لتمثل معلمي مادتك.
- أهمية رأيك لهذه الدراسة.

هل يتوجب على المدرسة المشاركة في الدراسة؟

الأمر متروك تماما لك للموافقة على المشاركة في هذه الدراسة، كما يمكن سحب موافقتك على المشاكة في الدراسة في أي وقت أثناء التطبيق أو بعده،

بدون الحاجة لتوضيح الأسباب وذلك من خلال التواصل مع الباحث هلال الشندودي
على رقم الهاتف: 92901002، أو البريد الإلكتروني:
h.alshandudi@pgr.reading.ac.uk

ماذا سوف يحدث في حال مشاركة المدرسة في الدراسة؟

في حال موافقتك، سيطلب منك تعبئة استبيان حول تجربتك ورأيك الشخصي في
التعلم الانمائي للمعلم، والذي لن يزيد على 25 دقيقة، كما قد يطلب منك،
في حال موافقتك، الجلوس لعمل مقابلة لمدة 45 دقيقة في وقت يتم الاتفاق
عليه لاحقا، لتوضيح وبحث بعض النقاط بشكل أعمق والحصول على بعض الامثلة.

ما هي مخاطر وفوائد المشاركة في هذا البحث؟

سيتم معاملة المعلومات التي تقدمها بشكل سري ولن يطلع عليها أحد غير
الباحث، كما سيحرص الباحث على عدم ظهور الأسماء الحقيقية في أية مواد
يتم نشرها لاحقا، ولن يتم مشاركة البيانات التي تقدمها لأي جهة سواء
المدرسة أو المديرية أو الوزارة.

من المتوقع أن تساهم نتائج هذا البحث في تحسين الممارسات التدريسية
للمعلم وتحسين طرق وضع وتنفيذ خطط وبرامج التنمية المهنية، حيث سأحرص
شخصيا على نشر نتائج البحث ووصولها للمسؤولين والمعنيين في المديرية
وفي الوزارة.

ماذا سوف يحدث للبيانات التي أقدمها؟

سوف تحفظ جميع المعلومات التي يتم جمعها بشكل سري ولن تظهر أية أسماء
لأي مشاركين في البحث سواء في الرسالة أو أية مواد يتم نشرها بعد
انتهاء الدراسة، حيث سيتم الاستعاضة بأسماء بديلة لكل مشارك ولكل مدرسة
لضمان عدم امكانية التعرف على هوية المشاركين، وسيتم حفظ جميع المواد
في خزائن مغلقة وفي ملفات إلكترونية مشفرة حتى الانتهاء من عملية
التحليل ومن ثم سيتم إتلاف جميع البيانات من قبل البحث نفسه، كما سيتم
نشر نتائج الدراسة في مؤتمرات وورش ومقالات دولية لاحقا، ويمكنك الحصول
على نسخة من هذه المنشورات لو رغبت.

ماذا سيحصل لو غيرت رأي حول المشاركة؟

يمكنك تغيير رأيك حول المشاركة في أي وقت من دون أية تبعات، فأثناء
تطبيق الدراسة يمكنك التوقف عن استكمال أية أنشطة متعلقة بالدراسة،
وفي حال غيرت رأيك بعد انتهاء التطبيق سأحرص شخصيا على حذف أية بيانات
أو معلومات قمت بتقديمها.

من الذي قام بمراجعة هذه الدراسة؟

تم مراجعة هذه الدراسة بناء على الاجراءات المتبعة من قبل اللجنة الأخلاقية البحثية المختصة بجامعة ردنغ وتم منحها اذن الموافقة على التطبيق، حيث تحتفظ الجامعة بكافة الضمانات اللازمة، وتوجد التفاصيل في حال الطلب.

ماذ سوف يحصل اذا حص خطأ ما؟

في حال حدوث أي خطأ، وهو أمر مستبعد، يمكنك التواصل مع الدكتور/ كريس تيرنر، جامعة ردنغ، على البريد الالكتروني: c.k.turner@reading.ac.uk

كيف يمكنني الحصول على مزيد من المعلومات؟

في حال رغبتك في الحصول على مزيد من المعلومات، أرجو التواصل مع الدكتور/ ريتشرد هاريس، جامعة ردنغ، على البريد الالكتروني: j.harris@reading.ac.uk.

ما يتطلب مني الان؟

أتمنى الحصول على موافقتك على المشاركة في هذه الدراسة، وفي حال ذلك، أرجو كتابة موافقتك الخطية في استمارة الموافقة المرفقة وارسالها للباحث على البريد الالكتروني: h.alshandudi@pgr.reading.ac.uk.

مع فائق التقدير والاحترام

الباحث

هلال الشندودي

إسم الباحث: هلال الشندودي

البريد الإلكتروني: h.alshandudi@pgr.reading.ac.uk

الهاتف: 92901002

استمارة الموافقة على المشاركة في الدراسة – الأستبانة (المعلم)

عنوان البحث: التعلم الانمائي

- لقد قرأت استمارة معلومات البحث وحصلت على نسخة منها
 - لقد فهمت هدف البحث والمطلوب من المشاركين فيه
- أرجو وضع علامة صح في المكان الأنسب
- أوافق على تعبئة الاستبيان
 - أوافق على استخدام اقتباسات من كلامي في حال النشر مع عدم التعريف باسمي

الاسم: -----

المدرسة: -----

التاريخ: -----

التوقيع: -----

إسم الباحث: هلال الشندودي

البريد الإلكتروني: h.alshandudi@pgr.reading.ac.uk

الهاتف: 92901002

استمارة الموافقة على المشاركة في الدراسة - المقابلة (المعلم)

عنوان البحث: التعلم الانمائي

- لقد قرأت استمارة معلومات البحث وحصلت على نسخة منها
- لقد فهمت هدف البحث والمطلوب من المشاركين فيه

أرجو وضع علامة صح في المكان الأنسب

- أوافق على تطبيق هذا البحث في مدرستي
- أوافق على الجلوس للمقابلة
- أوافق على تسيل المقابلة وكتابتها
- أوافق على استخدام اقتباسات من كلامي في حال النشر مع عدم التعريف بإسمي

الاسم: -----

المدرسة: -----

التاريخ: -----

التوقيع: -----

إسم الباحث: هلال الشندودي

البريد الإلكتروني: h.alshandudi@pgr.reading.ac.uk

الهاتف: 92901002

معلومات عن الدراسة للمشرف التربوي

عنوان البحث: التعلم الانمائي

المشرفون الاكاديميون: كريس تيرنر و ريتشرد هاريس

الفاضل/ المشرف التربوي المحترم

أود دعوتك للمشاركة في بحثي هذا حول التعلم الانمائي للمعلم.

ما هي الدراسة؟

هذا البحث هو جزء من متطلبات رسالة الدكتوراة في كلية التربية بجامعة ردنغ بالمملكة المتحدة. وهو يهدف الى استقصاء مدى فاعلية الفرص التدريبية المقدمة للمعلم في تنمية تعلمة الانمائي/المهني وتحسين ممارساته التدريسية. ومن المأمول أن يساهم البحث في تطوير الممارسات التدريسية للمعلم بشكل عام وتعلمة الانمائي بشك خاص حيث سيقدم اطار يمكن من خلاله تطوير التعلم الانمائي للمعلم.

يستهدف البحث معلمين ومدراء مدارس ومشرفين تربويين، حيث سيطلب من المعلمين ومدراء المدارس الاجابة على استبيان والجلوس لعمل مقابلة، أما المشرفيين التربويين فيطلب منهم الجلوس للمقابلة فقط (بناء على الرغبة). وسيتم تسجيل المقابلات وكتابتها وتشفيرها قبل البدء بعملية التحليل.

لماذا تم اختياري للمشاركة في هذه الدراسة؟

- تم اختيارك بشكل عشوائي.
- أهمية رأيك لهذه الدراسة.
- دورك المهم في التعلم الانمائي للمعلم.
- تأثيرك في التعلم الانمائي للمعلم.

هل يتوجب علي المشاركة في الدراسة؟

الأمر متروك تماما لك للموافقة على المشاركة في هذه الدراسة، كما يمكن سحب موافقتك على المشاكة في الدراسة في أي وقت أثناء التطبيق أو بعده، بدون الحاجة لتوضيح الأسباب وذلك من خلال التواصل مع الباحث هلال الشندودي على رقم الهاتف: 92901002، أو البريد الالكتروني:

h.alshandudi@pgr.reading.ac.uk

ماذا سوف يحدث في حال مشاركة المدرسة في الدراسة؟

في حال موافقتك، سيطلب منك الجلوس لعمل مقابلة لمدة 45 دقيقة في وقت يتم الاتفاق عليه لاحقا، لتوضيح وبحث بعض النقاط حول التعلم الانمائي للمعلم بشكل أعمق والحصول على بعض الامثلة.

ما هي مخاطر وفوائد المشاركة في هذا البحث؟

سيتم معاملة المعلومات التي تقدمها بشكل سري ولن يطلع عليها أحد غير الباحث، كما سيحرص الباحث على عدم ظهور الأسماء الحقيقية في أية مواد يتم نشرها لاحقا، ولن يتم مشاركة البيانات التي تقدمها لأي جهة سواء المدرسة أو المديرية أو الوزارة.

من المتوقع أن تساهم نتائج هذا البحث في تحسين الممارسات التدريسية للمعلم وتحسين طرق وضع وتنفيذ خطط وبرامج التنمية المهنية، حيث سأحرص شخصيا على نشر نتائج البحث ووصولها للمسؤولين والمعنيين في المديرية وفي الوزارة.

ماذا سوف يحدث للبيانات التي أقدمها؟

سوف تحفظ جميع المعلومات التي يتم جمعها بشكل سري ولن تظهر أية أسماء لأي مشاركين في البحث سواء في الرسالة أو أية مواد يتم نشرها بعد انتهاء الدراسة، حيث سيتم الاستعاضة بأسماء بديلة لكل مشارك ولكل مدرسة لضمان عدم امكانية التعرف على هوية المشاركين، وسيتم حفظ جميع المواد في خزائن مغلقة وفي ملفات الكترونية مشفرة حتى الانتهاء من عملية التحليل ومن ثم سيتم إتلاف جميع البيانات من قبل البحث نفسه، كما سيتم نشر نتائج الدراسة في مؤتمرات وورش ومقالات دولية لاحقا، ويمكنك الحصول على نسخة من هذه المنشورات لو رغبت.

ماذا سيحصل لو غيرت رأي حول المشاركة؟

يمكنك تغيير رأيك حول المشاركة في أي وقت من دون أية تبعات، فأثناء تطبيق الدراسة يمكنك التوقف عن استكمال أية أنشطة متعلقة بالدراسة،

وفي حال غيرت رأيك بعد انتهاء التطبيق سأحرص شخصياً على حذف أية بيانات أو معلومات قمت بتقديمها.

من الذي قام بمراجعة هذه الدراسة؟

تم مراجعة هذه الدراسة بناءً على الإجراءات المتبعة من قبل اللجنة الأخلاقية البحثية المختصة بجامعة ردينج وتم منحها إذا الموافقة على التطبيق، حيث تحتفظ الجامعة بكافة الضمانات اللازمة، وتوجد التفاصيل في حال الطلب.

ماذا سوف يحصل إذا حصل خطأ ما؟

في حال حدوث أي خطأ، وهو أمر مستبعد، يمكنك التواصل مع الدكتور/ كريس تيرنر، جامعة ردينج، على البريد الإلكتروني: c.k.turner@reading.ac.uk

كيف يمكنني الحصول على مزيد من المعلومات؟

في حال رغبتك في الحصول على مزيد من المعلومات، أرجو التواصل مع الدكتور/ ريتشارد هاريس، جامعة ردينج، على البريد الإلكتروني: j.harris@reading.ac.uk.

ما يتطلبه مني الآن؟

أتمنى الحصول على موافقتك على المشاركة في هذه الدراسة، وفي حال ذلك، أرجو كتابة موافقتك الخطية في استمارة الموافقة المرفقة وإرسالها للباحث على البريد الإلكتروني: h.alshandudi@pgr.reading.ac.uk.

مع فائق التقدير والاحترام

الباحث

هلال الشندودي

إسم الباحث: هلال الشندودي

البريد الإلكتروني: h.alshandudi@pgr.reading.ac.uk

الهاتف: 92901002

استمارة الموافقة على المشاركة في البحث - المقابلة (المشرف التربوي)

عنوان البحث: التعلم الانماني

- لقد قرأت استمارة معلومات البحث وحصلت على نسخة منها
 - لقد فهمت هدف البحث والمطلوب من المشاركين فيه
- أرجو وضع علامة صح في المكان الأنسب

- أوافق على تطبيق هذا البحث في مدرستي
- أوافق على الجلوس للمقابلة
- أوافق على تسجيل المقابلة وكتابتها
- أوافق على استخدام اقتباسات من كلامي في حال النشر

الاسم: -----

التاريخ: -----

التوقيع: -----



Dr. So'ad AlFori

Director of the Technical Office for Studies and Development

Ministry of Education, Oman

Hilal Al-Shandudi

PhD Candidate, Institute of Education

University of Reading, UK

01-09-15

Dear Dr. So'ad

My name is Hilal Al-Shandudi, an employee in Al-Dhahira Educational Office who is currently doing his PhD study in the United Kingdom. I am writing to request permission to conduct a research study at the MOE. The study is entitled "**Teachers' Professional Learning in the context of recent educational reforms in Oman**" and the aim is to contribute to the development of teachers' practice in general and to teachers' professional learning in particular. It is intended to develop a framework that can be used to promote teachers' professional learning in the MOE.

I hope that you will allow me to recruit 197 participants from three educational offices (five inspectors, twelve school heads and 180 teachers (for reasons of confidentiality) to anonymously complete a 7-8 page questionnaires/ to be interviewed (copy enclosed). Interested staff members, who volunteer to participate, will be given an information sheet and a consent form to be signed and returned to me at the beginning of the survey process (copy enclosed).

If approval is granted, participants will complete the survey/be interviewed in their own time and no costs will be incurred by either the MOE, schools or the individual participants. All information collected will be kept strictly confidential (subject to legal limitations). In order to protect the anonymity of each participant, pseudonyms will be used to ensure participants cannot be identified and individuals' or schools' names will not be used. All electronic data will be held securely in password protected files on a non-shared PC and all paper documentation will be held in locked cabinets in a locked office. In line with University policy, data generated by the study will be kept securely in paper or electronic form for a period of three years after the completion of the research project. This data may be used in future publications in appropriate academic journals and/or books. All participants will be able to have access to a copy of the published research on request.

Your approval to conduct this study will be greatly appreciated. If you agree, kindly reply to this email acknowledging your consent and permission for me to conduct this study at the MOE by signing the attached consent form.

Yours sincerely, Hilal Al-Shandudi



Researcher: Hilal AlShandudi

Phone: 92901002

E-mail: h.alshandudi@pgr.reading.ac.uk

TOSD information sheet

Research Project: Teachers' Professional Learning in the context of recent educational reforms in Oman.

Project supervisors: Dr. Chris Turner; Dr. Richard Harris

The Study

This research is a part of the PhD requirements at the Institute of Education, University of Reading in the UK. It aims to investigate the Professional Learning (PL) opportunities (defined as: a learning activity that aims at improving teachers' practice in the classroom like workshops, seminars, discussion groups) and their effectiveness in improving teachers' practice. It hopes to contribute to teachers' practice in general and to their PL in particular. It is intended to develop a framework that can be used to promote PL in the MOE in Oman.

Aims of the study

- To analyze and evaluate the quality of PL opportunities.
- To improve teachers' practice in general and their capability to meet students' needs in particular.
- To help to improve teachers' teaching performance.
- To develop a suitable framework of PL which can be implemented in the MOE context.

Who are the participants?

- Five educational inspectors in one selected Educational Office.
- Twelve school Heads from 12 schools in one selected educational office.
- 180 core subject teachers (in the selected Educational Office) – Fifteen from each school where headteachers were selected.

These participants will be chosen due to the contribution they can provide in helping to answer the research question and due to their role as providers or receivers of professional learning.

What will happen if my schools take part in this study?

If you agree and permit your schools to take part, two methods of research will be conducted:

- Individual interviews with Inspectors.
- Questionnaires with all the school heads of the selected schools and interviews with some of them in person.
- Questionnaires with all the selected teachers and interviews with some of them in person.

The questionnaires are expected to take no more than 25 minutes to complete and will take place in September 2015 in the schools and the interviews will last for about 40-45 minutes and will be done between September and November in the schools. This will be in coordination with the schools' administrations and based on participants' consent to participate in the study.

Do schools and participants have to take part?

It is entirely up to the schools and participants whether to participate or not. Participants may also withdraw their consent to participation at any time during the project, without any repercussions to them, by contacting the Researcher, Hilal Alshandudi, Tel: 92901002, email:

h.alshandudi@pgr.reading.ac.uk

What are the risks and benefits of taking part?

The information the participants give will remain confidential and will only be seen by the researcher. My academic supervisors will have access to the transcripts and the recordings (for reliability purposes). No names will be identifiable in any published report resulting from the study. Information about individuals will not be shared with the school nor with the educational office or the ministry.

I anticipate that the findings of this study will be used to develop teachers' pedagogical skills and thus lead to improvement in classroom teaching and learning in Oman. This development may enhance teachers' performance and may lead to recommendations for changes in strategic planning process. Through my role in the Human Resources Development Department (HRDD) in AlDhahira Educational District Office I will make sure to disseminate the findings of my research to the officials in the Educational Office and the ministry and help them to improve PL practices.

What will happen to the data?

Any data collected will be held in strict confidence and no real names will be used in this study or in any subsequent publications. The records of this study will be kept private. No identifiers linking you, or the school to the study will be included in any sort of report that might be published. Participants will be assigned a number and will be referred to by that number in all records. Research records will be stored securely in a locked filing cabinet and on a password-protected computer and only the researcher will have access to the records. The data will be destroyed securely after two years. The results of the study will be presented at national and international conferences, and in written reports and articles. I can send you electronic copies of these publications if you wish.

What happens if participants change their minds?

Participants can change their minds at any time without any repercussions. During the research, they can stop completing the activities at any time. If they change their minds after data collection has ended, I will discard their data.

Who has reviewed the study?

This project has been reviewed following the procedures of the University Research Ethics Committee and has been given a favourable ethical opinion for conduct. The University has the appropriate insurances in place. Full details are available on request.

What happens if something goes wrong?

In the unlikely case of concern or complaint, you can contact my supervisor: Dr. Chris Turner, at the University of Reading's Institute of Education by email on c.k.turner@reading.ac.uk

Where can I get more information?

If you would like more information, please contact me via email on h.alshandudi@pgr.reading.ac.uk.

What do I do next?

I do hope that you will agree to the study to be conducted. If you do, please complete the attached consent form and return it by e-mailing it back to h.alshandudi@pgr.reading.ac.uk.

I know how busy you are, but I highly value the information that schools can provide regarding PL, and I hope that you will be able and willing to contribute to this research project by giving your permission.

Thank you for your time.

Yours sincerely

Hilal Alshandudi

Researcher: Hilal Al-Shandudi

E-mail: h.alshandudi@pgr.reading.ac.uk

Supervisor: Dr. Chris Turner; Dr. Richard Harris

E-mail: c.k.turner@reading.ac.uk; r.j.harris@reading.ac.uk

TOSD (Consent Form)

Project title: “Teachers’ Professional Learning in the context of recent educational reforms in Oman”.

I have read the Information Sheet about the project and received a copy of it.

I understand what the purpose of the project is and what is required of the participants. All my questions have been answered.

Please tick as appropriate:

I consent to this research to take place in my educational offices and schools:

I consent to the interviews being recorded and transcribed

I agree to the use of anonymised quotations in publications

Name:

Signed:

Date:

Researcher: Hilal AlShandudi

Phone: 92901002

E-mail: h.alshandudi@pgr.reading.ac.uk

Head Teacher information sheet

Research Project: Teachers' Professional Learning in the context of recent educational reforms in Oman.

I would like to invite you to take part in a research study about Professional Learning.

Project supervisors: Dr. Chris Turner; Dr. Richard Harris

Dear Head Teacher

I would like to invite you and your school to take part in a research study about Professional Learning of teachers.

What is the study?

This research is a part of the PhD requirements at the Institute of Education, University of Reading in the UK. It aims to investigate the Professional Learning (PL) opportunities (defined as: a learning activity that aims at improving teachers' practice in the classroom like workshops, seminars, discussion groups) and their effectiveness in improving teachers' practice. It hopes to contribute to teachers' practice in general and to their PL in particular. It is intended to develop a framework that can be used to promote PL in the MOE in Oman.

The study will involve teachers, headteachers and inspectors. Teachers and headteachers will be asked to complete a survey and might be asked to sit for an interview; inspectors will be asked to sit for an interview. The interviews will be audio recorded. The recordings will be transcribed and anonymised before being analysed.

Why have I and this school been chosen to take part?

You and your school have been invited to take part in the project because

- Your school has been chosen based the contribution it can provide in helping to answer the research question about teachers' PL
- Your role and influence in teachers' PL is very important
- Your views as a school head are very important to this study

Does the school have to take part?

It is entirely up to you whether to participate yourself and/or give permission for the school to participate. You may also withdraw your consent to participation at any time during the project, without any repercussions to you, by contacting the Researcher, Hilal Alshandudi, Tel: 92901002, email: h.alshandudi@pgr.reading.ac.uk

What will happen if the school takes part?

With your agreement, you will be asked to complete a questionnaire about your own opinion about Professional Learning (PL) of teachers. This should take about 25 minutes to complete. Five randomly selected core subject teachers will also be asked to complete a questionnaire about their own experience and opinion about PL. You and some of your teachers might be asked to sit for an interview for about forty minutes, in a mutually agreed time, to clarify some in-depth issues and elicit some examples. This will only happen if you, and your teachers, give your consent, in advance.

What are the risks and benefits of taking part?

The information you give will remain confidential and will only be seen by the research team listed at the start of this letter. Neither you nor the school or teachers will be identifiable in any published report resulting from the study. Information about individuals will not be shared with the school nor with the educational office or the ministry.

I anticipate that the findings of this study will be used to develop teachers' pedagogical skills and thus lead to improvement in classroom teaching and learning in Oman. This development may enhance teachers' performance and may lead to recommendations for changes in strategic planning process. Through my role in the Human Resources Development Department (HRDD) in AIDhahira Educational District Office I will make sure to disseminate the findings of my research to the officials in the Educational Office and the ministry and help them to improve PL practices.

What will happen to the data?

Any data collected will be held in strict confidence and no real names will be used in this study or in any subsequent publications. The records of this study will be kept private. No identifiers linking you, or the school to the study will be included in any sort of report that might be published. Participants will be assigned a number and will be referred to by that number in all records. Research records will be stored securely in a locked filing cabinet and on a password-protected computer and only the researcher will have access to the records. The data will be destroyed securely after two years. The results of the study will be presented at national and international conferences, and in written reports and articles. I can send you electronic copies of these publications if you wish.

What happens if I change my mind?

You can change your mind at any time without any repercussions. During the research, you can stop completing the activities at any time. If you change your mind after data collection has ended, I will discard your data.

Who has reviewed the study?

This project has been reviewed following the procedures of the University Research Ethics Committee and has been given a favourable ethical opinion for conduct. The University has the appropriate insurances in place. Full details are available on request.

What happens if something goes wrong?

In the unlikely case of concern or complaint, you can contact my supervisor: Dr. Chris Turner, at the University of Reading's Institute of Education by email on c.k.turner@reading.ac.uk

Where can I get more information?

If you would like more information, please contact me via email on h.alshandudi@pgr.reading.ac.uk.

What do I do next?

I do hope that you will agree to your participation in the study. If you do, please complete the attached consent form and return it by e-mailing it back to h.alshandudi@pgr.reading.ac.uk.

Thank you for your time.

Yours sincerely

Hilal Alshandudi



Researcher: Hilal Al-Shandudi

Phone: 92901002

E-mail: h.alshandudi@pgr.reading.ac.uk

Research Project: Teachers' Professional Learning in the context of recent educational reforms in Oman.

Head Teacher Consent Form

I have read the Information Sheet about the project and received a copy of it.

I understand what the purpose of the project is and what is required of me. All my questions have been answered.

Name of Head Teacher: _____

Name of school: _____

Please tick as appropriate:

I consent to the involvement of my school in the project as outlined in the Information Sheet

I consent to completing a questionnaire

I agree to the use of anonymised quotations in publications

Signed: _____

Date: _____

Researcher: Hilal Al-Shandudi

Phone: 92901002

E-mail: h.alshandudi@pgr.reading.ac.uk

Research Project: Teachers' Professional Learning in the context of recent educational reforms in Oman.

Head Teacher Consent Form

I have read the Information Sheet about the project and received a copy of it.

I understand what the purpose of the project is and what is required of me. All my questions have been answered.

Name of Head Teacher: _____

Name of school: _____

Please tick as appropriate:

I consent to the involvement of my school in the project as outlined in the Information Sheet

I consent to being interviewed

I consent the interview to be recorded and transcribed

I agree to the use of anonymised quotations in publications

Signed: _____

Date: _____

Researcher: Hilal Al-Shandudi

Phone: 92901002

E-mail: h.alshandudi@pgr.reading.ac.uk

Teacher information sheet

Research Project: Teachers' Professional Learning in the context of recent educational reforms in Oman.

Project supervisors: Dr. Chris Turner; Dr. Richard Harris

Dear Teacher

I would like to invite you to take part in a research study about teachers' Professional Learning.

What is the study?

This research is a part of the PhD requirements at the Institute of Education, University of Reading in the UK. It aims to investigate the Professional Learning (PL) opportunities (defined as: a learning activity that aims at improving teachers' practice in the classroom like workshops, seminars, discussion groups) and their effectiveness in improving teachers' practice. It hopes to contribute to teachers' practice in general and to their PL in particular. It is intended to develop a framework that can be used to promote PL in the MOE in Oman.

The study will involve teachers, headteachers and inspectors. Teachers and headteachers will be asked to complete a survey and might be asked to sit for an interview; inspectors will be asked to sit for an interview. The interviews will be audio recorded. The recordings will be transcribed and anonymised before being analysed.

Why have I been chosen to take part?

You have been invited to take part in the project because

- You have been selected randomly to represent core subject teachers in your school
- Your opinion is very important to the research

Do I have to take part?

It is entirely up to you whether you participate. You may also withdraw your consent to participation at any time during the project, without any repercussions to you, by contacting the Researcher, Hilal Alshandudi, Tel: 92901002, email: h.alshandudi@pgr.reading.ac.uk

What will happen if I take part?

You will be asked to complete a questionnaire about your own experience and opinion about Professional Learning. This should take about 25 minutes to complete.

You might also be asked to sit for an interview for about forty minutes to clarify some in-depth issues and elicit some examples. This will only happen if you give your consent, in advance.

What are the risks and benefits of taking part?

The information you give will remain confidential and will only be seen by the researcher. Neither you nor the school will be identifiable in any published report resulting from the study. Information about individuals will not be shared with the school nor with the head teacher, and the researcher will make sure that all participants are unidentifiable.

I anticipate that the findings of this study will be used to develop teachers' pedagogical skills and thus lead to improvement in classroom teaching and learning in Oman. This development may enhance teachers' performance and may lead to recommendations for changes in strategic planning process. Through my role in the Human Resources Development Department (HRDD) in AlDhahira Educational District I will make sure to disseminate the findings of my research to the officials in the Educational Office and the ministry and help them to improve PL practices.

What will happen to the data?

Any data collected will be held in strict confidence and no real names will be used in this study or in any subsequent publications. The records of this study will be kept private. No identifiers linking you, or the school to the study will be included in any sort of report that might be published. Participants will be assigned a number and will be referred to by that number in all records. Research records will be stored securely in a locked filing cabinet and on a password-protected computer and only the researcher will have access to the records. The data will be destroyed securely once the findings of the study are written up, after five years. The results of the study will be presented at national and international conferences, and in written reports and articles. I can send you electronic copies of these publications if you wish.

What happens if I change my mind?

You can change your mind at any time without any repercussions. During the research, you can stop completing the activities at any time. If you change your mind after data collection has ended, I will discard your data.

Who has reviewed the study?

This project has been reviewed following the procedures of the University Research Ethics Committee and has been given a favourable ethical opinion for conduct. The University has the appropriate insurances in place. Full details are available on request.

What happens if something goes wrong?

In the unlikely case of concern or complaint, you can contact my supervisor: Dr. Chris Turner, at the University of Reading's Institute of Education by email on c.k.turner@reading.ac.uk

Where can I get more information?

If you would like more information, please contact me via email on h.alshandudi@pgr.reading.ac.uk.

What do I do next?

I do hope that you will agree to your participation in the study. If you do, please complete the attached consent form and return it by e-mailing it back to h.alshandudi@pgr.reading.ac.uk.

Thank you for your time.

Yours sincerely

Hilal Alshandudi

Researcher: Hilal Al-Shandudi

Phone: 92901002

E-mail: h.alshandudi@pgr.reading.ac.uk

Research Project: Teachers' Professional Learning in the context of recent educational reforms in Oman.

Teacher Consent Form (for survey)

I have read the Information Sheet about the project and received a copy of it.

I understand what the purpose of the project is and what is required of me. All my questions have been answered.

Name of teacher: _____

Name of school: _____

Please tick as appropriate:

I consent to completing a questionnaire

I agree to the use of anonymised quotations in publications

Signed: _____

Date: _____

Researcher: Hilal Al-Shandudi

Phone: 92901002

E-mail: h.alshandudi@pgr.reading.ac.uk

Research Project: Teachers' Professional Learning in the context of recent educational reforms in Oman.

Teacher Consent Form (for interview)

I have read the Information Sheet about the project and received a copy of it.

I understand what the purpose of the project is and what is required of me. All my questions have been answered.

Name of teacher: _____

Name of school: _____

Please tick as appropriate:

I consent to being interviewed

I consent the interview to be recorded and transcribed

I agree to the use of anonymised quotations in publications

Signed: _____

Date: _____

Researcher: Hilal Al-Shandudi

Phone: 92901002

E-mail: h.alshandudi@pgr.reading.ac.uk

Inspector information sheet

Research Project: Teachers' Professional Learning in the context of recent educational reforms in Oman.

I would like to invite you to take part in a research study about Professional Learning.

Project supervisors: Dr. Chris Turner; Dr. Richard Harris

Dear Inspector

I would like to invite you to take part in a research study about teachers' Professional Learning.

What is the study?

This research is a part of the PhD requirements at the Institute of Education, University of Reading in the UK. It aims to investigate the Professional Learning (PL) opportunities (defined as: a learning activity that aims at improving teachers' practice in the classroom like workshops, seminars, discussion groups) and their effectiveness in improving teachers' practice. It hopes to contribute to teachers' practice in general and to their PL in particular. It is intended to develop a framework that can be used to promote PL in the MOE in Oman.

The study will involve teachers, headteachers and inspectors. Teachers and headteachers will be asked to complete a survey and might be asked to sit for an interview; inspectors will be asked to sit for an interview. The interviews will be audio recorded. The recordings will be transcribed and anonymised before being analysed.

Why have I been chosen to take part?

You have been invited to take part in the project because

- Your role in the provision of teachers' PL.
- Your influence on teachers' PL
- Your opinion is very helpful to the research

- You have been randomly selected

Do I have to take part?

It is entirely up to you whether you participate. You may also withdraw your consent to participation at any time during the project, without any repercussions to you, by contacting the Researcher, Hilal Alshandudi, Tel: 92901002, email: h.alshandudi@pgr.reading.ac.uk

What will happen if I take part?

If you agree to take part, an interview for about 40-45 minutes will be conducted with you to discuss various issues related to teachers' PL in the school or any place that suits you. This will only happen if you give your consent, in advance.

What are the risks and benefits of taking part?

The information you give will remain confidential and will only be seen by the researcher. Neither you nor the school will be identifiable in any published report resulting from the study. Information about individuals will not be shared with the school nor with the head teacher, educational office, or the ministry. The researcher will make sure that all participants are unidentifiable.

I anticipate that the findings of this study will be used to develop teachers' pedagogical skills and thus lead to improvement in classroom teaching and learning in Oman. This development may enhance teachers' performance and may lead to recommendations for changes in strategic planning process. Through my role in the Human Resources Development Department (HRDD) in AlDhahira Educational District I will make sure to disseminate the findings of my research to the officials in the Educational Office and the ministry and help them to improve PL practices.

What will happen to the data?

Any data collected will be held in strict confidence and no real names will be used in this study or in any subsequent publications. The records of this study will be kept private. No identifiers linking you, or the school to the study will be included in any sort of report that might be published. Participants will be assigned a number and will be referred to by that number in all records. Research records will be stored securely in a locked filing cabinet and on a password-protected computer and only the researcher will have access to the records. The data will be destroyed securely once the findings of the study are written up, after five years. The results of the study will be presented at national and international conferences, and in written reports and articles. I can send you electronic copies of these publications if you wish.

What happens if I change my mind?

You can change your mind at any time without any repercussions. During the research, you can stop completing the activities at any time. If you change your mind after data collection has ended, I will discard your data.

Who has reviewed the study?

This project has been reviewed following the procedures of the University Research Ethics Committee and has been given a favourable ethical opinion for conduct. The University has the appropriate insurances in place. Full details are available on request.

What happens if something goes wrong?

In the unlikely case of concern or complaint, you can contact my supervisor: Dr. Chris Turner, at the University of Reading's Institute of Education by email on c.k.turner@reading.ac.uk

Where can I get more information?

If you would like more information, please contact me via email on h.alshandudi@pgr.reading.ac.uk.

What do I do next?

I do hope that you will agree to your participation in the study. If you do, please complete the attached consent form and return it by e-mailing it back to h.alshandudi@pgr.reading.ac.uk.

Thank you for your time.

Yours sincerely

Hilal Alshandudi

Researcher: Hilal Al-Shandudi

Phone: 92901002

E-mail: h.alshandudi@pgr.reading.ac.uk

Research Project: Teachers' Professional Learning in the context of recent educational reforms in Oman.

Inspector consent Form

I have read the Information Sheet about the project and received a copy of it.

I understand what the purpose of the project is and what is required of me. All my questions have been answered.

Name of inspector: _____

Please tick as appropriate:

I consent to being interviewed

I consent the interview to be recorded and transcribed

I agree to the use of anonymised quotations in publications

Signed: _____

Date: _____

Appendix 25

Letter to facilitate the study



Institute of Education
London Road Campus
4 Redlands Road,
Reading, RG1 5EX
phone +44 (0)118 378 2614
fax +44 (0)118 378 2731
email loe-pgr@reading.ac.uk

24 August 2017

To whom it may concern in the MoE

RE: Hilal Al Shandudi

I am writing to confirm that Mr Hilal Al-Shandudi is a full time doctoral student here in the University of Reading, where he is being supervised by Dr Chris Turner and Dr Richard Harris. I would be grateful if you would grant him permission to carry out his research and collect data in schools in Oman in the period between June and October 2015. The title of his research is:

'Teachers' Professional Learning in the context of recent educational reform in Oman'.

If you have any queries please do not hesitate to contact me by email:

c.k.turner@reading.ac.uk

Yours sincerely

Dr C.K. Turner



LIMITLESS POTENTIAL | LIMITLESS AMBITION | LIMITLESS IMPACT

Appendix 26

Ethical approval to conduct the study

University of Reading
Institute of Education
Ethical Approval Form A (version February 2014)

Tick one:

Staff project: PhD

Name of applicant (s): Hilal Alshandudi

Title of project: **“Teachers’ Professional Learning in the context of recent educational reforms in Oman”**.

Name of supervisor (for student projects: Dr Chris Turner; Dr Richard Harris)

Please complete the form below including relevant sections overleaf.

	YES	NO
Have you prepared an Information Sheet for participants and/or their parents/carers that:		
a) explains the purpose(s) of the project	X	
b) explains how they have been selected as potential participants	X	
c) gives a full, fair and clear account of what will be asked of them and how the information that they provide will be used	X	
d) makes clear that participation in the project is voluntary	X	
e) explains the arrangements to allow participants to withdraw at any stage if they wish	X	
f) explains the arrangements to ensure the confidentiality of any material collected during the project, including secure arrangements for its storage, retention and disposal	X	
g) explains the arrangements for publishing the research results and, if confidentiality might be affected, for obtaining written consent for this	X	
h) explains the arrangements for providing participants with the research results if they wish to have them	X	
i) gives the name and designation of the member of staff with responsibility for the project together with contact details, including email . If any of the project investigators are students at the IoE, then this information must be included and their name provided	X	
k) explains, where applicable, the arrangements for expenses and other payments to be made to the participants		X
j) includes a standard statement indicating the process of ethical review at the University undergone by the project, as follows: “This project has been reviewed following the procedures of the University Research Ethics Committee and has been given a favourable ethical opinion for conduct’.	X	
k)includes a standard statement regarding insurance: “The University has the appropriate insurances in place. Full details are available on request”.	X	
Please answer the following questions		
1) Will you provide participants involved in your research with all the information necessary to ensure that they are fully informed and not in any way deceived or misled as to the purpose(s) and nature of the research? (Please use the subheadings used in the example information sheets on blackboard to ensure this).	X	
2) Will you seek written or other formal consent from all participants, if they are able to provide it, in addition to (1)?	X	

3) Is there any risk that participants may experience physical or psychological distress in taking part in your research?		X	
4) Have you taken the online training modules in data protection and information security (which can be found here: http://www.reading.ac.uk/internal/imps/Staffpages/imps-training.aspx)?	X		
5) Have you read the Health and Safety booklet (available on Blackboard) and completed a Risk Assessment Form to be included with this ethics application?	X		
6) Does your research comply with the University's Code of Good Practice in Research?	X		
	YES	NO	N.A.
7) If your research is taking place in a school, have you prepared an information sheet and consent form to gain the permission in writing of the head teacher or other relevant supervisory professional?	X		
8) Has the data collector obtained satisfactory DBS clearance?	X		
9) If your research involves working with children under the age of 16 (or those whose special educational needs mean they are unable to give informed consent), have you prepared an information sheet and consent form for parents/carers to seek permission in writing, or to give parents/carers the opportunity to decline consent?		X	
10) If your research involves processing sensitive personal data ¹ , or if it involves audio/video recordings, have you obtained the explicit consent of participants/parents?		X	
11) If you are using a data processor to subcontract any part of your research, have you got a written contract with that contractor which (a) specifies that the contractor is required to act only on your instructions, and (b) provides for appropriate technical and organisational security measures to protect the data?		X	
12a) Does your research involve data collection outside the UK?	X		
12b) If the answer to question 12a is "yes", does your research comply with the legal and ethical requirements for doing research in that country?	X		
13a. Does the proposed research involve children under the age of 5?		X	
13b. If the answer to question 13a is "yes": My Head of School (or authorised Head of Department) has given details of the proposed research to the University's insurance officer, and the research will not proceed until I have confirmation that insurance cover is in place.			X
If you have answered YES to Question 3, please complete Section B below			

PLEASE COMPLETE EITHER SECTION A OR B AND PROVIDE THE DETAILS REQUIRED IN SUPPORT OF YOUR APPLICATION, THEN SIGN THE FORM (SECTION C)

A: My research goes beyond the 'accepted custom and practice of teaching' but I consider that this project has no significant ethical implications.	
Give a brief description of the aims and the methods (participants, instruments and procedures) of the project in up to 200 words. Attach any consent form, information sheet and research instruments to be used in the project (e.g. tests, questionnaires, interview schedules).	
Please state how many participants will be involved in the project: 197 participants <i>This form and any attachments should now be submitted to the Institute's Ethics Committee for consideration. Any missing information will result in the form being returned to you.</i>	
This research investigates the influence of recent educational reforms in improving teachers' professional learning in Oman. One hundred and ninety seven participants (five inspectors, 12 school heads, 90 male teachers and 90 female teachers) from one Educational Office will be involved in this study.	

¹ Sensitive personal data consists of information relating to the racial or ethnic origin of a data subject, their political opinions, religious beliefs, trade union membership, sexual life, physical or mental health or condition, or criminal offences or record.

Three data collection methods will be used: semi-structured interviews (for all categories of participants) and questionnaires (only with teachers and head teachers).

There will be a pilot study followed by the main study.

SPSS will be used for quantitative analysis and NVivo for qualitative analysis of data. These will be triangulated to provide more robust results.

Participants will have the right to withdraw from the study at any time even after the data have been collected with no consequences which will be clearly mentioned in the Information Sheets.

Any data collected will be held in strict confidence and no real names will be used in this study or in any subsequent publications. The records of this study will be kept private. Participants will be assigned a number and will be referred to by that number in all records. Research records will be stored securely in a locked filing cabinet and on a password-protected computer and only the researcher will have access to the records. The data will be destroyed securely after two years.

B: I consider that this project may have ethical implications that should be brought before the Institute's Ethics Committee.	
---------------------------------------------------------------------------------------------------------------------------------------------	--


Please provide all the further information listed below in a separate attachment.

1. title of project
2. purpose of project and its academic rationale
3. brief description of methods and measurements
4. participants: recruitment methods, number, age, gender, exclusion/inclusion criteria
5. consent and participant information arrangements, debriefing (attach forms where necessary)
6. a clear and concise statement of the ethical considerations raised by the project and how you intend to deal with them.
7. estimated start date and duration of project

This form and any attachments should now be submitted to the Institute's Ethics Committee for consideration. Any missing information will result in the form being returned to you.


C: SIGNATURE OF APPLICANT:

I have declared all relevant information regarding my proposed project and confirm that ethical good practice will be followed within the project.

Signed:  Print Name: Hilal Al-Shandudi Date: 17/03/2015

STATEMENT OF ETHICAL APPROVAL FOR PROPOSALS SUBMITTED TO THE INSTITUTE ETHICS COMMITTEE

This project has been considered using agreed Institute procedures and is now approved.

Signed:  Print Name Andy Kempe Date 27.3.15
(IoE Research Ethics Committee representative)*

* A decision to allow a project to proceed is not an expert assessment of its content or of the possible risks involved in the investigation, nor does it detract in any way from the ultimate responsibility which students/investigators must themselves have for these matters. Approval is granted on the basis of the information declared by the applicant.

University of Reading
Institute of Education

Risk Assessment Form for Research Activities February 2014

PGR project

Name of applicant (s): Hilal Al-Shandudi

Title of project: **“Teachers’ Professional Learning in the context of recent educational reforms in Oman”**


Name of supervisor (for student projects): Dr Chris Turner; Dr Richard Harris

A: Please complete the form below

Brief outline of Work/activity:	Investigating teachers’ perceptions of their current professional learning opportunities and their influence on their teaching practice through questionnaires and interviews. Papers, a pen and a recorder will be used.	
Where will data be collected?	In 12 secondary schools in one educational district	
Significant hazards:	There are no significant hazards. I will follow the current safety guidance of the Educational Offices and schools.	
Who might be exposed to hazards?	No one	
Existing control measures:	I will seek to obtain the permission of the Technical Office for Studies and Development which is the unit authorized to give this permission in the MOE. This will guarantee that schools are aware of all the requirements including safety issues. Also answering the questionnaires will be up to the teachers and headteachers to decide the place and time. The interviews will take place in the schools but outside the classrooms in suitable well ventilated rooms. All schools in Oman are designed to allow enough light and well ventilation. In case there is any issue with the place, I will make sure to find another suitable location that suits the interviewees.	
Are risks adequately controlled:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
If NO, list additional controls and actions required:	Additional controls	Action by:

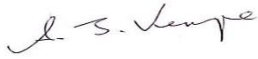
B: SIGNATURE OF APPLICANT:

I have read the Health and Safety booklet posted on Blackboard, and the guidelines overleaf. I have declared all relevant information regarding my proposed project and confirm risks have been adequately assessed and will be minimized as far as possible during the course of the project.

Signed:..... Print Name Hilal Al-Shandudi Date 17/03/2015

STATEMENT OF APPROVAL TO BE COMPLETED BY SUPERVISOR (FOR UG AND MA STUDENTS) **OR** BY IOE ETHICS COMMITTEE REPRESENTATIVE (FOR PGR AND STAFF RESEARCH).

This project has been considered using agreed Institute procedures and is now approved.



Signed:

Print Name Andy Kempe

Date 27.3.15

* A decision to allow a project to proceed is not an expert assessment of its content or of the possible risks involved in the investigation, nor does it detract in any way from the ultimate responsibility which students/investigators must themselves have for these matters. Approval is granted on the basis of the information declared by the applicant.

Guidance notes for the completion of the risk assessment form

Significant hazards:

- Only list those that you could reasonably expect to cause significant injuries or affect several people
- Will the work require the use of machines and tools? How could you or anyone else be injured? Will injury be significant?
- Will the research take place in a high-risk country?
- Will the work require the use of chemicals? Check safety data sheets for harmful effects and any exposure limits?
- Will the work produce any fumes, vapours, dust or particles? Can they cause significant harm?
- Are there any significant hazards due to where the work is to be done, such as confined space, at height, poor lighting, high/low temperature?

Who might be exposed?

- Remember to include yourself, your supervisor, your participants, others working in or passing through the work area.
- Those more vulnerable or less experienced should be highlighted as they will be more at risk, such as children, people unfamiliar with the work area, disabled or with medical conditions e.g. asthma.

Existing control measures:

- List the control measures in place for each of the significant hazards, such as machine guards, ventilation system, use of personal protective equipment (PPE), generic safety method statement/procedure.
- Existing safety measures and procedures in place in the establishment
- Remember appropriate training is a control measure and should be listed.
- List any Permits to Work which may be in force.

Are risks adequately controlled?

- With all the existing control measures in place, do any of the significant hazards still have a potential to cause significant harm.
- Use your judgement as to how the work is to be done, by whom and where.

Additional controls:

- List the additional control measures, for each of the significant hazards, which are required to reduce the risk to the lowest so far as is reasonably practicable.

- Additional measures may include such things as: increased ventilation, Permit to Work, confined space entry permit, barriers/fencing, fall arrest equipment, etc.
- PPE should only be used as a last resort, if all else fails.

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DATA PROTECTION ACT 1998

[Module Selection](#)

This is to certify that


- **Hilal Al-Shandudi**

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