



How and Why are Women Using the
Internet and is it Providing Them
with Opportunities for
Empowerment? A Study Undertaken
in and around Kampala, Uganda

PhD International Development


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Declaration

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

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Abstract

There has been a rapid increase in internet penetration in Africa over the last decade. As women gain access to the internet, it is hoped that it will increase their opportunities for empowerment. However, whether and how the internet will lead to their empowerment is uncertain. This study aims to evaluate whether the internet is empowering non-elite women in and around Kampala, Uganda. It examines the gender dynamics that are affecting women's use of the internet and the opportunities for empowerment that it affords. It also undertakes a contextual analysis of women's use of the internet by exploring how the multiple identities of women and the context of its use are influencing its effectiveness. The research employs a grounded, iterative approach and uses a combination of quantitative and qualitative methods to collect and triangulate the data.

The study demonstrates that once women gain access to the internet it can provide them with opportunities for economic, social, political and psychological empowerment. The research suggests that the use of the internet is helping some women to bypass offline gender constraints particularly in terms of controls over access to information, the ability to freely associate with others and to express oneself freely. On the other hand, the research reveals that some gender norms are being replicated online and these act as barriers to women's empowerment. Furthermore, there are particular constraints such as poor IT skills that prevent women from using the internet effectively and are hence increasing the digital gender divide. This study highlights the importance of understanding the complex relationship between the technology and the gender dynamics and context within which it is introduced, so that strategies can be developed that help close the divide rather than exacerbate it.

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List of Abbreviations

APC	Association for Progressive Communications
CDO	Community Development Officer
CIPESA	Collaboration on International ICT Policy for East and Southern Africa
DGD	Digital Gender Divide
FAT	Feminist Approach to Technology
FGD	Focus Group Discussion
FGM	Female Genital Mutilation
GNI	Gross National Income
ICT	Information and Communication Technology
ICT4D	Information and Communication Technology for Development
IT	Information Technology
KI	Key Informant
KII	Key Informant Interview
NGO	Non-governmental Organisation
PGE	Participatory Group Exercise
PPI	Poverty Probability Index
PTC	Primary Teachers College
SNS	Social Networking Site
SRH	Sexual and Reproductive Health
SSA	Sub-Saharan Africa
STI	Sexually Transmitted Infection
TLC	Treasure Life Centre
WHO	World Health Organisation
WOUGNET	Women of Uganda Network

Chapter 1 Introduction

1.1 Introduction

The potential impact of ICTs on the Majority World¹ has been a contested issue within development spheres for many years. Initially, there were those who saw these new technologies as a means of helping people within the Majority World to leap frog over their infrastructural constraints and grasp the social, economic and political opportunities that these technologies proffer. Consequently, the aim of many development interventions at the turn of the millennium was to close the “digital divide” between the Minority and the Majority World through increasing access to ICTs such as the internet. “Hole in the Wall” computer projects, computer labs and telecentres were established to attempt to bridge this divide (Warschauer, 2003).

On the other hand, there are those who have viewed this optimism as misguided. They claim that the idea that the introduction of these technologies would bring about social, economic and political change, is a reflection of the heavily critiqued modernist perspective that views technological transfer alone as an over-arching solution to poverty and inequality (Asiedu, 2012). Instead they counter that meaningful access to ICTs is more than just providing the hardware or the internet connection. Many scholars propose that the success of the technology at eliciting change is dependent on the relationship between the technology and the social structures in which it is embedded (Warschauer, 2003). Indeed some scholars purport that rather than reducing poverty and inequality, the introduction of the internet may well be increasing poverty and inequality as it serves to promote the underlying interests of those who are promoting its use and those already in power (Unwin, 2017).

¹ The term “Majority World” was first used in the early nineties by a Bangladeshi photographer Shahidul Alam to represent what has formerly been known as the “Third World” or “Developing World”. The term highlights the fact that these countries are indeed the majority of humankind and it defines the group of countries in terms of what they are rather than what they lack.

The last decade has seen the rapid growth of internet penetration in the Majority World, particularly in Africa (African School of Internet Governance, 2019) where as of March 2020 it was estimated that there were over a half a billion internet users (Internet World Stats, 2020) with another 300 million new subscribers predicted by 2025 (GSMA, 2018a). As a result of the widespread introduction of the internet, emphasis has shifted from the digital divide to the digital gender divide. There are gender gaps in access to the internet in most African countries (Sey and Hafkin, 2019) and the research to date has been inconclusive as to whether ICTs should be seen as a threat to women, thus increasing gender inequalities or an opportunity for them to leapfrog over hitherto patriarchal constraints and hence reduce these inequalities (Hilbert, 2011).

This debate around the significance of the internet as a transformative accelerator for social, political and economic change extends into the realm of women's empowerment. It has long been recognized that women's empowerment is a development objective in its own right (World Bank, 2011) and more recently it has been promulgated that access to ICTs are an important way of promoting empowerment for women. The importance of ICTs in fostering women's empowerment is shown by its incorporation into the Sustainable Development Goals (SDGs), with goal 5b setting the target of "enhanc(ing) the use of ... information and communications technology, to promote the empowerment of women" (UN, 2015). Despite the widespread acceptance of this development goal, many scholars have questioned the inevitability of the link between access to ICTs and women's empowerment. They question the technological determinism that it belies, and the underlying assumption that once women gain access to these ICTs, they will necessarily become empowered (Gurumurthy, 2004). Instead, they recognize the importance of context in shaping the way that these technologies are used (Gajjala, 2002) and acknowledge that their introduction may well lead to greater gender inequality depending on the context of their use.

Much of the gender and ICT4D discourse to date has focused on women gaining access to the technology or, in terms of research, the evaluation of ICT interventions that have encouraged women to engage with the technology. However, now that the ability to access the internet has increased, such that millions of ordinary women can access the internet on their own smartphones, it is time to look beyond access and evaluate whether and how the internet is empowering women. It is important to understand the gender dynamics surrounding its use so as to ensure that future ICT policies, projects and applications do not exacerbate current gender inequalities or even create new ones. This study attempts to undertake this investigation from a gender perspective with the purpose of understanding how the context surrounding their access and use is affecting opportunities for empowerment. Further justification for this study is set out in the section below and the literature review carries on the discussion of the themes raised above in further detail.

1.2 Research Justification

Most of the rapid growth in internet penetration in Africa relates to mobile internet-use and yet most of the research to date has focused on people using the internet on computers at research institutions or internet cafes and has tended to focus on elites (such as students or professionals within the business community). Although the research in the Minority World has moved on from looking at gender differences in access to differences in usage because the gaps in access have closed (Hargittai & Hsieh, 2013), this transition has not yet occurred in Africa. As a consequence of the continued gender gap in access in Africa, most of the research has concentrated on access and there has not been an in-depth examination on the way that women are using the internet (Asiedu, 2012).

In particular, much of the research on ICT4D has been devoid of any power, gender or contextual analysis. There is some research that examines the formal mechanisms through which internet-use can influence how power is exercised and enforced such as through e-governance but this is not focusing on the

consequent changes in power dynamics within women's lives (Cummings & O'Neil, 2015). There is also research that assesses the potential for ICTs to empower from an instrumental perspective, for example, in terms of economic empowerment but very little research that assesses its potential from a non-economic and a more intrinsic perspective (Kivunike, 2015). If the research does shine a light on how women can become empowered from ICT use, it is often within the context of ICT interventions, where women are seen as the recipients of ICTs, rather than as active users (Asiedu, 2012) thus overlooking the potency of women's agency (Buskens & Webb, 2014).

As discussed already, much of the research has focused on women gaining access to the internet. There has been little research on the gender dynamics around use of the internet, particularly with women accessing the internet through their phones. Despite Hafkins call in 2002 (Hafkin, 2002) for a "gender lens" to evaluate ICT4D projects, this lens has rarely been applied to the use and impact of the internet on people's lives. Furthermore, as identified by Cummings' and O'Neil's (2015) literature review on ICTs and women's empowerment,

“...the key questions – and ones where more research is needed - are *which* women are able to access ICTs, under *which* conditions can they use them effectively and for *what purpose?*”

There has also been a lack of research on how socio-economic circumstances impact upon women's relationship with technology. Context is important. Gender relations are not only conditioned by broader socio-economic and cultural norms, they are also conditioned by age, wealth, education, that is, by a range of demographic and socio-economic factors that affect relations both *between* and *among* women and men (Huyer, 2006).

This research therefore sets out to fill some of the research gaps identified above. It focuses on how non-elite women are using the internet, not necessarily within an institutional setting but within their own homes and communities. It recognizes that women are active users of the internet and

therefore attempts to put their voices and their perspectives at the centre of the research. It examines how their use of the internet is providing them with opportunities for empowerment, not just from an economic perspective but from a more holistic perspective through understanding the changes that it has brought about in their lives. Furthermore, it links the empowerment occurring at the micro-level with possible changes in power dynamics at a structural level.

This study uses a gender lens to examine how gender dynamics are influencing women's use of the internet and the opportunities for empowerment that it provides and how these dynamics are, in turn, being changed by it. It does this by incorporating both women and men into the research design, but only focusing on women within the thesis. Men act as the invisible norm against which women's use of the internet is compared and so highlight the possible gender dynamics at play. Finally, the study determines what type of women, in which circumstances are benefitting the most from using the internet. This is done in order to gain a better appreciation of the intersections between gender and the demographic and socio-economic factors that situate changes in power dynamics, resulting from women's interaction with the technology.

The research was undertaken in Uganda, a country with a rapidly changing ICT landscape and that yet has a relatively high level of gender inequality (UNDP, 2019). As such it provided an interesting backdrop to study how gender dynamics and socio-economic factors were shaping the use of internet by women. Further background information on Uganda is included in Chapter Three.

1.3 Study Aim, Research Objectives and Questions

1.3.1 Research Aim

The primary research aim is to evaluate whether and how the use of the internet is empowering women in and around Kampala, Uganda and to understand the gender dynamics surrounding its use.

1.3.2 Specific Research Objectives and Questions.

Objective 1. To gain an understanding of internet access and use at the study sites:

- a) Why are women using the internet?
- b) How are women accessing it?
- c) How are women learning to use it?
- d) How frequently are they using it?
- e) What are the factors/constraints that are influencing women's access and use of the internet?

Objective 2. To understand whether and how women's use of the internet is providing opportunities for empowerment:

- a) What changes has women's use of the internet brought about in their lives?
- b) How might these changes be empowering?
- c) What types of empowerment are these changes bringing about at an individual level?
- d) What is the potential for changes in power dynamics to occur at a structural level as a result of the changes at an individual level?

Objective 3. To explain how gender dynamics are affecting women's access to and use of the internet and the opportunities for empowerment that the internet affords:

- a) What are the differences in women's and men's access to and use of the internet?
- b) What are the differences in the changes that the use of the internet has brought about in women and men's lives?
- c) Why are these differences occurring?
- d) What are the particular gender constraints that may be limiting women's access and use and reducing the opportunities for empowerment?

Objective 4. To gain an understanding of what type of women in which circumstances are able to access and use the internet and benefit from these opportunities for empowerment:

- a) How do the multiple identities of the women themselves (age, educational attainment, marital status and poverty etc) affect their access and use of the internet and the subsequent opportunities for the internet to empower?
- b) How do the different social, economic and political factors at the different study sites affect their access and use of the internet and the subsequent opportunities for the internet to empower?

1.4 Scope of the Thesis

For the purpose of this PhD, the definition of the internet is taken as “the electronic network of networks that links people and information through computers and other digital devices allowing person-to person communication and information retrieval “ (DiMaggio *et al.*, 2001). The term “internet” is used to describe both the infrastructure that facilitates this network but also the uses to which the internet is put, for example, social media. The study therefore includes the use of the internet through mobile phones, otherwise known as the mobile internet and focuses on the personal appropriation of this technological infrastructure (for example, the use of the worldwide web, e-mail, and social media) rather than its organisational appropriation.

The study will target women who already have access to the internet, so that the focus of research can be on whether the internet is empowering them. The constraints to women’s access to the internet will be touched during the research but it will not be a main focus of the research per se. Furthermore, given the resource limitations inherent in a PhD project, the research focuses on how women’s use of the internet is affecting their own lives; it is outside the scope of this study to analyse the impact of other people’s use of the internet on their lives.

1.5 Outline of the Thesis

Chapter Two develops the theoretical context for the research and draws upon the literature from women’s empowerment, gender and ICT4D and communication power. In particular, it sets out and explains the conceptual framework.

Chapter Three sets out the context of internet use in Uganda. It briefly describes the social, economic and political landscape of the country, including the levels of poverty and gender inequality found within Uganda. It provides an overview of current accessibility of the internet and the main inhibitors of internet-use. It then moves on to briefly review the current ICT policies and legal framework, including the recent introduction of the social media tax.

Chapter Four provides details of the methodology of the study. It sets out the epistemology and methodological approach, the research design and the selection of study sites and participants, the data collection methods and tools and the types of data analysis employed. Finally, the chapter discusses the researcher's perspective, positionality and reflexivity and the limitations of the methodology.

Chapters Five, Six, Seven and Eight are results chapters. Chapter Five sets the scene as to how and why the participants are accessing and using the internet, and the constraints that are influencing their use. The other three results chapters focus on the key enablers that gaining access to the internet provides: the ability to search for information, skills and opportunities; the ability to interact with other people; and the ability to express oneself. Chapter Six sets out how the internet is enabling the participants to access information, skills and opportunities. Chapter Seven examines how access to the internet is changing who the participants are interacting with. Chapter Eight presents the research findings in terms of the implications of the participants' use of the internet for increased self-expression. The chapters are structured so that they start by examining the changes in control over access to these enablers that internet use has brought about. They then move on to look at the possible opportunities for empowerment from economic, social, political and psychological perspectives. In each results chapter, the gender dynamics surrounding the use of the internet are considered as well as the type of women and in which circumstances.

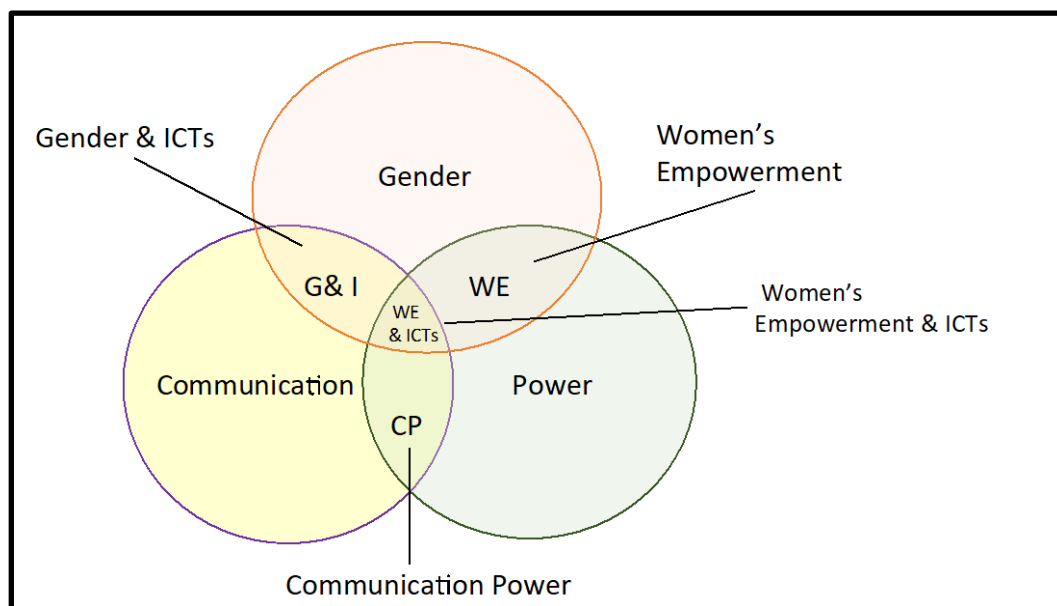
Chapter Nine is the discussion chapter. It discusses the findings in respect of the research objectives and brings in the relevant literature to help draw some final conclusions. Chapter Ten, the concluding chapter, summarises the main findings and highlights the implications for knowledge and for policy and practice. Finally, it makes suggestions as to areas where further research would be beneficial.

Chapter 2 Literature Review

2.1 Introduction

This study sits at the nexus of the three development themes of gender, communication (ICTs) and power (see Figure 2.1 below). The first half of this chapter briefly examines the literature concerning the three intersections of women's empowerment, communication power and gender² and ICTs. It then reviews the literature on the central theme of women's empowerment through use of ICTs. The final section of the chapter sets out the conceptual framework that is used to analyse the data. This framework was developed from an understanding of the concepts within the literature as presented here and from the analysis of the data from the study.

Figure 2.1 Venn Diagram Showing the Key Themes to be Explored in the Literature Review.



² Gender is defined as “the socially acquired notions of masculinity and femininity by which women and men are identified” (Momsen, 2009, p 2)

2.2 Women's Empowerment

The concept of women's empowerment first appeared within the development arena in the 1980's as a transformative idea that served as a reaction against the economically focused and apolitical Women In Development (WID) model³ of development that prevailed at the time. The concept emerged from several key discourses within the women's movement (Batiwala, 2007): the "liberation theology" arising out of Latin America and the ideas spearheaded by Paolo Freire challenged the previous top-down paternalistic development approach but nevertheless ignored the oppression of women in particular; Gramsci's ideas of the hegemonic role of dominant ideologies were also being resurrected at the time; and the emergence of social constructionism theory and post-colonial theory also influenced the new ideas being formed by the women's movement (ibid). By introducing the gender dimension to these theories and ideas, the concept of women's empowerment was conceived (see Willis, 2009 for further details).

By the 1990's, women's empowerment was an important policy aim within the gender and development agenda (Huyer, 2006). It had been widely adopted by international NGOs, multi-lateral agencies and governments alike and at one point was deemed to be almost a "magic bullet" to alleviate poverty and promote gender equality (Batiwala, 2007). However, despite its significance, the concept of empowerment is ambiguous and poorly defined (Gigler, 2004). Part of this ambiguity results from the complexity of the concept of power from which it is derived and part of it results from the multidimensional nature of its potential outcomes (Rowlands, 1995).

Rowland's (1997) analysis of power has been deeply influential in the debate about women's empowerment. She categorises power into *power over*, *power to*, *power with* and *power within* and reveals the different levels at which empowerment could be achieved (personal, close relationship and collective).

³ For a detailed explanation of this model of development see Parpart et al, 2000.

Table 2.1 Rowland’s types of power – definitions and underlying interpretations of empowerment.

Types of Power	Definition of Power	Interpretations of Empowerment
<i>Power to</i>	It is a generative or productive power that enables people to act. It involves the power to solve problems and to exercise choice.	Capability approach (Sen) Gender (Kabeer)
<i>Power with</i>	It focuses on collective agency and collective consciousness – building. It creates strength and solidarity from the collaboration with others and collective action. The whole is greater than the sum of the individuals’ power.	Social Capital (Putnam, Bebbington)
<i>Power within</i>	It refers to self –confidence, self awareness/knowledge and self efficacy that is a pre-condition for action. It is an important part of agency.	Critical consciousness (Freire) Gender (Kabeer)
<i>Power over</i>	The ability to control others and effect the actions and thoughts of the powerless. Includes visible, hidden and invisible power.	Hegemony (Gramsci) Power (Weber) Power (Lukes)
Based on Rowlands 1997, Gigler, 2004, Miller at al, 2006		

Table 2.1 above sets out the definitions of these different types of power and their implications in terms of empowerment. Most development interventions with an empowerment agenda have traditionally concentrated on the “power to” aspect of empowerment and therefore the means for empowerment, that is the capabilities and resources that are necessary for individuals to become empowered (Longwe, 2000, Batiwala, 2007). The focus on to the “power to” aspect of empowerment rather than the “power over” aspect has been heavily criticized. There is a view that when the concept of women’s empowerment was mainstreamed within the development arena and taken on by multilateral agencies in a more instrumental guise (for example, women’s access to education or credit), the more radical emphasis on overturning power relations, which was originally at the heart of empowerment, was lost and its real potency weakened (Laderchi, 2001). In effect, the “power” element of empowerment was diluted and the concept degenerated

into a set of technocratic interventions (Batiwala, 2007). As a reaction to this criticism, Longwe's Women's Empowerment Approach creates a hierarchical empowerment model that places the concepts of welfare and access (changing "power to") at the bottom of the empowerment pyramid and the concepts of conscientisation, participation and control (changing "power within", "power with" and "power over") at the top. Her model also includes an analysis of changes in gender relations at each of these levels and suggests that empowerment needs to be understood as a concept involving changes at different levels and in different dimensions (Longwe, 1995).

The requirement to measure women's empowerment has sometimes lead to the concept being seen an outcome rather than a journey or a process (Cornwall & Edwards, 2010). However, it is difficult to measure for many reasons partly because it is situated (Champeau & Shaw, 2002) and is contingent and contextual (Cornwall & Edwards, 2010). A measurement indicator for empowerment in one context may not be applicable in another circumstance. A good example of the complexity around measuring empowerment can be seen in the debate around "silence" between Parpart and Kabeer (2010). In certain circumstances silence could be interpreted as a consequence of empowerment as women remain silent in an act of defiance and as a challenge to patriarchal control where as in another situation, it could be seen as an outcome of disempowerment where women's voice is suppressed and women have no choice but to remain silent.

Another important aspect of empowerment is that it cannot be bestowed upon women, (Rowlands, 1997); it must come from within, from the women themselves (Kabeer, 2003). In this sense, empowerment is therefore not about means and ends but is more a "process whereby women can freely analyse, develop and voice their needs and interests, without them being pre-defined or imposed from above" (Oxaal and Baden, 1997, p6). This also fits in with Freire's ideas of "conscientisation" whereby oppression is internalized such that the sense of what a person can do and what they are due from society is limited and can only be reversed through a process of critical consciousness. He argued that knowledge is a social construct and therefore cannot simply be transferred, it can only be

acquired through a process of co-learning based on reflection, dialogue and practical action (Freire, 1972). It is not only about enlarging the boundaries within which people can act, it is about extending the horizons of possibilities of what they imagine they can do (Cornwall and Edwards, 2010). For this reason, some scholars have chosen to include this sense of possibility for change within their definition of empowerment. For example, Eyben et al in their 2008 paper, define it thus,

“ empowerment happens when individuals and organized groups can imagine their world differently and realize that vision by changing the power relations that are keeping them in poverty. “ (Eyben et al, 2008, p3)

The realizing of that vision requires agency. Once again, women should not just be seen as recipients of resources and skills and be empowered through the actions of others, but should become agents of change themselves (Kabeer, 2005). Kabeer (1999, p 438) defines agency as,

“the ability to define ones goals and act upon them”.

At the personal level, as already discussed, this agency can be achieved through *power within* which focuses on self-awareness, self-esteem and consciousness building and the more psychological dimensions of empowerment. It is also closely connected to *power with* and the more collective level of empowerment that concerns networking and alliance building. Kabeer’s influential view of empowerment rests on the idea of power as “the ability to make choices.” She defines empowerment as,

“the processes by which those who have been denied the ability to make choices acquire such an ability” (Kabeer, 2003, p. 170).

One of the criticisms of the women’s empowerment approach within development is that the emphasis on individual or collective agency, moves the focus away from the analysis of the oppressive structures that disempower women (Wilson, 2008).

Agency itself is not necessarily transformative; it could be argued that this will depend upon whether the structural inequalities within society (for example, gender relations or class) that keep people disempowered can also be transformed (Luttrell et al, 2009). Many scholars have attempted to address the importance of these structural issues within their conceptions of empowerment. Kabeer conceptualizes three dimensions of empowerment: resources, agency (as already discussed) and achievements. For her, these enabling resources, including income and for example, claims to material, human and social resources, are the preconditions for empowerment (Kabeer, 1999). Alsop & Heinsohn (2005) use the term “opportunity structures” to represent the formal or informal institutions or “rules of the game” that determine whether individuals can gain agency, defining agency as the capacity to make meaningful choices. They also frame the concept of empowerment at different levels (local, intermediary and macro) and domains (state, market, society).

Using Rowland’s (1997) and Luke’s (1974) conceptualisations of power, Gaventa (1980 and 2006) has tried to operationalise the idea of *power over* and developed three interactive dimensions of *power over* which have been used by development practitioners to analyse empowerment from a more structural perspective (Just Associates, 2006, Oxfam, 2014). The three interactive dimensions are *visible*, *hidden* and *invisible* forms of power. *Visible* forms of power are the formal mechanisms through which power is exercised and enforced and take place within the public arena. The most obvious form of visible power is an elected parliament but other institutions like the judiciary, the police, government agencies also represent this form of power. Decisions made within these public spaces are perceived to be made based on logic, fact and open deliberation. These public arenas are seen as neutral playing fields where it is assumed that the voice of all those concerned will be taken into account. It is argued that in decision-making in these public arenas is not “neutral” and that *hidden* forms of power are in fact being manifested. Certain powerful actors or corporations may be influencing control over the decision-making agendas. The media plays an important role in setting this agenda and is often controlled by powerful corporations or individuals that have vested interests in the outcome of these decision-making processes. The

exclusion of certain voices from the media may result in them being excluded from the decision-making process itself or the negative portrayal by the media of certain groups may undermine the credibility of their arguments. Finally, *invisible* power is an insidious form of power in which people may not even be aware that power is being exercised over them. It is not just a question of issues not being brought to the decision-making table, the problems, ideas, sense of rights behind these issues may not even be within the consciousness of the people involved (Gaventa, 2007). For example, injustices such as racism and sexism may not even be recognised within a society. This type of power can be manifested in many ways but one of these is the way that those in power have control over information: either in a passive way, by not providing information that would assist people in becoming more aware of different viewpoints or taking greater control over their lives; or in an active way by preventing people from accessing information or by spreading misinformation (Miller et al, 2006). Another way that this form of power manifests itself is by defining and reinforcing the dominant ideologies and the social and cultural hegemony that frames our understanding of the world and our sense of self within that world. In turn, this shapes the boundaries within which change can occur (Gaventa, 2007).

Overall, it can be seen that the concept of women's empowerment is difficult to define and hard to measure. It operates at different levels and in different dimensions and requires a deep understanding of the nature of power. It can be seen either as a means, an end or a process. Some development approaches have focused more on agency and others on structural issues. Many of the empowerment ideas highlighted above have influenced the development of the conceptual framework and will be discussed in more detail in section 2.6 when the framework is examined.

2.3 Communication Power

This section of the literature review, examines the extent to which the use of the internet has resulted in changes in power dynamics within society. The first half of this section presents the literature that extolls the virtues of the internet in terms of shifting the balance of power to the less powerful and the second half presents the opinions of those who see the internet as increasing the concentration of power in the hands of the few.

Manuel Castells' exposition of the relationship between power and communication has been influential in the debate as to whether the unique features of the internet can enable the current power structures to be challenged. Drawing upon the work of Weber he defines power as follows:

‘ the relational capacity that enables a social actor to influence asymmetrically the decisions of other social actors in ways that favour the empowered actor's will, interests and values” (Castells. 2013, p10)

Shaped by the work of Habermas and Foucault he explains how power is exercised through communication. He proposes that the legitimization of the dominant values, interests and will of those in power not only requires the threat of coercion, it also requires consent which is elicited by the construction of shared meaning. This shared meaning is constructed in society through the process of socialised communication and according to Castells, socialised communication is communication that exists in the public realm beyond the interpersonal. Before the introduction of new ICTs, the main source of socialized communication was the mass media. Power is exercised not just by coercion but by the

“construction of meaning in the human mind through processes of communication enacted in global/local media networks of mass communication including mass self communication.” (Castells. 2013 p.416)

In effect, Castells is arguing that our minds are shaped by the images and narratives that we receive from mass media communications and that those in power can therefore use this form of socialized communication to mould the public's will, values and interests to favour and support their own. Media corporations set the agenda for what is to be discussed on television and in newspapers, they prime the audience as to what are the key arguments in a debate and frame the narratives, that is, select, highlight and connect certain aspects of an event. They also use emotions such as anger, fear, or enthusiasm to influence what we think about and how we think about an issue so as to promote a particular interpretation of events.

The significance of the internet is that it has facilitated "*mass self communication*" which offers *the potential* to shape the public mind and therefore to challenge the existing narratives of the media and ultimately the values of institutions and the state. Mass self communications are "mass" because they can reach a global audience and they are also self generated in content (for example, You Tube videos, blogs, websites, social media sites), self directed in emission and self selected in reception; you can search for whatever you want on the worldwide web except in places where censorship prevails.

Castell identifies that mass self-communication increases individual autonomy. It increases freedom to access and share information and provides the freedom to autonomously construct social networks that exist in "spaces of autonomy". In addition to the increase in autonomy, mass self-communication facilitates the creation of large global social movements outside the control of those already in power.

"Power relies on the control of communication where as counter power depends on breaking through such control" (Castells, 2013, p3)

The internet therefore allows for non-institutional social or political action by civil society or other groups with the ability to shape the public mind. He uses some of the social movements generated by the Arab Spring uprisings in Tunisia and Egypt as examples of how social movements can successfully use the internet to change

the narrative and ultimately challenge the status quo, partly through mobilising people and partly through revealing misinformation (Castells, 2013).

Other scholars have used Habermas' concept of the "public sphere" to elucidate whether and how the internet is shifting power within society (Webster, 2014, Warschauer 2003, Margetts, 2013). According to Boeder (2005) the internet can be seen as providing a "public sphere" or rather a space where public discussion and deliberation can take place, in the same way that the coffee houses of Vienna provided a physical space for Habermas' original idea of the concept. Within this space, people have the freedom to speak directly without the need for intermediaries, thus bringing about disintermediation and empowerment (Webster, 2014). Shirky (2008) also promotes the idea that the internet through social media enhances new freedoms online,

" To speak online is to publish, to publish is to connect with others. With the arrival of globally accessible publishing, freedom of speech is the new freedom of the press and the freedom of the press is the freedom of assembly". (ibid, p 172)

The internet facilitates not only freedom of speech but also freedom of association within these spheres. Papacharissi (2010) like many scholars, recognizes that there is a new form of political engagement online with internet users being able to blog, tweet, watch, share videos and post comments about the issues that are important to them as part of online discussion groups (ibid). She views this as constituting an expression of political dissent within a public sphere that emanates from a private sphere. For Papacharissi (2010) this is important as the internet bridges the gap from the personal to the political as well as from the self to polity and society. This blurring of the binaries of a public sphere and a private sphere should in principle encourage greater political engagement.

There are other more formal mechanisms in which the internet is seen to engage with how power is exercised and enforced within the public arena. E-governance initiatives can make government more transparent and provide citizens with

online access to information about government services and about their rights and entitlements (Heeks, 2001). Additionally, the internet can promote transparency and accountability by allowing citizens access to see how decisions were made and by facilitating citizen feedback on services and policies (Association for Progressive Communications, 2009). There have also been debates about the extent to which the internet encourages formal political participation. There are those who have proposed that the internet would reinforce the participation of those who traditionally participated in democratic life but would not increase engagement (Norris, 2001, Bimber, 2001). More recent evidence shows that the internet may be mobilizing new individuals, such as young people, who have not traditionally participated in politics (Margetts, 2013).

Whilst the internet challenges “power over” through the ability of individuals to communicate, to network and participate, it also provides for the “democratization of knowledge”. According to Sanger (n.d.), until recently knowledge was established and disseminated by the elites, such as “priests and publishers” whereas now, with the internet, all contributions to knowledge can be treated equally such that what we know can be gained in a more egalitarian way. There are few controls over the information that we can access online. Knowledge can emanate from a variety of heterogeneous sources that increase the information available and allow us to choose the source. On the other side of the coin, it also allows internet users to become their own “autonomous epistemic agents” (Mobner & Kitcher, 2017) and to create and share their own knowledge, thus allowing previously excluded and marginalized groups to contribute to the generation of knowledge.

As shown in the literature set out above, the internet has many emancipatory features that have the potential to radically change power dynamics within society. On the other hand, there are many who recognize that although the internet has this potential benefit, the socio-economic and political realities of the society in which we live have re-shaped this potential in more sinister directions.

The contradictory potential of the internet is shown very clearly in terms of the democratization of knowledge. Whilst the amount of information that everyone can access has undoubtedly increased, Mobner & Kitcher (2017) argue that this becomes a problem in itself. They argue that the traditional markers that enable us, in the offline world, to assess whether information is true or false are removed and instead we are faced with “epistemic opacity” and are unable to sort out the “wheat from the chaff” and discern misinformation or disinformation. Origgi (n.d.) confirms that our mastery of reputational clues about the quality of information has been diminished online. Ironically, the fact that “we are all authors” (Keen, 2008) has also undermined who we can trust online, since the traditional clues as to the veracity and provenance of the author are lost. For Waisbord (2018), the problem lies even deeper. The networked, flatter structure of the creation and dissemination of information using the internet, has challenged the previous vertical structure of knowledge production and dissemination that existed and with it the elite consensus of truth that was embedded within it. According to Waisbord (2018), the Enlightenment principles of science and reason that sat behind the principles of knowledge generation have been weakened as this hierarchical structure begins to be undermined. Previously the experts and mass media organisations acted as gatekeepers to knowledge generation but as this diminished, so have these underlying epistemic principles (ibid). Mass self-communication on the internet has unleashed a proliferation of ideas with epistemologies that differ in their engagement with the “truth”. This has led to a proliferation of “fake news” and falsehoods online as the underlying principles of science and reason are dismissed. Certain interest groups, politicians and corporations have used the chaos of this contemporary communication situation to spread disinformation, “fake news” and propaganda and the ordinary citizen is simply not armed with the tools to discern the “truth” (ibid).

Even searching for information online has a socio-economic political dimension. Mobner & Kitcher (2017) examine the way that searching for information online is not neutral, search engines such as Google personalize searches so that information-seekers “remain within the epistemic circles in which they have previously travelled”. The information sources provided to the user through these

search engines are “tailored” through algorithms based on our online searches to date. This has the potential to reinforce stereotypes and can lead to “fragmentation and cocooning” (Webster, 2014). On the one hand, the filtering of information leaves us trapped in our own “information cocoons” (Sunstein, 2006); echo chambers that can lead to the exclusion of ideas that challenge our current beliefs and therefore result in polarization of ideologies. At the same time, the abundance of information, fragments our attention and results in increased isolationism. According to Webster, this is dangerous as it erodes the areas of common ground in which a consensus of opinion can be formed and thus could lead to an erosion of democracy.

Although the horizontal, one to many, form of communication that the internet affords, in principle, gives a voice to those who may not have had a voice in the past, it does not mean that these voices will necessarily be heard (Hindman, 2009). Fuchs states that it is naïve to believe that everyone’s opinion will have the same visibility or attention on social media, for example. It is the well-connected, the rich and the powerful who will command more attention and will buy themselves this attention if needs be. Fuchs also questions the extent to which ordinary citizens are using social media to offer their political opinions and engage politically. His analysis suggests that most people using social media are just sharing information rather than expressing their political views and are rarely using it for political activism. Other scholars also question the extent to which using social media for blogging, micro-blogging and commenting is political activism and claim that it is watering down real offline political activism (Jodi Dean, 2005).

Fuchs’ (2017) examination of the political economy of social media raises particular doubts on the ability of the internet to reduce the power of the capitalist institutions and allow the ordinary citizen to take more control over their lives. Rather than democratization, he purports that the internet has enabled the commodification of human creative activity. The technology giants who own social media and the search engines provide free access to their platforms and services in return for the permission to sell the data gathered on their users online

activities in order to generate advertising revenue. In effect, these companies are amassing our personal data in order to accumulate capital in what Zuboff has called “surveillance capitalism” (Zuboff, 2015). Even, Castells, the great proponent of the emancipatory affordances of the internet has labeled this as the “commodification of freedom” (Castells, 2013, p421). It is not just the economic exploitation of the users that is of concern. Research has shown that our emotions can be manipulated online through social media (Kramer et al, 2014, Bond et al, 2012) and that as more data is gathered these emotional responses can be fine-tuned (Benkler, 2016). This puts a significant amount of power in the hands of the social media companies such as Facebook or the owners of telecommunications companies who have access to this data. This opens up the possibility of abuse by those in power as illustrated by the case of the consulting company Cambridge Analytica micro-targeting voters using tailored messages based on Facebook data to manipulate the outcome of elections across the world (Roberts, 2018).

This section of the literature review started off by presenting the literature that highlights the emancipatory potential that the internet affords. However, the latter half of the section revealed that as time has progressed, the hopes and dreams surrounding its empowering potential have been replaced by the nightmare of a world where control is centralized in the hands of a small number of big tech companies who have the potential to survey our every move and manipulate our behavior. Only time will tell how these contradictory visions will play out. This part of the literature review has focused on publications from the Minority World. The question arises as to whether this has implications in the Majority World. There remains a dearth of evidence from the Majority World and further research is required to understand the power dynamics created by the internet within the context of the Majority World where the emancipatory potential may be greater and the perceived commercial value of the individual internet user may not be as high.

2.4 Gender and ICTs

The literature describing the relationship between gender and ICTs is concentrated around the idea of the digital gender divide (DGD). This section of

the review will start by examining different conceptualisations of the digital divide (DD) and the DGD within the literature and will then determine the current gender gap in the use of ICTs within the Majority World. Most of the section will explore the literature on the constraints that women face that may explain the DGD. Finally, there will be a brief review of some of the suggested solutions for closing the digital gender divide.

The digital divide was developed as a concept over a quarter of a century ago and is described as the gap between those who have access to ICTs and those who do not (Norris, 2001). Norris' definition of the digital divide encompasses three different aspects of the divide; the divide between the Majority and Minority world, the divide between rich and poor within the same country and the "democratic divide" between those who can and can't use digital resources to engage, mobilise and participate in public life (p4). There are many other conceptualisations of the digital divide (Van Deursen, 2010). One of these is the concept of the first and second level digital divide (Hargittai, 2002) with the first level related to inequalities in access to the technologies and the second level related to inequalities surrounding use. Most of the research to date in the Majority World has focused on inequalities of access but more recently this emphasis has shifted towards use (Antonio and Tuffley, 2014).

Graham (2011) questions the underlying temporal and spatial assumptions behind the concept of the digital divide between the Majority and Minority World. He claims that the concept of the digital divide often suggests that there is a linear pathway for ICT uptake within society and that the Majority World is behind the Minority World but will catch up over time. Similarly, he suggests that there is an underlying notion of a spatial divide within the concept with those who have access to "cyberspace" and those who do not. He claims that this leads to the misconception that the solution to the digital divide is to build "a bridge" so as to allow those in the Majority World to cross over into cyberspace. He argues that these underlying temporal and spatial assumptions are misleading. These assumptions suggest that there is a technological determinism behind the divide and they detract from the idea that the inequalities surrounding the access and

use of the internet are embedded within the different socio-economic and political circumstances into which the technologies are introduced. They also exclude the idea that the use of the internet and implications of this use will be different in the Majority compared to the Minority World.

The notion of the DGD derives from the gap in internet access and use between women and men. Whilst the gender gap in access has closed in the Minority world, there is evidence that the gender gap may be increasing in some parts of the Majority World, particularly in the world's least development countries where the gap is estimated to be as high as 52% according to the latest data (World Wide Web Foundation, 2020). Many scholars recognize that technologies such as the internet are not gender neutral; technology exists within society and shapes and is shaped by the social circumstances that influence its integration (Wamala, 2010). As Gurumurthy (2004, p1) purports,

“ Existing power relations in society determine the enjoyment of benefits from ICTs, and hence these technologies are not gender neutral”.

ICTs are in effect valuable resources and therefore it should not be surprising that their level of adoption will reflect existing inequalities (FAO, 2019).

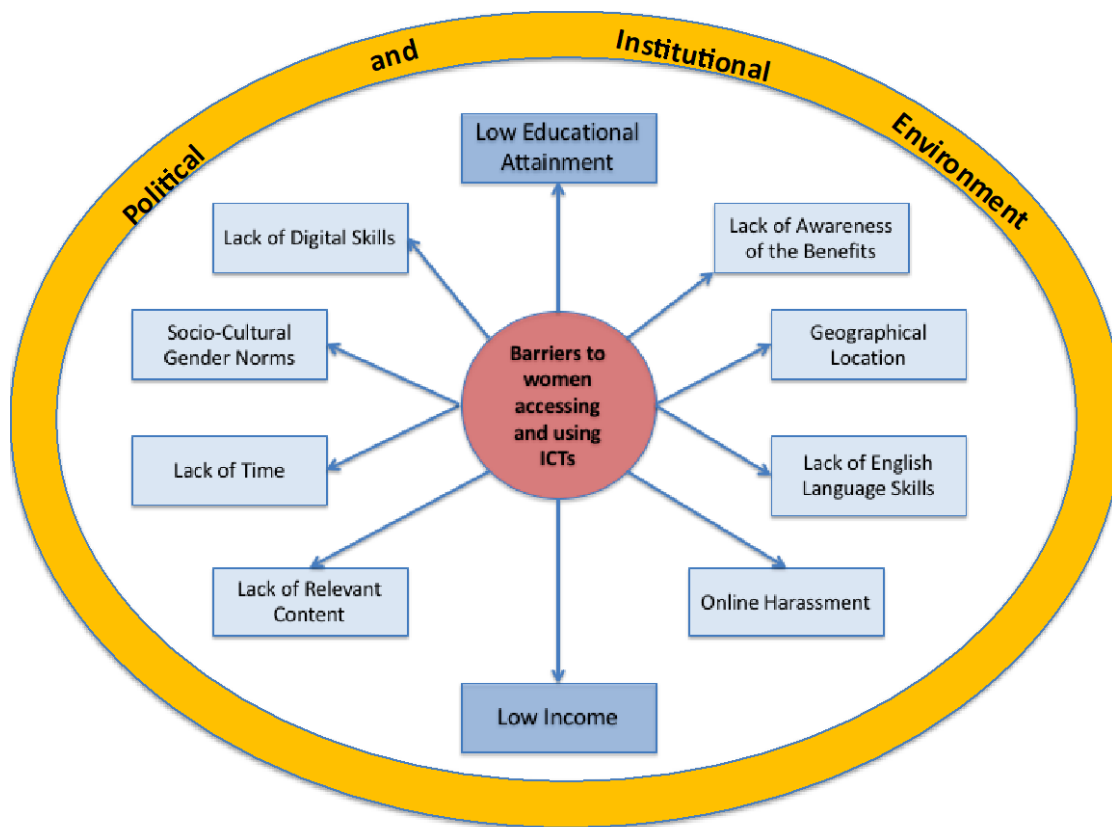
There is much debate as to the extent to which already existing socio-economic inequalities are responsible for the gender gap and whether the introduction of these technologies may well be exacerbating these existing gender inequalities or helping to overcome them (O'Donnell and Sweetman, 2018). The influential research of Hilbert in 2011 using data from 25 Majority world countries found that if the socio-economic variables of education, income and employment are controlled, women are accessing the internet more than men. He argues that being a woman in itself does not prevent access, it is the socio-economic inequalities that women face that restrict access. In effect, he suggests that if women can gain access to the internet the vicious circle of inequalities being reinforced through lack of access will be broken. Instead a virtuous circle will be

created whereby women's access will allow them to increase their education and income and thereby increase internet access.

Alozie and Akpan-Obong's (2017) analysis of the data from six Sub-Saharan countries found strong evidence of a DGD and also found that women's lower levels of education, lower socio-economic status and increased domesticity were all factors influencing the gap. Like Hilbert's (2011) research, they also found that gender per se did not influence the gap. However, on the other hand, other research has suggested that gender disparities still exist even if the key inequality variables are controlled (see de Silva et al, 2011). More research in this area is required. Although education and income discrepancies between women and men appear to be two of the main reasons for the DGD, there are many other gendered constraints that have been highlighted by the research in this field. Figure 2.2 below sets out the main barriers to ICT access and use that have been identified in the literature. Each of these barriers will be briefly discussed in turn. Although not the focus of this literature review, it should be recognized that these constraints are set within a political and institutional environment that may serve to help or hinder women's engagement with the technology. Education, economic and ICT policies, ownership of the media and the telecommunication corporations, and the legal protections in terms of freedom of speech, online harassment and privacy will all influence women's uptake and use of ICTs (Antonio and Tuffley, 2014, World Wide Web Foundation, 2015).

As already touched on above, the lower level of educational attainment of women is suspected to be a key reason for the DGD. Socio-cultural gender norms influence girls ability to attend school (Antonio and Tuffley, 2014), women are more likely to be illiterate compared to men and without basic literacy skills women will be less likely to benefit from the internet (Intel, 2013). There has been interesting research confirming the significance of education in closing the DGD. Research in West Africa found no gender gap in internet access between young women and men educated to secondary level and above (Hafkin and Huyer, 2008). In 2015 the World Wide Web Foundation found that in cities where the education gap between women and men was low, the DGD was small.

Figure 2.2 Diagram Showing the Main Barriers to Women Accessing and using ICTs as Identified in the Literature.



Closely connected to women’s lower levels of education are their lower levels of skills to be able to use the internet effectively. Van Dijk and Van Deursen’s research shows that the complex skills that are required to use the internet are closely connected to educational attainment (Van Dijk and Van Deursen, 2010). Their research finds that not only are medium-related internet skills required, which include operational and navigational skills which can be learnt through internet-use, but also complex content-related skills are necessary. These content-related skills include strategic thinking, communication, content-creation and informational skills and are found in those with higher levels of education. Without such levels of education, people will struggle to use the internet effectively and will become increasingly disadvantaged. Deen-Swarray et al’s (2017) research in Kenya found that a combination of low literacy levels and lack of internet skills were the main barriers for internet use by women. A recent survey in four Majority world countries (Columbia, Ghana, Uganda and Indonesia) revealed that digital skills ranked highly as a barrier to internet access with 45%

of female non-users in urban areas citing lack of skills as a key reason why they don't use the internet compared to 36% of non-using men (World Wide Web Foundation 2020). Educational attainment also limits women's ability to comprehend the information available online since it is estimated that 60% of websites online are in English and yet only 16% of the world speaks English (ibid). The predominance of English online is a barrier for most users (Suresh, 2011) but particularly for women who are less educated than men.

The literature suggests that there is a lack of awareness of the potential benefits of the internet and that women are likely to be less aware than men (Intel, 2013, Antonio and Tuffley, 2014 and Deen-Swarray et al, 2017). This reduces the motivation for going online. A 2008 survey found that women were less likely to know what the internet is compared to men in 11/15 African countries (Research ICT Africa, 2008). This is likely to be because of their lower levels of education and employment which limit their exposure to the internet and because of their reduced participation in the public sphere compared to men (Intel, 2013). One of the challenges for closing the DGD is how to develop awareness of what the internet can do. The motivation to use the internet is also diminished because of the absence of relevant content online (Broadband Commission, 2013, Somolu, 2007). Studies have shown that users interact with ICTs in ways that reflect their existing priorities and interests so if they cannot find relevant content online and it's not in a language that they can comprehend, they are less likely to use the internet (FAO, 2019). One of the advantages of the internet as an ICT is that women should be able to create their own content and not just be reliant on what is already online but the latest research suggests that women are less willing and able to do so (World Wide Web Foundation, 2020).

Affordability is a key driver of the gender gap in access and use (Gurumurthy & Chami, 2014, FAO, 2019, World Wide Web Foundation, 2020). Women, on the whole, earn less than men (Deen-Swarray et al, 2017) and even if they do have income they often do not have control over their finances and therefore cannot use their income to pay for internet access (Melhem et al, 2009). Even if women can afford to go online, they often do not have the time to use the internet (Huyer, 2006, Chair, 2017, WWF 2015). The triple role of domestic, productive and

community responsibilities reduces the time that they have available for going online and for learning about ICTs (Huyer and Sikosa, 2003). Once again, this creates a vicious circle of disadvantage; some research has found that the more time people spend on the internet, the greater the benefits become as people become more familiar with the technology (Intel, 2013).

The geographical location of the potential user and the socio-cultural gender norms in their locations underpin many of the other constraints. Women are more likely than men to live in rural areas and therefore face increased infrastructural constraints to access ICTs (Huyer and Sikosa, 2003). FAO's analysis of four studies of ICT interventions in rural areas also found that rural women have lower incomes and yet face higher ICT access costs (FAO, 2019). Furthermore, in rural areas they are more likely to face conservative gender norms that see ICTs as a threat to women's assigned reproductive roles and therefore may hinder access (ibid).

Irrespective of location, the literature suggests that socio-cultural norms are restricting women from accessing and using ICTs. These constraints appear to be focused around four main themes: restrictions over association; gender identities surrounding control over and the use of technologies; preservation of reproductive gender roles; along with the protection and security of women. Table 2.2 below sets out these constraints and provides some more detail about how these categories are restricting women's access to and use of the internet.

More recent literature surrounding the DGD and internet use has identified the issue of online harassment as a reason why women are constrained from venturing online. Stalking, sexual harassment, invasions of privacy and "revenge porn" are taking place online and are contributing to the way that women are using the internet (O'Donnell and Sweetman, 2018). Thakur's research on gender based violence online in Jamaica highlights the ways in which the internet can perpetuate violence and abuse against women online (Thakur, 2018). The possibility of anonymity online, the lack of empathy because of the distance from

the victim and the speed at which images and messages can be communicated all enhance the potential for abuse online (ibid).

Table 2.2 Socio-cultural gender norms that constrain ICT access and use.

Categories of Gender Norms	How are these Norms Constraining ICT Use?
<i>Restrictions over association</i>	<ul style="list-style-type: none"> • Concern that women may develop friendships online outside the control of men which results in men restricting use (Intel, 2013, FAO, 2019). • Use of the internet is seen as a threat to relationships because of the risks of infidelity (Gurumurthy and Chami, 2014, Chair, 2017). • Women are constrained from accessing the internet in the public sphere (e.g. telecentres, internet cafes) (Melhem et al, 2009).
<i>Gender identities and technology</i>	<ul style="list-style-type: none"> • Norms that assign men controls over technology (Hafkin and Taggart, 2001). • Preconceptions by both men and women about women’s lack of capabilities with technologies (Intel, 2013). • Women’s fear to use technology (Intel, 2013).
<i>Preservation of reproductive gender roles</i>	<ul style="list-style-type: none"> • Concern that women’s use of the internet may distract women from their reproductive roles within the household (Chair, 2017, Gigler, 2015, FAO, 2019). • Women’s communication using ICTs expected to just be for household activities (Rathinam, 2015).
<i>Protection and security of women</i>	<ul style="list-style-type: none"> • Patriarchal ideas of the internet exposing women to dangerous people online (Intel, 2013). • Patriarchal ideas of the internet exposing women to pornography (Intel, 2013).

Although these possible constraints to women’s access and use of the internet have been discussed separately, it should be recognized that context and personal circumstances interact to create a constraining or supportive environment for internet access and use. As O’Donnell and Sweetman (2018, p219) state,

“ the digital divide is much more complicated than the binary ideas of male and female ownership of devices and access. Gender intersects with many other aspects of difference and disadvantage.”

In effect, the multiple identities of women including their class, race and gender are all factors that determine who can access and use the internet effectively.

In terms of the possible solutions to close the DGD, the more recent literature has recognized that it is difficult to prescribe a “one size fits all” solution because of the underlying intersections between women’s multiple identities and the socio-economic, cultural, geographical and political circumstances in which the technology is situated. Nonetheless, some of the key features of these solutions include: improving the collection of sex-disaggregated data (Broadband Commission, 2018, FAO, 2019); integrating gender perspectives into ICT strategies, plans, policies and budgets (Broadband Commission, 2018); addressing the constraints that hamper internet use, including lowering the cost of access, developing ICT skills (Gurumurthy and Chami, 2014) and tackling educational and income inequalities that underpin unequal access (Deen Swarray et al, 2017); and encouraging women to become involved in the design of new applications or developing online content (World Wide Web Foundation 2015, Intel, 2013).

2.5 Women’s Empowerment and ICTs

The ideas around communication power as expounded in section 2.3 (above), have rarely been discussed within a Majority World setting, let alone from a gender perspective. It is possible to find literature about power dynamics and women and ICTs at an individual level but most of the literature that is available focuses on the economic empowerment of women (Cummings and O’Neil, 2015). However, there has also been research in the following areas (ibid):

1. Self expression online particularly in repressive societies (for example, see Buskens and Webb, 2014);
2. Rural access to services and enterprise development (for example, see FAO, 2019);
3. E-governance, providing women access to information and services (for example, see De, 2006).

Most of the literature takes a technologically deterministic outlook and assumes that the use of the internet will automatically bring about empowerment; it does not explore the pathways through which internet use will change the power dynamics in women's lives. However, there are exceptions and this section of the literature review will examine these exceptions where the researchers have developed conceptual models of women's empowerment in respect of ICT interventions involving the internet.

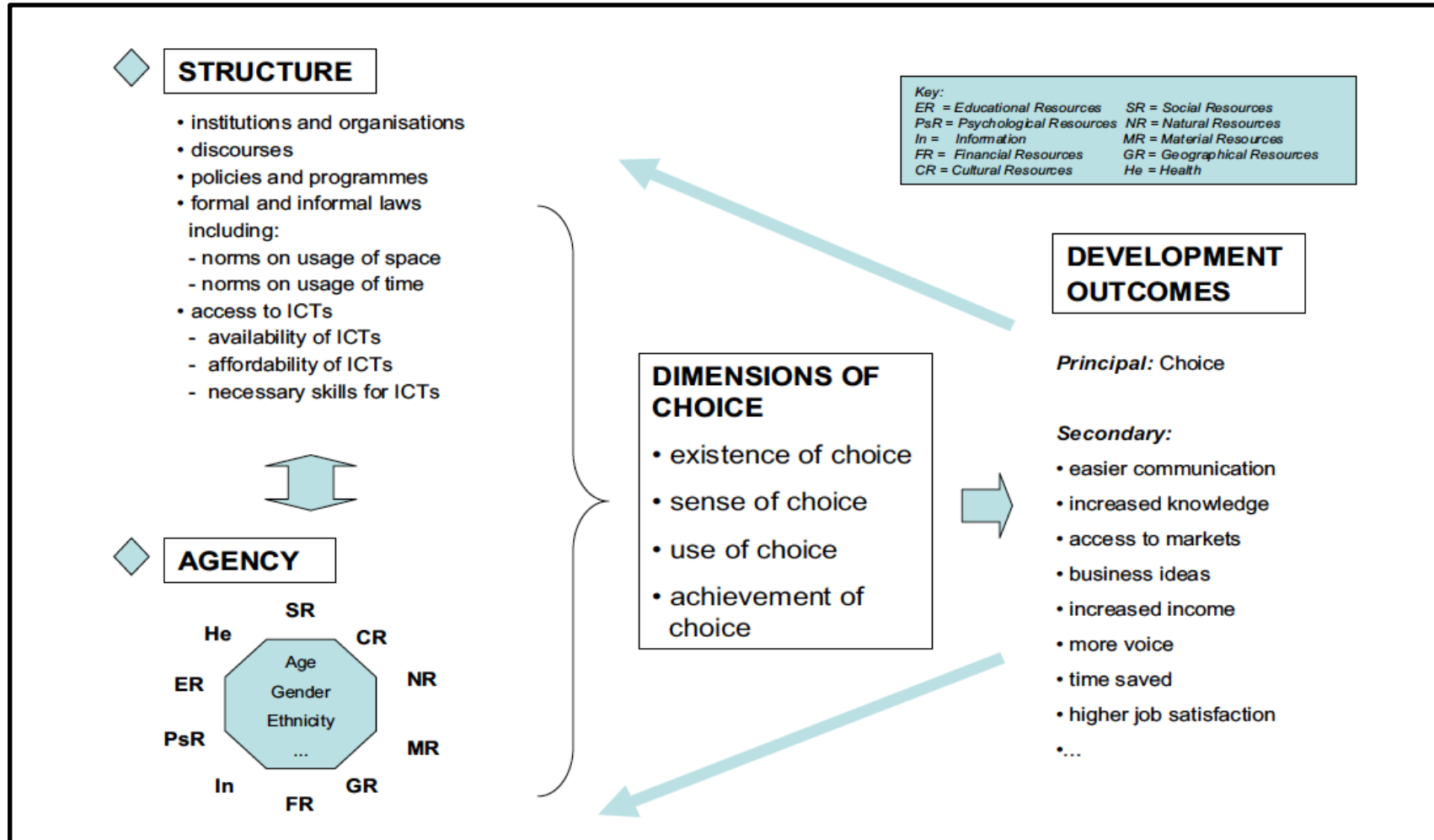
Sen's Capability Approach (1999) has been influential for some of the models of empowerment in respect of ICTs. Sen's definition of development as,

“ a process of expanding the real freedoms that people enjoy to lead the lives they have reason to value” (Sen, 1999, p3)

accords with the empowerment concepts of freedom of choice and according to Gigler (2004) is well suited to capture the multi-dimensional impact of ICTs on people's lives. Both Kleine (2008) and Gigler (2015) have developed empowerment models using ideas from the capability approach to assess the impact of ICTs interventions on rural marginalized communities in Chile and Bolivia respectively. They both combine the ideas of capabilities and “functionings” with the idea of “livelihood assets” from the sustainable livelihood framework as a representation of agency. Kleine also adopts part of the empowerment framework of Alsop and Heinsohn (2005) as mentioned in section 2.2 (above), who distinguish between existence of choice, use of choice and achievement of choice. Kleine's model, which is shown in Figure 2.3 below, also includes the reciprocal relationship between structure and agency.

Both Kleine (2010) and Gigler (2015) introduce the notion of informational capital and capabilities within their empowerment frameworks. Informational capital as a livelihoods resource and informational capabilities are particularly important concepts within Gigler's framework. One of his key findings is that ICTs enhance the informational capabilities of the indigenous people that he was studying and that this not only has intrinsic value for their wellbeing but also plays a catalytic role in improving their human and social capabilities.

Figure 2.3 Kleine's "Choice Framework" which is used as an Empowerment model for Evaluating ICT Interventions.



He envisages four main components within informational capabilities: the capability to use ICTs in an effective manner; the capability to find, process, evaluate and use information; the capability to communicate effectively with other people and the capability to produce and share local content with others.

Although, the conceptual models of Kleine and Gigler are useful in shining a light on the pathways between ICTs and empowerment, they are complex and do not necessarily draw attention to the changes in gender and power dynamics surrounding ICT use. Gurumurthy and Chami's (2014a) research framework, that they use to evaluate several ICT projects and approaches in India (that include the use of the internet), is much simpler and puts power at the centre of the model. They envisage empowerment through digital technologies as "the extent to which women can exercise informational, communicative and associational power " (ibid.p4). Table 2.3 (below) sets out their definitions of these different types of power and the parameters used to measure each type within their research. Like in Gigler's (2015) conceptualization of informational capabilities, informational power has two very different aspects, one is the power gained from accessing information and the other is the power gained from being able to produce information. Associational power is the power gained from part of being a collective and communicative power is defined as the power to shape or challenge the mainstream discourse in the public sphere.

Gurumurthy and Chami's (2014a) assessment of the ICT projects in India using the framework reveals the interesting ways in which digital technologies are empowering women. The use of the internet at information centres allowed the women in their study to overcome traditional male gate-keeping mechanisms over access to information. It also enabled them to produce their own information that could challenge the information provided by male local leaders. The use of ICTs created "techno-social spaces that usher in a non-instrumental, commons-oriented approach to association". These spaces allowed women, who were previously marginalized, to build spaces where they could increase their solidarity with others in a context where other possibilities for joining the public sphere were limited. The research also found that setting up media platforms where

women can share ideas and forge a “communications community” formed an important part of increasing women’s communicative power.

Table 2.3 Definitions of conceptions of power (Gurumurthy & Chami 2014a)

Types of Power	Definition of this Type of Power	Parameters used to Measure this Power
<i>Information</i>	The power gained from access to information and the power that women gain from becoming interlocutors in the local informational ecology. The power they gain from the capacity to produce information.	<ul style="list-style-type: none"> • Women’s access to public information • Women’s participation in local information networks
<i>Associational</i>	The power gained from being part of a collective. This includes the power gained from the vibrancy of the collective and the capacity of the collective to convene public forums and engage in local action.	<ul style="list-style-type: none"> • Capacity for collective action • Strength of women’s collectives
<i>Communicative</i>	The power to shape or challenge mainstream discourse in the public sphere. The power to challenge the status quo and informal power structures.	<ul style="list-style-type: none"> • Women acquiring a voice in the local sphere • Women challenging the status quo. • Women generating content

Cummings’ and O’Neil’s (2015) review of the literature on voice and empowerment through the use of digital ICTs uses Rowlands’ types of power (see Table 2.1 above) to analyse the findings and establishes two pathways in which the women and girls use of ICTs could be empowering. First of all, the new ways of accessing information that the internet affords could disrupt information asymmetries between women and men and allow women to access information and make more informed personal decisions that could lead to better life outcomes (power to). Secondly, the use of digital ICTs could enable women to interact more with each other, to gather and share information and to participate in the public sphere so as to influence government decisions about allocation of services, rights and resources (challenge power over). The World Banks’ (2014)

report on Voice and Agency concurs with the ideas of the internet providing new online spaces where women's voices can be heard. However, according to Cummings and O'Neil's review, the literature is weak on revealing whether and how that influence is occurring. There is little research on whether and how women's increased voice from ICT use is resulting in more power within public decision-making processes.

Other research on ICTs and women's empowerment reaches the conclusion that, although the use of digital ICTs brings about important changes in women's lives, these do not necessarily result in women challenging current power structures. Wheeler's research in Egypt found that, although internet use increased access to information, social networks and social capital as well as social and political awareness, this was not necessarily transformative. Similarly, the interesting research of Hussain and Amin (2018) in Afghanistan found that women's use of ICTs served more to enhance the efficiency of women's ability to fulfill their traditional gender roles than to challenge these roles.

Buskens and Webb's (2014) research as part of the Gender Research in Africa and the Middle East into ICTs for Empowerment (GRACE) Network provides a rich seam of knowledge about digital ICTs and women's empowerment. Within the GRACE network of research projects, they identify three types of ICT projects; those which are conformist, reformist and transformative. Many projects are conformist in the sense that although women use ICTs to make their lives better, they are not used in an emancipatory way as a result of strongly held societal beliefs that reaffirm male dominance. The chapter in their book about women's use of the internet in Tunisia (Ben Hassine, 2014) suggests that because social harmony is dependent upon gender inequality, the disruption to social harmony that the internet affords is often unacceptable to female users. Other research projects within the book reveal the importance of the internet in providing a safe space or "womb" (Buskens and Webb, 2014, p10) where women can find refuge and reflect on their lives, reform and develop their own voice (Quawas 2014, Dada 2014, Oweis, 2014). This may not yet be socially transformative but is personally empowering and fosters a powerful form of agency within the women. Finally, there are other examples where the internet is being used to directly challenge

patriarchal norms such as in social networking sites in Zambia that challenge the misogyny that is embedded in certain Zambian traditions (Abraham, 2014). However, it is unclear as to the extent to which this is resulting in offline social change, particularly given the anonymity that the internet affords.

As suggested above, the research often presents a complex picture of the empowering effect of ICTs. The research of Philip (2018) on middle class youth in India found that whilst the use of social media is transforming some of the social norms around female and male interactions, it is also “reproduc(ing) some of the paradoxes and biases of patriarchal Indian society online, which are particularly misogynistic.” (p323). This reminds us that the technology in itself is not good or bad, its effect is determined by the conditions in which it is used. This highlights the importance of understanding these complex conditions and the way that they interact with the use of the technology.

This section has highlighted some of the conceptual approaches for considering whether and how the internet is empowering women, drawing upon some of the key research in this area. It is evident that more research is required in this area. The following section uses these approaches and the review of the literature as set out in the previous sections of this chapter to develop the conceptual framework that is used to explain the data in the results chapters in this study.

2.6 The Conceptual Framework

The conceptual framework has been developed from two different perspectives. On the one hand, it draws upon concepts found in the literature concerning notions of power and of empowerment and about the barriers to effective internet use that have been discussed in the sections above. On the other hand, it has been further modified based on the original research findings from this study. This approach is consistent with the underlying grounded theory methodology that allows for the theory to emerge through an iterative process, moving between the research data and the literature (see section 4.2.1). This section of the chapter will start by describing the framework and will then examine the different concepts of power, gender and social differentiation that sit within the framework. Finally,

the socio-economic, political and institutional environment in which the framework sits will then be considered.

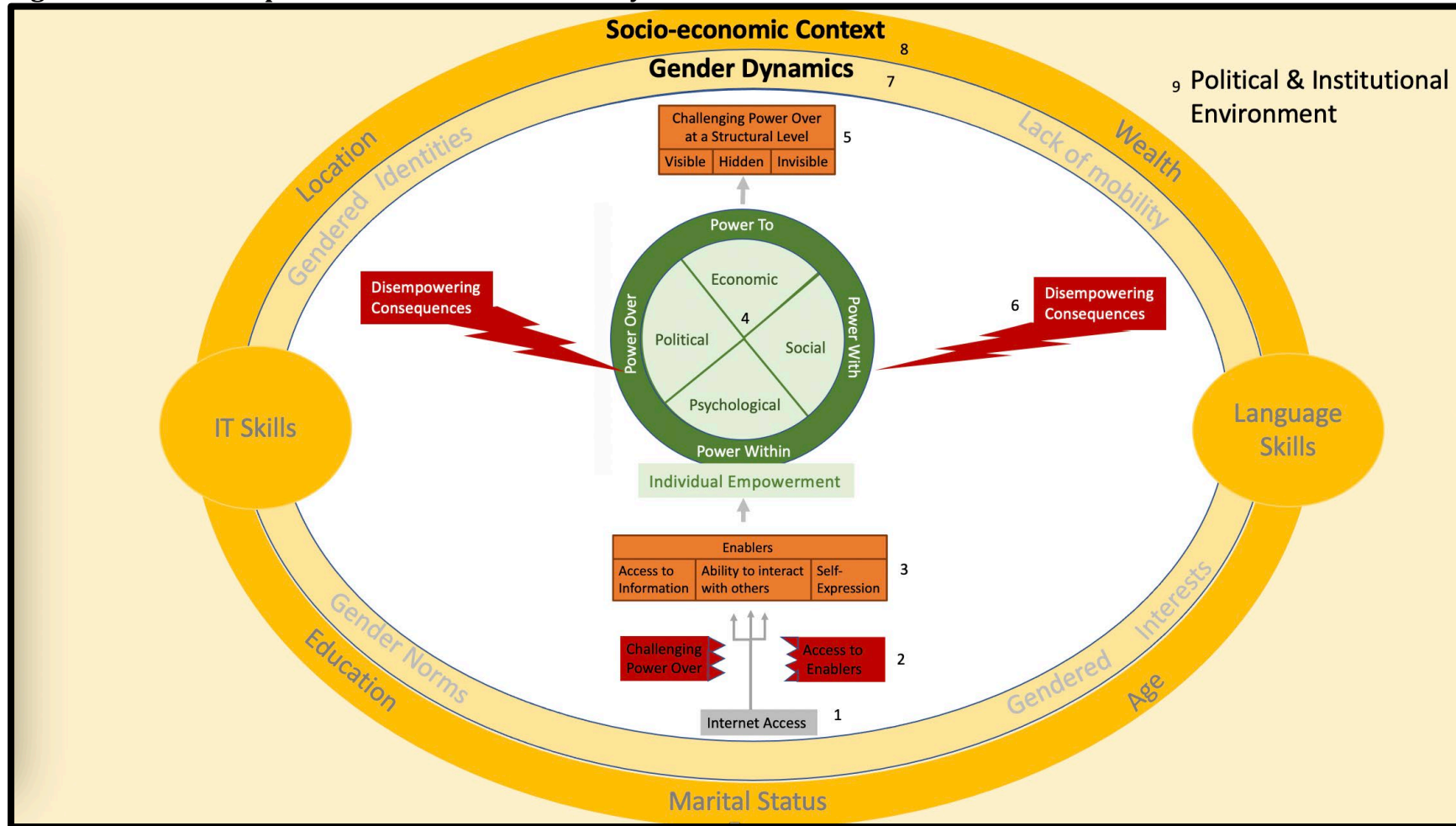
2.6.1 Description of the Framework

The pictorial representation of the conceptual framework is set out in Figure 2.4. In the centre of the circle is the empowerment model. It starts at the bottom with internet access (1) and moves upwards towards the enablers (3), passing through the individual empowerment model (4) until it reaches the structural level of empowerment (5) at the top. It shows that once women can access the internet (1), the use of the internet has the potential to challenge the power over them (2) that previously constrained their access to three key enablers (3): the access to information, the ability to interact with others and the ability to express oneself. These enablers in turn provide them with opportunities to empower themselves.

The core realm of individual empowerment (4) is divided into four main dimensions: economic, social, political and psychological. The model uses the concepts of *power to*, *power with*, *power within* and *power over* to assess the types of empowerment that are taking place within these dimensions. Beyond the individual empowerment model (4) lies the model for considering how empowerment at an individual level can influence changes in power at a more structural level (5). It uses the concepts of visible, hidden and invisible power to assess these changes in power dynamics. Unfortunately, the use of the internet has disempowering consequences (6) and those are shown as influencing the individual opportunities for empowerment.

The inner circle (7) surrounding the empowerment model represents the gender dynamics that are affecting each part of the empowerment model, right from the ability of women to gain internet access (1) all the way through to the structural level of power at the top (5). Some of the key themes that have come from the research in terms of these gender dynamics are the constraints that women face such as lack of mobility because of their reproductive role and the socio-cultural gender norms surrounding technology, gender identities and gendered interests.

Figure 2.4 The Conceptual Framework for the Study.



The outer circle (8) represents the socio-economic context that is influencing access and use of the internet. Within this context are the socio-economic and demographic factors that affect access and use, including the levels of educational attainment, age, wealth, employment and marital status of the participants. Finally, this framework sits within a particular socio-economic, political and institutional environment (9) that can either act to enhance or deter the opportunities for using the internet for empowering purposes.

2.6.2 The Concepts of Power Within the Framework

The framework draws upon several different concepts of power. These concepts are discussed for each of the different sections of the empowerment model.

2.6.2.1 Challenging Power Over the “Enablers”

The internet has certain unique features that allow its users to gain access to a suite of “enablers”. These enablers represent the ability of the user to:

- gain access to information
- interact with others
- express themselves.

The conceptual framework suggests that once access has been gained to these enablers, this opens up opportunities for empowerment across many different dimensions.

These enabling features of the internet have already been identified in the literature discussed above. In the communication power section, Waisbord (2018) explains his ideas about the “democratization of knowledge” that the internet has brought about and how the gatekeepers over access to information have been removed. Shirky (2008) expounds the importance of the “freedom of association” that the internet provides whereby people can join online groups and Castells (2013 p58) exposes the significance of “mass-self-communication”, that is, the ability to communicate and interact with many people at the same time. Shirky also speaks of the “freedom of expression” online and Webster of the ideas

around the public sphere where individuals can express themselves directly online.

The importance of these enablers is also expressed within the context of women's empowerment and ICTs. Gurumurthy and Chami (2014) in their empowerment framework use the concepts "informational power", "associational power" and "communicative power" (see Table 2.3 above). The informational power that the internet facilitates is the power gained from access to information. Their research in India found that the use of the internet at information centres helped women to overcome the gate-keeping mechanisms over information that they previously faced. Underlying their definition of associational power, is the concept that the internet enables women to form groups and alliances online, thus suggesting the increased ability to interact with others. Similarly, their notion of "communicative power" is based on an understanding that the internet provides women with a voice to challenge the status quo and enables them to generate their own content. Cummings and O'Neil's (2015) pathway to empowerment through ICTs recognizes the informational asymmetries that ICTs help women overcome and the importance of their ability to interact with others. They also recognize the importance of the internet in facilitating women's voice as a means to individual empowerment (see also Buskens and Webb, 2014).

Within the literature around the DGD, many of the constraints to access and use of the internet provide an insight into the enabling features of the internet. As shown in Table 2.2 above, gender norms acting to constrain women's access to the internet concern restrictions over association, with men restricting women's use of the technology because of fears of them using it to gain the freedom to interact with other people without their control. Furthermore, the online harassment that women face, could be construed as a reaction to women entering the public sphere and to their voices being heard online, particularly if those voices seek to challenge the status quo (Megarry, 2014). This confirms how the use of the internet has enabled women to enter into the public sphere and to express themselves.

As will be discussed in the results chapters below, this study has found that before the female participants had access to the internet, they were often constrained from accessing these enablers. Although the male participants also faced these

constraints, it was found that female participants had the addition of socio-cultural gender norms that restricted their access. This study proposes that the use of the internet challenges the “power over” them that restrains their access to these enablers. For this reason, the three main results chapters have been structured around these three enabling features of the internet.

2.6.2.2 Individual Empowerment

Once the study participants gain access to these enablers, they can use them to gain opportunities for empowerment. The research uses Rowland’s (1997) analysis of power to assess whether the internet is empowering the participants. As shown in Table 2.1 above, the different types of power used by Rowlands (*power to, with, within* and *power over*) allow a breadth of interpretations of empowerment to be applied to the research. This flexibility of the notion of power is important given the different ways of understanding power from an ICT perspective. The conceptual framework then categorises the way that the internet empowers at an individual level using four different dimensions; economic, social⁴, political and psychological. This is appropriate given the range of pathways to empowerment that the internet facilitates according to the research findings. Furthermore, it allows an understanding of the relationships between the empowering nature of the internet and the underlying socio-economic, political and psychological circumstances within which the internet is used.

2.6.2.3 Opportunities for Changes in Power Dynamics at a Structural Level

The literature revealed the importance of incorporating concepts of empowerment and agency at the individual level as well as concepts of changes in power at a broader structural level, to be able to assess whether the use of the internet is being transformative rather than simply conformist or reformist. The conceptual framework therefore includes an empowerment model at a structural level to assess these changes.

⁴ Social empowerment is understood to include health, nutrition and education which strengthens people’s capacity to participate in society (based on Gigler, 2004).

At the structural level the conceptual framework adapts the three forms of power (*visible, hidden and invisible*) to illustrate how individual empowerment may be influencing power dynamics at a wider, societal level. The notions of visible, hidden and invisible power seem to fit particularly well with the ideas of communication power discussed in the sections above. Table 2.4 below sets out these different forms of power and links them to these opportunities for empowerment as discussed in the literature.

2.6.2.4 Disempowering Consequences

The study found that many of the emancipatory features of the internet also foster contradictory disempowering features with disempowering consequences. For example, whilst the democratization of knowledge and the increased access to information online are empowering features, they also allow the study participants to be exposed to false information that they may not be able to identify as untrue.

2.6.3 Gender Dynamics

This research explores how gender dynamics are influencing the access to and use of the internet and how in some cases the use of the internet is changing the gender dynamics within the participants' lives. The inner circle within the conceptual framework represents these gender dynamics. The study identified several key ways in which gender was influencing access to and use of the internet for empowering purposes. These include the lack of mobility that women face; gendered interests that determine how the participants use the internet and gendered identities that influence attitudes towards the use of the new technology. These notions are all intertwined with gender norms that act to influence the motivations and behaviour of the participants, their partners and families in respect to their use of the internet. The significance of gender norms on the access to and the use of ICTs within the literature was established in section 2.4. The framework draws upon the literature and the data from the research to develop these ideas within the discussion Chapter 9.

2.6.4 Socio-Economic Context

The outer circle of the framework represents the socio-economic context in which the participants live. This context includes socio-economic and demographic factors such as their educational attainment, age, wealth, marital status and location. The literature, as discussed in section 2.4, shows how these factors all influence women's access to and use of the internet. The importance of these factors was confirmed in the findings of the study.

IT and English language skills have been placed in both the socio-economic context and the gender dynamics rings in order to recognize how both the socio-economic context of the participant, such as their educational attainment, *and* gender dynamics operating within their lives may be influencing these skills. This was found to be the case from the findings and also reflects the link between education and IT skills within the literature.

2.6.5 Socio-economic, Political and Institutional Environment

The framework sits within the broader socio-economic, political and institutional environment in which the research takes place. As will be highlighted in the following context-setting chapter and within the results chapters, this environment plays an important role in determining the participants' access to and use of the internet and the extent to which it may lead to empowerment.

2.7 Conclusion

This chapter has examined the literature on women's empowerment, communication power, gender and ICTs and women's empowerment and ICTs. It then set out the conceptual framework that will be used to structure the three main results chapters. Now that the relevant literature has been reviewed, the following chapter will set out the context of Uganda where the research was undertaken.

Table 2.4 How the use of the internet may provide opportunities to empower at a structural level using different forms of power.

Forms of Power	Brief Description of this form of power	Opportunities for the Internet to Empower?
Visible	Formal mechanisms through which power is exercised and enforced	<p>E- Government (Heeks,2001):</p> <ul style="list-style-type: none"> • Provides online access to information about rights and entitlements; • Provides access to government services. <p>E-Governance (APC,2009):</p> <ul style="list-style-type: none"> • Provides information about how decisions are made and why; • Facilitates citizen feedback on services and policies. <p>E-Democracy (Norris, 2001, Martinez and Reilly, 2002, Margetts, 2013):</p> <ul style="list-style-type: none"> • Supports political engagement through: <ul style="list-style-type: none"> ○ online political information ○ the ability to form networks and build political movements online.
Hidden	Determines who sets the agenda for visible decision-making	<p>Challenges the power of those who would traditionally set the agenda, e.g. media corporations, powerful individuals</p> <ul style="list-style-type: none"> • Creates a new “public sphere” where ordinary people can share ideas that in principle can influence the agenda using mass self communication (Boeder, 2005, Shirky,2008, Castells, 2013); • Facilitates the building of movements and alliances that can challenge the conventional agenda because of the sheer numbers of people involved (Castells, 2010a).
Invisible	Shapes the boundaries of Socio-economic, Political, Psychological and Cultural change	<p>Challenges control over information</p> <ul style="list-style-type: none"> • It opens up a world of information that is not controlled by intermediaries or elites (Sanger et al, n.d.) • Information can be verified online and misinformation challenged (Mobner and Kitcher, 2016) <p>Challenges control over knowledge generation</p> <ul style="list-style-type: none"> • Internet users can generate their own content online, allowing those previously excluded to contribute to the generation of knowledge (Mobner & Kitcher, 2016). <p>Challenges control over social norms</p> <ul style="list-style-type: none"> • It can be used to influence social norms through providing a new way of constructing shared meaning through social media (Castells, 2013).

Chapter 3 Setting the Context: Uganda

3.1 Introduction

Uganda is a landlocked country in East Africa (see Figure 3.1 below). It was selected as the country where the research would take place for several reasons. Despite the fact that it is a low-income country, it has experienced a rapid growth in the internet penetration rate in recent years and according to the World Bank statistics in 2017, it had the highest rate of internet usage compared with some of the other major East African countries, such as Kenya, Rwanda, Tanzania and Ethiopia at the start of the research, (see Table 3.1 below). At the same time, it has a low Gender Development Index compared with its neighbours and yet has one of the lowest gender gaps in internet use in the region (Figure 3.2 below). This provided an interesting backdrop for the research since Uganda provides the study with non-elite women and men who are using the internet within the context of high levels of gender inequality.

Figure 3.1 Map of Uganda in East Africa.

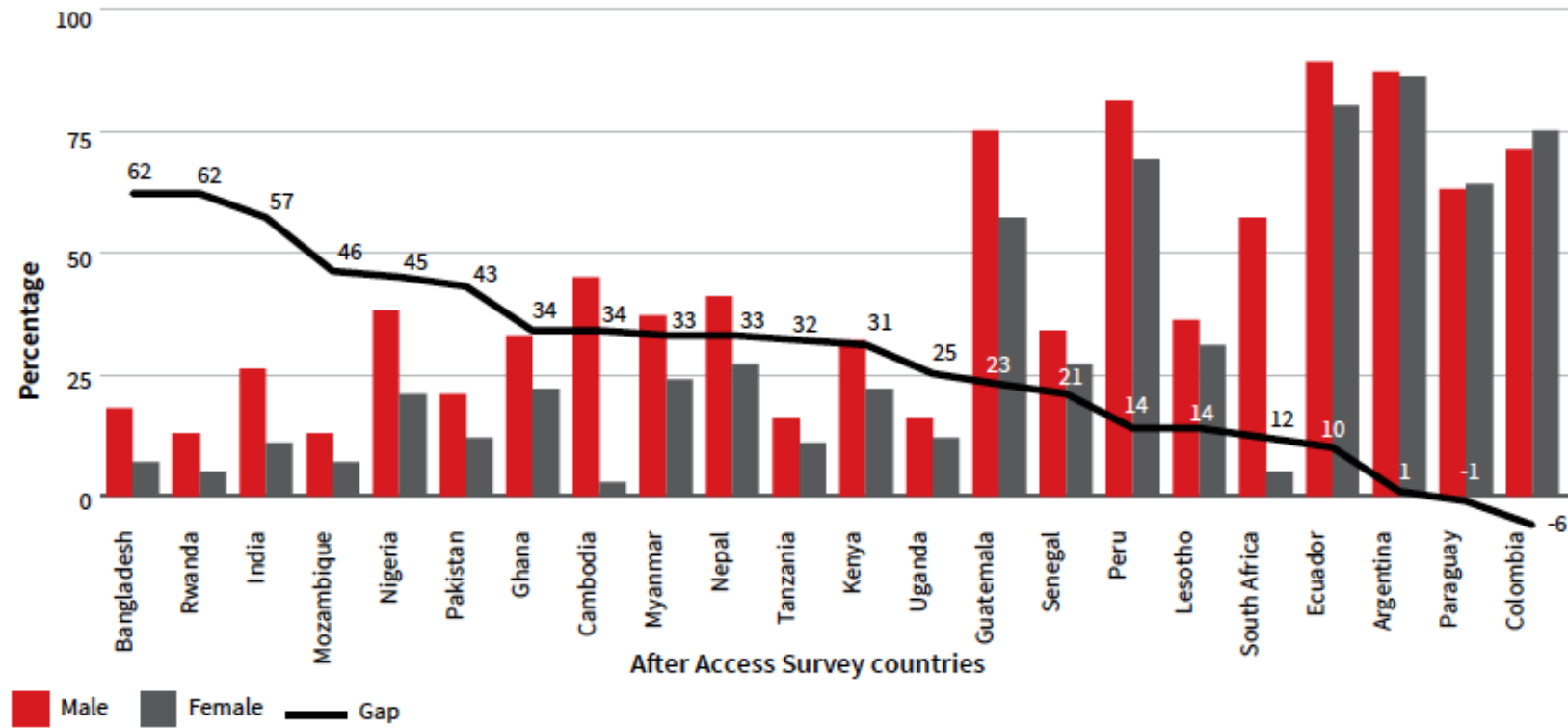
This chapter starts by providing a brief country profile of Uganda, examining the economic, social and political situation in Uganda, particularly focusing on areas that are relevant to the research. It then briefly examines the internet penetration⁵ in the country, and the constraints that people face accessing the internet, particularly women. Finally, it discusses the ICT policy and legal framework within the country.

Table 3.1 Showing Internet usage, GNI per capita and the Gender Development Index across five different East African Countries.

East African Country	Individuals Using the Internet in 2017 (Percentage of the population) World Bank (2017)	GNI per Capita 2017, PPP (Constant 2017 international \$) World Bank (2017)	Gender Development Index 2018 (UNDP, 2018)
<i>Uganda</i>	24%	2,026	0.863
<i>Kenya</i>	18%	3,969	0.933
<i>Tanzania</i>	16%	2,473	0.936
<i>Rwanda</i>	22%	1,909	0.943
<i>Ethiopia</i>	19%	2,009	0.844

⁵ Internet penetration corresponds to the percentage of the population that uses the Internet (Internet World Stats, 2020)

Figure 3.2 Gender Disparity in Internet use in Africa and the Global South.



Gillwald et al, 2019, Source: RIA After Access Survey data 2017/18)

3.2 Brief Country Profile: Uganda

3.2.1 Economic Context

Despite the reduction in poverty over the past few decades, Uganda is still classified as one of the Least Developed Countries (LDC) in the world (UNDESA, 2020) and it is estimated that 41% of the population live in poverty (living on less than \$1.90 a day (2011 PPP) (World Bank, 2018). Almost 70% of the population earns a living from agriculture, mainly on a subsistence basis (UNDP, 2019). Although, the percentage of Ugandan households living in poverty has reduced over the past few decades, the vulnerability to external shocks is still high; two thirds of those who escape from poverty fall back into it according to the World Bank (2020).

A quarter of the population live in urban areas (CIA, 2020) and 60% of this urban population is estimated to be living in slums (Cities Alliance, 2016.) Alongside rapid urbanization (African Development Bank, 2019) there has been a rapid growth in the informal sector (Cities Alliance, 2016). The informal sector is the fastest growing economic sector in Uganda and is estimated to be worth 43% of GDP (ibid). The main drivers of this growth are the low market entry conditions (ibid) and the lack of jobs within the formal sector that can absorb the growing unskilled labour force (Mugoda et al, 2020). Women are more heavily represented in certain parts of the informal sector, such as those involving food, clothes and retail goods (ibid). In general, women have less earning potential than men in Uganda and female GNI per capita is approximately 60% of male GNI (UNDP, 2018).

3.2.2 Demographic and Social Context

Uganda has a population of 43 million. It has one of the fastest growing populations in the world and one of the youngest, with 68% of the population under 25 years old (CIA, 2020). One of the causes of this growth is the country's high fertility rate with an average of 5.8 children being born for every woman. Moreover, at least a third of women are married before the age of eighteen (UNDP, 2019) and Uganda has one of the highest teenage pregnancy rates in SSA

(Ochen,Chi and Lawoko, 2019). Uganda has the lowest life expectancy amongst the other major countries in East Africa⁶ (UNDP, 2019) and according to Azevedo (2017), the healthcare system is characterized by inadequate infrastructure, gross inequities in the distribution of health services, a paucity of specialized physicians and overloaded doctors and nurses.

On average, Ugandans have 6.1 years of schooling with women having 4.8 years on average compared to 7.4 years for men (UNDP, 2019). Consequently, there is a literacy disparity with 70.8% of women being able to read and write compared to 82.7% of men (CIA, 2020). Uganda ranks 127th out of 160 on the 2018 Gender Inequality Index with a value of 0.536 (UNDP, 2019). Although there is a progressive legal framework promoting gender equality, there is a lack of effective implementation or enforcement of gender –related laws. This undermines women’s legal status and the protection of their rights (African Development Bank, 2016). Women are less likely to own assets compared to men and, for example, only a third of landowners are female. Socio-cultural norms that are deeply entrenched prevent women from exerting their agency and fully participating in social and economic life. For example, one third of Ugandans believe that women should not have the same access to land as men and 67% of the population think that land is the sole responsibility of men (African Development Bank, 2016). Socio-cultural norms also burden women with unpaid care and domestic work responsibilities that in turn limit women’s ability to gain employment, education, to have mobility and to participate in community and political activities (Oxfam, 2018).

3.2.3 Political Context

The British influence started in Uganda in the 1860s and independence from the British was achieved in 1962. Since then, the country has experienced a violent political history characterized by debilitating civil war, military invasion, a vicious guerilla warfare campaign and numerous contested elections (Golooba-Mutebi,

⁶ For the purpose of this research, Ethiopia, Tanzania, Kenya and Rwanda are considered to be the other major countries within East Africa.

2008). There has been a debate as to the extent to which this turbulence was caused by the legacy of a weak state bequeathed by the British and the extent to which it has resulted in weak institutions of the state (ibid) ⁷. Yoweri Museveni came to power in Uganda in 1986 following the Ugandan Bush War between the rebel National Resistance Army (led by Museveni) and the government of Milton Obote (Tangri and Mwenda, 2010). It was also known as the Luweero War since the Luweero Triangle area was notorious for the persecution of civilians who were forcibly killed or recruited by both sides (Bernard, 2017). Within this area sits one of the study sites, the town of Nakaseke⁸.

Whilst Uganda is now a presidential republic and holds regular elections, their credibility has reduced over time and the ruling political party remains in power through a system of patronage, intimidation by state security forces, politicized prosecutions of the opposition party leaders and misappropriation of state funds (Freedom House, 2019). At the time of the field research there was political tension and civil unrest due to a bill being put forward in parliament to remove the upper age limit for the presidency, to enable President Museveni to contest the presidency again at the 2021 election (Osiebe, 2020). There has been political interference concerning internet use in recent years. Social media was blocked for four days during the 2016 election in order to prevent people from “tell(ing) lies” online (BBC, 2016). Further examples of the ways in which the government has increasingly attempted to curtail internet-use are set out in the sections below.

⁷ When reflecting on the political, social and economic context within Uganda, the negative impact of colonialism needs to be acknowledged. The author agrees with the sentiment behind Fuchs and Horak’s (2008) perception of how imperialism has shaped the African continent, “That there is a lack of economic and technological resources in Africa is not the fault of corrupt African governments and not an effect of bad governance, market protectionism, a lack of investment conditions for Western capital, etc., but the effect of hundreds of years of colonial and post-colonial exploitation, exclusion, and dependency of the Third World that has caused the very conditions that Africans have to face today.” (Fuchs and Horak, 2008 p115)

⁸ More details of Uganda’s turbulent history can be found in Reid’s (2017) “A History of Modern Uganda”.

3.3 Internet Access, Constraints, Policy & Legal Framework

This research is about access and use of the internet in Uganda and so this section will briefly consider the extent of access, the constraints that prevent access and the policy and legal framework surrounding its use.

3.3.1 Access

The estimated rate of internet penetration in Uganda varies depending on how the rate is calculated. According to the Uganda Communications Commission, the Ugandan communications regulatory body, the internet penetration rate was 48% as of September 2017 at the start of the field research UCC (2017). There had been significant growth in internet users, with internet penetration increasing from 19% in 2015 (Freedom House, 2017). However, by the end of the field research, in September 2018, the internet penetration rate had declined to 35% as a result of the introduction of the social media tax (see Box 3.1 below). It has taken until March 2020 for the rate to recover, with 45% internet penetration rates at that point in time, with the increase in internet subscriptions stimulated by the Covid19 pandemic and the subsequent lockdown (UCC, 2020).

According to the UCC analysis, almost all of the internet penetration is through mobile phones. As of October 2019, there were over 27 million mobile phones in circulation. However, only 6 million of these phones were smartphones⁹; the majority of phones (17 million) are feature¹⁰ phones many of which have the possibility of gaining basic internet access (UCC, 2020). From observation and

⁹ The UCC defines a smartphone as “a class of mobile phones and of multi-purpose mobile computing devices. They are distinguished from feature phones by their stronger hardware capabilities and extensive mobile operating systems, which facilitate wider software, internet and multimedia functionality alongside core phone functions such as voice calls and text messaging.” (UCC, 2020 Market Performance Report, p7)

¹⁰ The UCC defines a feature phone as a device that “can make and receive calls, send text messages and provide some of the advanced features found on a smartphone”. (UCC, 2020 Market Performance Report, p7)

conversations with experts, until July 2018, the majority of internet users were gaining access to data through the use of prepaid scratch cards or mobile money.

Box 3.1 Social Media Tax.

On 1st July 2018, the Ugandan government introduced a Social Media Tax that was otherwise known as the “Over The Top” (OTT) Tax. The tax imposes a charge of UGX 200 (about USD 0.05) a day for the use of social media and communications apps such as Facebook, Instagram, Twitter and WhatsApp. The apps are blocked until the daily tax is paid. President Museveni justified the tax as a way of curbing online “gossip” and increasing the country’s tax revenues (Freedom House, 2018). The tax was introduced at a time when there was heavy online criticism of the president and critics believe that the introduction of the tax was a cynical means of silencing the voice of the majority against his rule (Unwanted Witness, 2019).

The result of the tax was an estimated 30% drop in internet-use between March and September 2018 and a drop in overall tax revenue (Gillwald et al, 2019). There were reports that poor people were particularly struggling to be able to get online (Pinch, 2020). Moreover, since social media is often an entry point for internet-use because of the low skillset required to use it, the introduction of the tax may reduce the likelihood of those with lower skillsets as well as lower incomes from using the internet (Unwanted Witness, 2018, Alliance for Affordable Internet, 2019).

The scratch card vendors were ubiquitous in urban and peri-urban areas and even in rural towns. However, the government banned the cards in July 2018 and there are concerns that this may have prevented people, particularly those living in rural areas, who may be without access to the alternative easy load system, to obtain access to data (Walubiri, 2019). There are four main licensed telecommunications operators in the country who dominate the ICT market; Africell, Airtel Uganda, MTN Uganda and Uganda Telecom (Gillwald *et al.*, 2019).

3.3.2 Constraints

Poor infrastructure, poverty and poor digital literacy appear to be the key constraints to internet access across the country according to some of the research undertaken to date (Gillwald *et al.*, 2019, WOUGnet, 2015). Mobile internet coverage is concentrated in urban areas and along the main transport routes, with

only 65% of the population having access to a 3G network (Gillwald *et al.*, 2019). Furthermore, only 18% of Ugandans are connected to the mains electricity grid, although solar power is used by a quarter of the population (*ibid*). The poor network coverage and the inability to charge mobile phones because of lack of electricity partly explains the large gap in urban and rural dwellers internet access. According to Gillwald et al (2019), the urban internet penetration rate is three times the penetration rate in rural areas.

Affordability of both internet-enabled mobile phones and data is also a major constraint (World Wide Web Foundation, 2016). The cost of a 1GB of data was USD2.77 as at June 2018 (Gillwald et al, 2019). Although the cost of data in Uganda is not high compared with some other African nations (Alliance for affordable Internet, 2018), Uganda has a low GNI per capita. Not surprisingly there is a correlation between internet use and GNI per capita at a national level and it appears that internet-use is linked to disposable income at an individual level (Gillwald *et al.*, 2019). Table 3.2 below sets out the usage levels at different levels of disposable income in Uganda in 2018. It can be seen that at lower levels of disposable income, internet usage is low.

Table 3.2 Comparison of internet use across different income groups in Uganda in 2018 (Research ICT Africa, 2019).

Disposable Income (USD)	Internet Use (Percentage)
0-100	11
101-1000	34
1001-2000	100

The sensitivity of the price of data for ordinary Ugandans can be seen from the introduction of the social media tax in July 2018 (see Box 3.1 above). The addition of the tax instantly reduced the affordability of data as evidenced by an instantaneous 15% drop in internet use after the introduction of the tax (Research ICT Solutions, 2019). According to the Alliance for Affordable Internet (2018), the Social Media Tax on average represents another 10% of the monthly income for the lowest income groups in society. Women in Uganda have less disposable

income than men (WOUGnet, 2015) and are therefore disadvantaged by the lack of affordability of the mobile device and the data required to use the internet. During 2017/18 there was estimated to be a 25% gender gap in access to the internet as shown in Figure 3.2 above (Gillwald *et al.*, 2019). Interestingly, research undertaken in 2011 found that the gender gap in internet use in Uganda was only 6% once the confounding variables of employment, education and income had been removed (Hilbert, 2011). This suggests that the underlying differences in education, employment status and financial resource might play a large part in explaining the gender gap in gaining access to the internet.

Digital literacy is also a major constraint to internet access. According to the WOUGnet survey undertaken in Kampala in 2015, a third of women said that digital know-how was preventing them from using the internet (WOUGnet, 2015). As stated above, women have lower levels of education in Uganda compared to men and this also impedes their access to and use of ICTs (APC and WOUGnet, 2020). There is other research suggesting that gender norms are influencing the uptake of mobile phones and ICT use by women in Uganda (Madanda, 2014). Research by WOUGnet (2015) found that women's access to the internet is controlled by men; a survey found that 40% of women and 60% of men agreed with men's right to control women's access.

3.3.3 ICT Policy & Legal Environment

The Ugandan Government recognizes that the growth of ICTs is key to achieving its sustainable development goals. The Digital Uganda Vision (DUV) provides the policy and strategic framework of how ICTs will assist in the delivery of the national Vision 2040. There is a raft of policies that sit within the DUV. These include the National ICT Policy (2014) and the National Broadband Policy (2018). These policies have the objective of increasing internet access and stimulating socio-economic development by improving connectivity and knowledge of ICTs. One of the criticisms of the ICT policies in Uganda over the last decade has been that they are gender blind in policy design and implementation and do not specifically address the gender digital divide (APC and WOUGnet, 2020; Madanda,

Okello and Bantebye-Kyomuhendo, 2009; WOUGnet, 2015). One of the other criticisms is that the policies are poorly integrated and coordinated within and between government departments and are rarely effectively implemented (Gillwald *et al.*, 2019). As an example, the improvement in access to the internet in rural areas has been spearheaded by the Rural Communications Development Fund (RCDF) which has had some success in addressing the rural-urban access divide through its ICT training programmes and drive towards integrating ICTs within the health, education and local government sectors. However, assessment of these initiatives has shown that many of the programmes are not sustainable, they are not focused on the marginalized in society and instead focus on more profitable, commercial activities. Finally, there are not enough resources, for example, ICT teachers, computers or infrastructure to support these initiatives (Madanda, Okello and Bantebye-Kyomuhendo, 2009, CIPESA, 2015).

In a similar vein, on the face of it, Uganda appears to have a reasonable ICT legal and regulatory framework to promote freedom of expression online and protect against cyber harassment. However, the individual laws draw heavy criticism in the way that they are interpreted and implemented (Freedom House, 2018, Rukundo, 2018, Unwanted Witness, 2018). Whilst, on the one hand, the Ugandan Constitution provides for freedom of speech, on the other, the 2011 Computer Misuse Act, for example, contains provisions that are open to interpretation and can therefore be abused by those in power to limit the freedom of expression. Section 25 of the Act “prohibits the willful and repeated use of electronic communication to disturb the peace, quiet or right of privacy of any person with no purpose of legitimate communication” (Rukundo, 2018, p260). What counts as disturbing the peace, quiet or right of privacy of an individual is highly subjective (*ibid*) and this subjectivity has resulted in the Act being used to suppress criticism from journalists, bloggers, human rights defenders and political opponents. For example, in April 2017, Dr Stella Nyanzi was arrested and charged under the act on two counts of cyber harassment for calling the President a “pair of buttocks” on her Facebook page (Freedom House, 2017). In September 2017, Robert Kyagulanyi (otherwise known as Bobi Wine) was detained on the basis of his

online criticism of President Museveni's successful attempt to lift the presidential age limit (Rukundo, 2018).

The Regulation of Interception of Communications Act (RICA), 2010, has been criticized for requiring telecom operators to install technical surveillance equipment to monitor communication through its channels. Once again, without the necessary protections in place, this requirement opens up the possibility of cyber surveillance for politically, economically or socially motivated purposes. There is evidence that the state has used pressure on these private telecom operators to gain access to people's communications and that the weak internal policies of these companies compromise the freedom of expression and right to privacy of their customers (Unwanted Witness, 2018). Moreover, at the time of the research there were no data protection or privacy laws in place in Uganda. Given this environment of weak protection of freedom of expression and privacy, it is not surprising that in a recent survey, many Ugandans stated that they did not feel able to freely express themselves online with 89% stating that they couldn't talk about political issues freely and 92% that they couldn't engage in social gossip freely (Gillwald *et al.*, 2019). Uganda had the worst freedom of expression percentages compared to the other African countries contributing to the survey. The Data Protection and Privacy Act was passed in 2019 but, according to Unwanted Witness, a year after the enactment, the lack of an enforcement mechanism has "rendered the law toothless" (Unwanted Witness, 2019, p 13).

3.4 Conclusion

The chapter has briefly set out the economic, social and political context for the study and has highlighted some of the constraints to internet access, many of which affect women in particular. It has also examined the policy and legal framework for internet-use and has revealed some of the ways in which the current legal and taxation environment may be reducing access and curtailing online freedoms. The next chapter considers the methodology for the study.

Chapter 4 Methodology

4.1 Introduction

Studying the use of a new technology from a gender, contextual and empowerment perspective is methodologically challenging especially when this is an under-researched area of study, providing very few clues as to the most appropriate research approach and design. As will be discussed below, a grounded, iterative approach was undertaken because of the paucity of research available to explain the gender dynamics around how ordinary people were using the internet in Uganda. This allowed the learning from one part of the data collection to influence the next part and to result in a reflection of the data analysis arising from the previous parts. Mixed methods were employed to provide a rich data set to capture how and why the participants were using the internet, to reveal the opportunities for empowerment that the internet affords and provide the ability to explore the gender dynamics and contextual influence on their use. This chapter begins by setting out the research epistemology and methodological approach and moves on to reveal the research design and the researcher's perspective, positionality and reflexivity. It then discusses the selection of study sites and participants, the data collection methods and tools and the types of data analysis employed. Finally, the chapter discusses the limitations of the methodology.

4.2 Research Epistemology & Methodological Approach

The research is based on a social constructionist epistemology. Fundamentally, meaning is not discovered, it is socially constructed and knowledge is developed and transmitted as a result of interaction between human beings within a social context (Berger and Luckmann, 1991). It takes a critical inquiry theoretical perspective as it recognizes how the construction of meaning serves to support certain power structures (Crotty, 1998). Layered on top of this, it takes a feminist

perspective that recognises the centrality of male power as a key factor in the construction of meaning and knowledge (Maguire, 1987). As part of this feminist perspective, the research also adopts certain underlying feminist principles. It focuses on the status of women and on the conditions that produce domination in gender relations and seeks to undertake the research with the aim of facilitating the transformation of these relations (Kushner and Morrow, 2003). It therefore attempts to put women's voices at the centre of the research, to highlight their experiences and their understanding of them, interpreted from the perspective of gender relations (Ramazanoglu, 1989). It aims not just to describe women's situations, but to consider how their gender, age, and material circumstances, for example, all contribute to explaining the social injustices that they face (Oleson, 2005). It therefore welcomes diversity and encourages different voices and experiences to be incorporated into the research. Furthermore, it seeks to develop non-exploitative relationships within the research process (Letherby, 2003) but also recognizes the researcher's influence on the selection, analysis and interpretation of the data and therefore highlights the importance of positionality and reflexivity (Mauthner and Doucet, 2003).

4.2.1 Grounded Theory Methodological Approach

In terms of the methodological approach, a grounded theory methodology has been adopted. The grounded theory approach was developed by Glaser and Strauss and its main purpose is to develop a higher level of understanding that is "grounded in" or derived from analysis of the data (Glaser and Strauss, 1967). This type of methodology is particularly appropriate in a situation like in this study, where there is little other research on this topic and the generation of concepts with explanatory power is a desired outcome (Birks and Mills, 2015). It demands an iterative approach that requires the researcher to move back and forth between the data and the emerging analysis and ensures that the data is progressively more focused and that the analysis becomes more and more theoretical (Bryant and Charmaz, 2007). The approach is summarised by (Charmaz, 2006, p 181).

“ Grounded theory involves taking comparisons from data and reaching up to construct abstractions and then down to tie these abstractions to the data. It means learning about the specific and the general – and seeing what’s new in them – then exploring their links to larger issues or creating larger unrecognised issues in entirety.”

The grounded theory approach is operationalised in the research design through the iterative, flexible approach that has been taken. Although the over-arching research objectives were determined at the start and used to develop the initial tools for data gathering, the underlying research questions emerged and were refined throughout the research process in response to the comparative analysis of the data within and between the different stages of the data collection. As necessitated by the grounded theory approach, after an initial phase of purposive sampling, theoretical sampling was used as a means of further addressing the research questions through the secondary phase of qualitative research, that is, through the case study interviews. This allowed clues about new concepts arising from the data analysis of the first phase of the research to be pursued. According to Glaser and Strauss (1967), theoretical sampling is an important method of allowing new ideas to emerge from the data. They define theoretical sampling as,

“ the process for generating theory whereby the analyst jointly collects, codes and analyses his data and decides what data to collect next and where to find them in order to develop his theory as it emerges.”

(ibid, 1967, p45)

Theoretical sampling and the iterative comparative analysis of the data continued until clearly defined narratives and concepts had emerged. More details of the operationalization of the grounded theory approach are included in research design section below.

At first sight, there appears to be a methodological incongruence between the epistemology of this research and the grounded theory methodological approach (Wuest, 1995; Allen, 2011; Kushner & Morrow 2003; Oleson, 2007). Whilst grounded theory appears to reject the notion of a priori theory acting as a means

of elaborating emerging concepts from the data, the critical and feminist theoretical perspective requires the imposition of the feminist perspective on the conceptual analysis of the data (Kushner and Morrow, 2003). This analysis may reject the participants' interpretation of their experience on the basis of false consciousness, that is, because it could reflect patriarchal rather than female interests. However, although the grounded theory approach has its roots in symbolic interactionism, some of its later proponents have stated that it can be viewed as "a theory/methods package with an interpretive, constructionist epistemology" (Clarke and Friese, 2007, p366) since it recognizes that the research participants and researchers action can be seen as constructed. Furthermore, some authors see these theoretical perspectives and the grounded theory approach as being congruent as long as the data gathering and analysis is grounded and the theoretical perspective is used as a form of "theoretical triangulation" between the different concepts deriving from the iterative analysis of the data (Kushner and Morrow, 2003). This allows the methodological approach to result in the generation of knowledge that provides meaningful explanations of human interaction in the social world. It is therefore concluded that the grounded theory approach can be accommodated within the epistemological and theoretical perspectives that underpin this research.

Moreover, it can be argued that a grounded theory approach satisfies some of the feminist research principles outlined above. The basic tenets that underpin grounded theory reflect an underlying respect for the perspectives and the voice of those who are the subjects of the study (Wuest, 1995). This is similar to the feminist perspective that women can be knowers, that the experiences of the participants in the study are a legitimate source of knowledge. In grounded theory research, multiple and diverse perspectives are welcomed to highlight the possible theories behind the concepts emerging from the data. Furthermore, as hinted at above, it is accepted that researchers using grounded theory do not simply provide the viewpoints of the participants of the study, they should "accept responsibility for their interpretive roles" (Strauss and Corbin, 1994, p274). This echoes the feminist perspective that the researcher influences the research process, the questions asked and the analysis.

4.3 Research Design

A research design helps explain how the research objectives are converted into a coherent research project (Robson, 2002) and justifies the strategies and methods employed. Within the grounded theory methodological approach it was decided that a mixed methods research design would be best suited to this flexible approach. The combination of qualitative and quantitative methods of data collection was not only deemed appropriate to add breadth and depth to the data collected (Mayoux 2006) and to triangulate the data (Bryman, 2012), it was deemed necessary given the nature of the research objectives. On the one hand, the qualitative research allowed the voices of the female participants to take centre stage and the complexities and dynamics of their interactions with the technology to be understood. On the other hand, there was a need to incorporate a quantitative approach to determine what was happening in terms of internet use and provide the context and comparative analysis. One of the central reasons for doing the research was to understand the gender differences in internet use and the consequences at the study sites since this would provide an insight into the gender dynamics surrounding use of the internet. Another main objective of the research was to gain an understanding of how different types of women were using the internet at the study sites in different ways so as to discern the contextual differences surrounding its use. This type of comparative analysis between gender and demographic and socio-economic factors in respect of the research phenomenon was deemed to be best suited to a quantitative approach. However, the data analysis derived from the initial qualitative data collection methods (Focus Group Discussions (FGDs) and Participatory Group Exercises (PGEs)) was used as a platform upon which to develop the quantitative tools. In turn, the data analysis from the quantitative methods, combined with the data analysed from the qualitative methods, was then used as a platform to determine the case study approach. In fact, this iterative, flexible approach, which reflects the grounded theory methodology, was used throughout the research process.

Figure 4.1 The Overall Research Design.

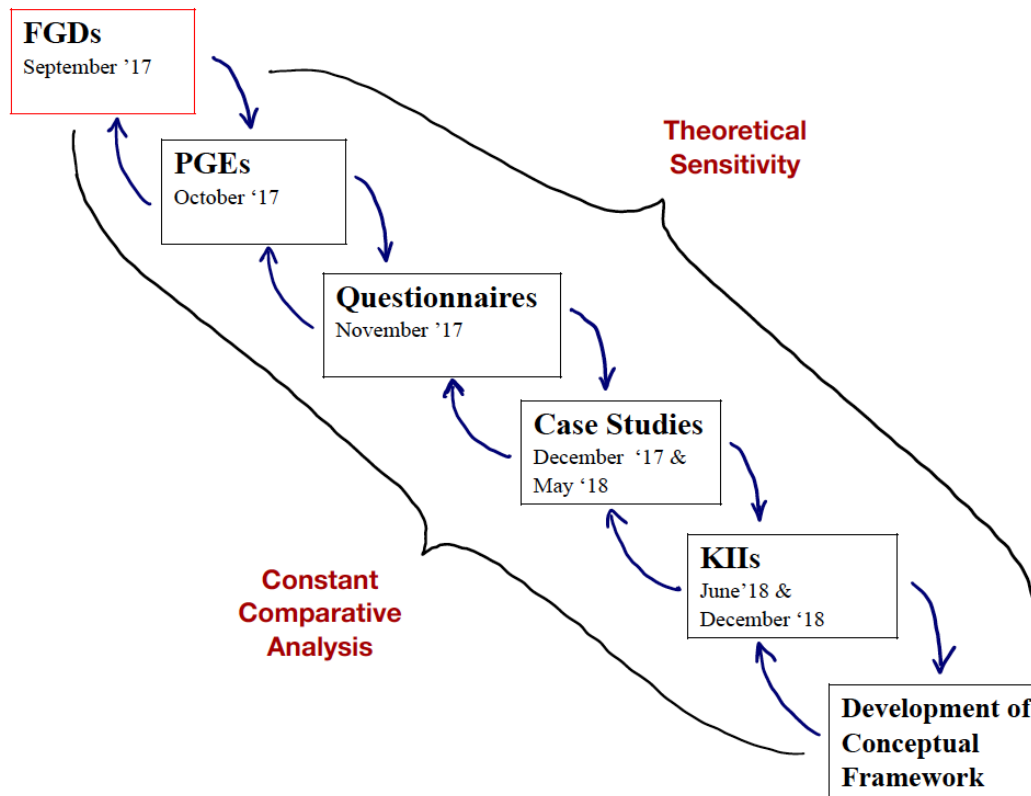


Figure 4.1 above shows the overall research design and reveals the timing and sequential and iterative nature of the design, with the quantitative research being placed in the middle of the research process as explained above. The arrows on the diagram show how the data analysis from one stage of the research process influenced the design of the next stage of the process and similarly how the data analysis from one phase would then result in a comparison with, and a reflection on, the data already analysed in the previous phases of the research. A constant comparative analysis took place both between and within the data sets, comparing and integrating incidents and participant statements relevant to each theme. Furthermore, theoretical sensitivity encompassed the whole research process and enabled elements of possible theoretical significance to be identified during data generation, collection and analysis. Theoretical sensitivity is defined as “ the ability to recognize and extract from the data elements that have relevance for the emerging theory” (Birks and Mills, 2015, p181) and was enhanced by the literature review, the open coding and the iterative nature of the design process.

Figure 4.2 below provides an overview of the mixed methods used and shows their purpose in generating data for the key research objectives, the sampling approach used and the type of data analysis undertaken. The fieldwork for this research was conducted over a period of 15 months, with three scoping visits taking place during the year before the fieldwork started. Table 4.1 below sets out the timescale for the fieldwork activities. The length of this process and the gaps between the different data collection activities allowed the data from one activity to be analysed and reflected upon before the next activity, in keeping with the grounded, iterative approach.

4.4 The Researcher's Perspective, Positionality and Reflexivity

As discussed in section 4.2, the epistemological and theoretical perspectives that underpin this research demand that the researcher states their own positionality within the research process at the earliest opportunity. At the heart of the foregrounding of self that reflexivity demands is the relationship between the researcher and the participants (Oleson, 2007); there is a power imbalance in these relationships that needs to be exposed throughout the research process. During the data collection process there is a power imbalance between the researcher and the participants since the control over the agenda and the process is in the hands of the researcher. The perceived power imbalance from the participants' perspective was heightened as the researcher was a white British woman with its associated social, political and economic privilege, particularly in a previously colonized country such as Uganda. Furthermore, the research assistants, although Ugandan, were well educated and not necessarily from the same ethnic group as the participants, thus creating another layer of hierarchy and difference between the researchers and the participants.

Whilst recognizing that the power imbalances could never be completely reduced, in order to try to redress this imbalance, time was spent with the participants explaining about the purpose of the research and the fact that the researcher did

not have an affiliation with a particular donor or government institution. More importantly, it was explained that the researchers did not know the answers to the questions that were being asked, that the participants were the only ones who knew and that there were not any right or wrong answers. During the FGDs and the PGEs the research assistants facilitated the sessions and the researcher did not intervene and ask questions until the very end. To a certain extent this minimized the potentially negative impact of the white researcher's presence and also enabled the session to be conducted in the participants language of choice.¹¹ At another level, the language barrier served to reinforce the power imbalance with those better educated participants more likely to be able to converse in English and those from outside the central region originally, less able to converse in Luganda.

Wherever possible, before the case study interviews, an additional session was spent with the participants getting to know them as individuals before undertaking the formal interview session. These sessions attempted to draw out the commonalities between the participant and the researcher such as womanhood and motherhood, rather than dwell on the differences. These sessions and the formal interviews were undertaken at a time and a place requested by the participant, once again, attempting in a small way to redress the power imbalance inherent in the relationship. It was observed that where due consideration was given to these issues, the subsequent interview took place at a deeper level than with the other interviews.

The power imbalance in this relationship extends beyond the data collection process into the data analysis process and into developing the findings from the research. Whilst power momentarily rests with the participant as they give their perspective on how the internet has changed their life, the decision as to whose voice to highlight and how this voice is interpreted within the framework of the research rests with the researcher. The researcher felt uncomfortable with the responsibility of representing the female participants voices within the research, given her lack of lived-in experience of the participants' lives and the dangers of

¹¹ The researcher sat with a translator throughout.

therefore misrepresenting the voices of those who are already disempowered. Although the researcher has spent a lot of time in East Africa, she has experienced this from the perspective of a privileged, well-educated, white woman. To counteract this inherent power imbalance, the researcher really tried to listen to everyone's voice, to be open to new ideas and to give equal weight to different ideas and to confront any prejudices that she may have had. She also spent a lot of time explaining her research aim so that the two main research assistants, who were experienced gender researchers, could assist her on her research journey. After every FGD and PGE or case study interview, there was a debriefing session where the researcher and the research assistants shared their notes from the session and where the meanings of what the participants had said could be unpacked, interpreted and discussed. Through sharing these perceptions and misconceptions, the researcher gained more understanding of the participants' experiences and the meanings that they attached to them and gained a greater awareness of her own "blindspots" within the research because of her positionality.

Figure 4.2 Overview of the Mixed Data Collection Methods Used.

	FGDs	PGEs	Questionnaires	Case Studies	KIIs
Sampling	Purposive	Purposive	Stratified Purposive	Purposive/theoretical	Purposive
Research objectives 1 & 2: Access, Use, Changes	General discussion to gain an understanding of access and use of the internet and constraints. Self assessment of internet skills.	How has your use of the internet changed your life? +ve and -ve impact of the internet? Time analysis of use	Questions about frequency of use, main reasons for use and the changes in life as a result of use	Clarification of questions answered already. More in-depth questions of opportunities for empowerment	Understanding of opportunities for empowerment and constructing key themes
Research objective 3: Gender Dynamics	Comparison between all female and all male discussion groups. Main question: do women or men use the internet most and why?	Comparison between all female and all male and mixed discussion groups.	Comparison between female and male responses. 10 x gender equality questions	Questions to ascertain changes in gender dynamics in their lives	Understanding of key concepts i.r.o gender dynamics
Research objective 4: Socio-economic factors	Comparison between urban, peri-urban & rural study sites	Comparison between urban, peri-urban & rural study sites	6 x demographic questions	Questions to obtain an understanding of the participants lives	Background to understanding context at local and national levels
Data analysis	Coding using Excel. Analysis of gender differences and study site differences	Coding using Excel. Analysis of gender differences and study site differences	Descriptive statistical analysis including Chi-square analysis	Coding using NVivo	Coding using NVivo

4.5 Unit of Analysis

The main unit of analysis selected for the field research is the individual female internet user since the focus of the research is how the use of the internet is empowering women. However, because of the requirement to gain a better understanding of the differences between men and women's interaction with the internet and the gender power dynamics surrounding its use, men have been included in certain parts of the study. They were included in the FGDs and PGEs either as part of all-male groups or in mixed groups and took part in the questionnaire, but were not part of the case studies. The all male groups in the FGDs and PGEs served as the comparison group to be able to ascertain the gender differences in internet-use and how they saw the internet changing their lives. The male respondents fulfilled a similar role in the questionnaire by allowing for an analysis of the gender differences. The mixed groups for the FGDs and PGEs served to generate discussion about the gender dynamics surrounding internet-use and once again to provide a comparison between the all-female and all-male groups in terms of the issues raised and those not raised. The number of female and male participants at each stage of the data collection is shown in Table 4.6 below.

Table 4.1 Timescale for the fieldwork activities.

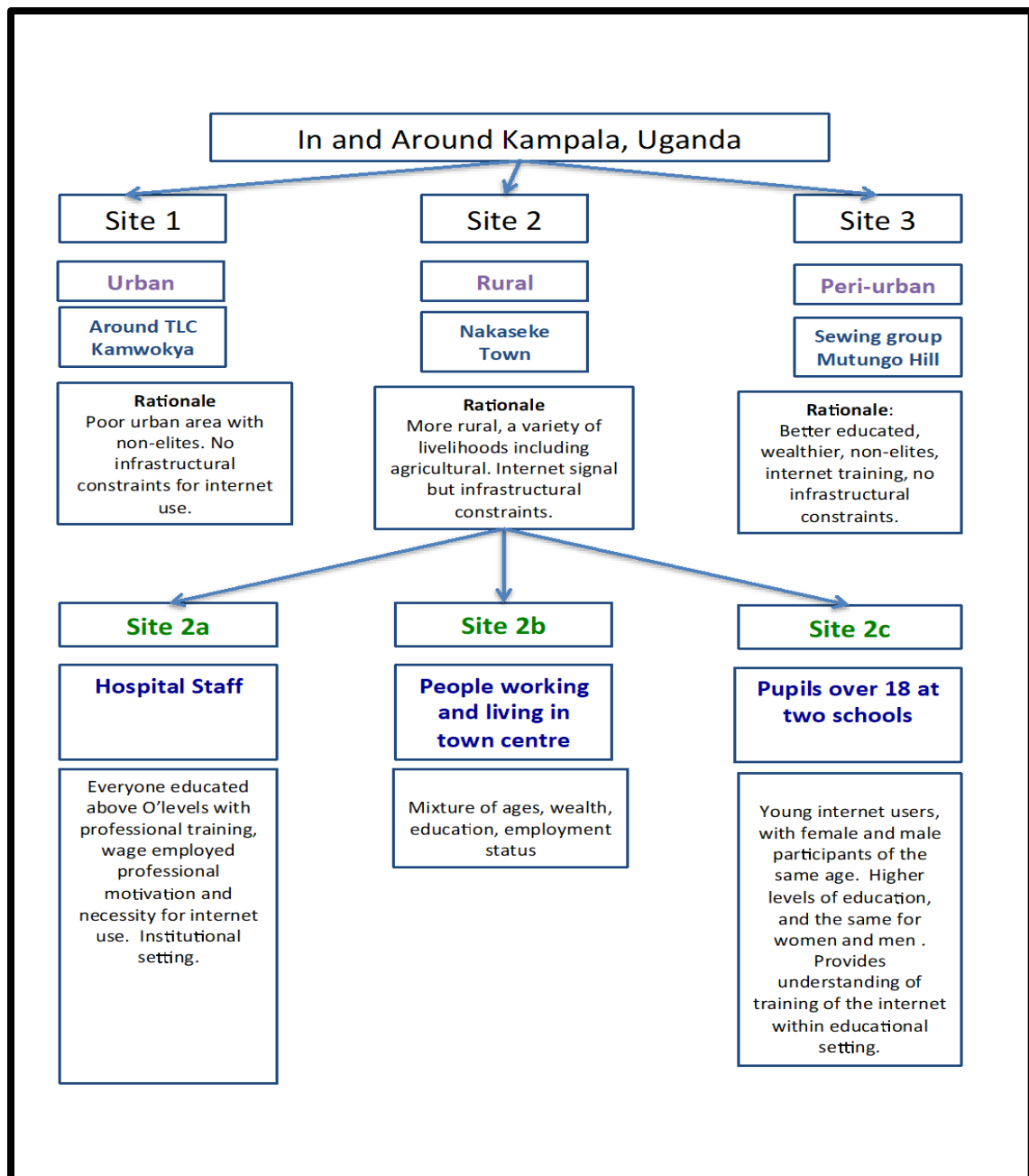
Date	Activity	Further details
October 2016	1 st Scoping Visit	Initial meeting with local NGOs, iNGOs and academics to better understand gender and ICT background and to establish possible research sites.
May 2017	2 nd Scoping Visit	Visits to 5 possible study sites (2 rejected). Meetings with community mobilisers. Ethical clearance process started. Interviews with research assistants.
July 2017	3 rd Scoping Visit	Ethical clearance process finalized. Training with research assistants. Visits with 2 lead research assistants to study sites to meet community mobilisers.
September 2017	FGDs	See section 4.8.1.1. below
October 2017	PGEs	See section 4.8.1.2. below
November 2017	Questionnaires	See section 4.8.1.3 below
December 2017	Case study interviews	See section 4.8.1.4. below
December 2017	Supervisor visit	
April 2018	Case study interviews KIIs	See section 4.8.1.4. and 4.8.1.5. below
December 2018	KIIs	See section 4.8.1.5. below

4.6 Selection of the Study Sites

Three main study sites were selected in locations where there was known use of the internet by non-elites, so that an understanding could be gained of how internet-users with different demographical attributes were using the internet within different geographical, social, economic and political settings. With this aim in mind, an urban, a peri-urban and a rural study site were chosen. The study sites were all selected in areas where there was known internet-use, within a reasonable proximity of Kampala so as to help reduce the research logistics. A map of the location of the main study sites is shown in Figure 4.3 below. Figure 4.4 provides a summary for the rationale for the selection of the different study sites.

Figure 4.3 Map Showing the Location of the Three Main Study Sites.

Figure 4.4 Diagram Showing the Rationale for Selection and the Key Characteristics of the Selected Sites.



4.6.1 Site 1

Given the paucity of research on internet-use by non-elites, one of the study sites was chosen to be the area of Kamwokya in the centre of Kampala, Uganda's capital. The participants for the research came from the area around the Treasure Life Centre¹² (TLC), a community centre in the middle of a deprived urban area. From observation and consultation with local experts, this is an area where most of the residents are poor. There are high levels of unemployment, with many of the residents engaging in small business enterprises or insecure employment. Drug and alcohol abuse, petty theft and prostitution are highly prevalent in the area. There is poor sanitation and cramped housing which leads to outbreaks of TB and cholera. Despite the levels of poverty and deprivation, mobile internet-use is common and there is a good 3G internet signal.

4.6.2 Site 2

Another site was selected to be the rural town of Nakaseke in the Nakaseke District, within the Central Region of Uganda. The town is located 68 kilometres northwest of Kampala and had a population of approximately 9,000 people¹³ at the time of the research. It is accessed for the last approximately 20km on a dirt road and the main economic activity in the area around the town is farming. The town has an Airtel and MTN mast on a hill just outside the town that allows the population of the town and its environs to access the internet. Following on from the data analysis of the FGD and the PGEs at Site 2, and from observations undertaken within the town, it was decided, for the purpose of the questionnaire and case studies, to create three sub-sites within Site 2. Figure 4.5 below shows a map of these sub-sites within Nakaseke Town. The aim of this division was to provide a wider variety of participants and enable the data collected to facilitate a better understanding the use of the internet in three distinct contextual settings. The employees at the local 120-bed hospital were chosen as one of the sub-sites (2a). This was because it became evident at the FGD and the PGEs that many of the hospital employees had been trained to use the internet at the local community telecentre, had easy access to the internet through their work and were encouraged to use the internet for their professional development.

¹² The TLC is a youth centre established in 2002 by a church group Kampala Christian Care in the Community to empower young people with the knowledge, skills and attitudes for preventing HIV/AIDS, early pregnancy, STIs, alcoholism and drug abuse.

¹³ This data was provided by the Nakaseke Town district council offices.

Moreover, the employees are wage-employed and the hospital provided an institutional setting within which to study internet use, unlike at all the other study sites. The staff at the hospital also had higher levels of educational attainment compared to the non-hospital population in the town. Site 2b was selected to represent the people working and living within the town centre. The town centre, as defined for purpose of this research, consists of one main street with shops and stalls situated along the street and small dwellings up to 100m back from the main street. During the daytime when the questionnaire was undertaken, the town was quiet and consisted mainly of shopkeepers and stallholders on the main street, and women at home with their children in the roads just back from the main street. Site 2b provided access to participants who were mainly self-employed business owners, shop-workers or homemakers, in contrast to the participants at Site 2a.

In the FGD and the PGEs, there were many negative comments about how young people were using the internet but it was recognized that there were no young people within the study sub-sites selected so far at Site 2; the voices of these younger people were not being heard within the research. There were also comments about the lack of IT skills as a constraint for internet use. It was therefore decided to create a third sub-site (2c) around two of the schools in the town, a primary teachers training college (PTC) and a secondary school just off the main street. Some of the pupils who were over 18 years old would be selected to be the subjects within this site. The school sub-site brought a different dynamic to the research. It provided a group of young female and male participants who were the same age, had approximately the same level of education and would have had access to similar training in internet use. It was hoped that this would allow the gender differences and dynamics around internet-use to become evident as the other key socio-economic factors were, in effect, controlled. Furthermore, the school provided another institutional setting within which the internet was used and offered insight into the extent to which internet skills were taught at the schools.

Figure 4.5 Map of the Study Sub-Sites in Nakaseke Town (Site 2).

4.6.3 Site 3

The third site was a sewing group based around the Old Butabika Road in the Mutungo Hill suburb of Kampala, Nakawa division, approximately 7.5km from the centre of Kampala. This area was selected because it has a good 3G signal for internet use and from observation and discussion with experts is an area with a population with higher levels of income and education compared to Site 1. The sewing group consisted of approximately 25 members who lived in and around Site 3 and who earned their living as micro-entrepreneurs, either as tailors or by making and selling crafted goods. The group contained women from a mixture of age groups, educational backgrounds and marital status, but there were many single women with children that were forced to work from home because of their dependents. A local NGO had provided internet training to many of the women.

4.7 Selection of Research Participants

Due to the nature of the grounded theory research design, this research followed a stratified purposive and theoretical sampling process using the researcher's judgement to choose participants to specifically satisfy the requirements of the research. Figure 4.6 (below) sets out an overview of the research undertaken at each of the study sites and includes the number of participants for each type of

data collection method employed at each site. It should be noted that the results from the quantitative data collection method were not intended to be generalizable to the wider population and therefore no attempt was made to obtain a representative sample at the study sites. Statistical guidance around the selection of the participants was sought at the design stage of the methodological approach.

4.7.1 Sampling for the FGDs and the PGEs

Community mobilisers at Site 1 and Site 2 and the leader of the sewing group at Site 3 were asked to select female or male participants who used the internet, depending on whether it was to be a female, male or mixed group of participants. The mobiliser at Site 1 was the chair of the TLC. He was asked to invite participants living around the TLC. At Site 2, the manager of the telecentre had a list of the names and the phone numbers of those people that frequented the centre for purposes of internet-use. He was asked to select the participants for the FGDs and the PGEs from this list. The leader of the sewing group was asked to select participants from her membership list. In order to reduce the selection bias of the mobilisers/ sewing group leader and obtain a variety of different internet users from Site 1 and Site 2, they were given ranked criteria for selecting the participants. First and foremost, they had to be internet users and be of the required sex. Secondly, they had to be a mixture of ages if at all possible, and come from a range of educational backgrounds. Finally, their livelihood was considered with a preference for a mix of different types of employment status, for example, self-employed and wage employed. The initial selection of participants by the community mobilisers was reviewed, discussed with the lead researcher before being finalized.

Data collection method	Site 1 Urban	Site 2 Rural	Site 3 Peri-urban						
FGDs	1 x female group (n = 5) 1 x male group (n = 5)	1 x mixed group (n(f) =4, n(m) =4)	1 x female group (n = 6)						
PGEs	1 x female (n=5), 1 x male (n =5) 1 x mixed group (n=5)	1 x female group (n=5) 1 x male group (n=5) 1 x mixed group (n=7)	1 x female group (n = 4)						
Question- naire	82 women 76 men 158 = total	<table border="1"> <thead> <tr> <th>Site 2a: Hospital</th> <th>Site 2b: Town</th> <th>Site 2c: Schools</th> </tr> </thead> <tbody> <tr> <td>38 women 20 men 58 = total</td> <td>29 women 26 men 55 = total</td> <td>23 women 22 men 45 =total</td> </tr> </tbody> </table>	Site 2a: Hospital	Site 2b: Town	Site 2c: Schools	38 women 20 men 58 = total	29 women 26 men 55 = total	23 women 22 men 45 =total	17 women 3 men 20 = total
Site 2a: Hospital	Site 2b: Town	Site 2c: Schools							
38 women 20 men 58 = total	29 women 26 men 55 = total	23 women 22 men 45 =total							
Case Studies	7 women	8 women	5 women						
KIIs	1 x head of local women's group 1 x community mobiliser 1 x CDO	1x head of a local women's group 2 x IT teachers at the PTC and the secondary school 1 x manager of the community telecentre 1 x CDO	1 x head of a local women's group 1x CDO						

Figure 4.6 Overview of the Research Undertaken at Each Study Site, including the Number of Participants for Each Type of Data Collection Method.

4.7.2 Sampling for the Questionnaire

For the questionnaires, approximately equal numbers of female and male internet-users were purposively selected at each of the study sites and sub-sites. The aim was not to obtain a representative sample but to obtain an approximately equal number of female and male internet users with a wide range of attributes within the key demographic and socio-economic criteria of age, educational attainment, employment status, marital status and wealth. This would allow these independent variables to be compared against the dependent variables under investigation, for example, using the internet for searching for livelihood information, and allow for statistically significant associations to be drawn where appropriate. The overall demographic analysis of the respondents to the questionnaire is shown in Table 4.2 below, and it shows that overall both the female and male participants have similar demographic characteristics. The demographic analysis at each study site between the female and male respondents is shown in Tables 4.3 to 4.8. There are small demographic differences between the female and male participants at some site and sub-sites, which will be discussed where gender differences are examined within the results. Different strategies were employed for selecting the respondents for the questionnaires at the different study sites and will be set out below.

4.7.2.1 Site 1 (Urban)

The area around the community centre, the TLC, was split into five different sub-areas and the lead researcher and the four research assistants were each allocated a sub-area in which to locate the participants. Originally, it had been hoped that the researchers would be able to select local residents by walking within these areas and asking residents whether they used the internet and then undertaking the questionnaire. However, due to the political tension in the area and the heavy rains which made the area difficult to access and for the questionnaire to be completed outside, a base was established at the TLC and five community mobilisers were used to act as research assistants, to find participants within these five different areas and to bring them back to the TLC where the questionnaire could be completed in the dry. They were asked to find an equal number of female and male internet users within each area. At the end of each day, the demographic data was analysed with specific attention paid to gender and age and the request for the types of participants required for the following day adjusted.

Table 4.2 Demographic analysis of all of the questionnaire respondents by gender.

Independent variable	Categories	Female (n=189)	Male (n=147)	Grand Total (n=336)
Age	18 to 30	69%	73%	71%
	31 to 40	22%	16%	20%
	41 to 50	4%	6%	5%
	Over 51	5%	4%	4%
	Grand Total	100%	100%	100%
Marital Status	Single	58%	59%	58%
	Living together with boyfriend/ girlfriend	13%	10%	12%
	Married (cultural or church)	25%	31%	28%
	Divorced/separated	2%	0%	1%
	Widowed	2%	0%	1%
	Grand Total	100%	100%	100%
Highest Level of Education	No school or primary school	14%	12%	13%
	O' Levels or Training after O' Levels	34%	29%	32%
	A' Levels or Training After A' Levels	27%	31%	29%
	Tertiary (see note 1 below)	25%	28%	26%
	Grand Total	100%	100%	100%
Employment Status (see Note 2 below)	Self employed	40%	40%	40%
	Wage employed	38%	41%	39%
	Student	24%	26%	25%
	Farmer	5%	12%	8%
	Unemployed	6%	10%	8%
	Homemaker	8%	1%	5%
	Retired	1%	2%	1%
	Grand Total	122%	131%	126%
Poverty Index Ranges (see note 3 below)	45-49	1%	1%	1%
	50-54	4%	7%	5%
	55-59	7%	7%	7%
	60-64	17%	16%	16%
	65-69	19%	16%	18%
	70-74	25%	20%	23%
	74-79	14%	20%	17%
	80-84	5%	7%	6%
	85-89	6%	3%	5%
	90-94	1%	2%	1%
	95-99	0%	1%	0%
	Grand Total	100%	100%	100%

Table 4.3 Demographic analysis of the questionnaire respondents at site 1 by gender.

Independent variable	Categories	Female	Male	Grand Total
		(n=82)	(n=76)	(n=158)
Age	18 to 30	72%	70%	71%
	31 to 40	22%	18%	21%
	41 to 50	4%	7%	5%
	Over 51	2%	5%	3%
	Grand Total	100%	100%	100%
Marital Status	Single	58%	58%	58%
	Living together with boyfriend/ girlfriend	18%	13%	15%
	Married (cultural or church)	20%	29%	25%
	Divorced/separated	1%	0%	1%
	Widowed	2%	0%	1%
	Grand Total	100%	100%	100%
Highest Level of Education	No school or primary school	27%	10%	19%
	O' Levels or Training after O' Levels	34%	29%	32%
	A' Levels or Training After A' Levels	25%	31%	28%
	Tertiary (see Note 1 below)	14%	30%	21%
	Grand Total	100%	100%	100%
Employment Status (see Note 2 below)	Self employed	49%	47%	48%
	Wage employed	29%	38%	34%
	Student	11%	20%	15%
	Farmer	1%	5%	3%
	Unemployed	11%	14%	13%
	Homemaker	16%	1%	9%
	Retired	0%	4%	2%
	Grand Total	117%	130%	123%
Poverty Index Ranges (see note 3)	45-49	1%	1%	1%
	50-54	5%	8%	6%
	55-59	9%	5%	7%
	60-64	20%	14%	17%
	65-69	22%	18%	20%
	70-74	23%	17%	20%
	74-79	13%	21%	17%
	80-84	5%	8%	6%
	85-89	1%	5%	3%
	90-94	1%	1%	1%
	Grand Total	100%	100%	100%

Table 4.4 Demographic analysis of the questionnaire respondents at site 2 by gender.

Independent variable	Categories	Female	Male	Grand Total
		(n=90)	(n=68)	(n=158)
Age	18 to 30	68%	76%	72%
	31 to 40	23%	15%	20%
	41 to 50	6%	6%	6%
	Over 51	3%	3%	3%
	Grand Total	100%	100%	100%
Marital Status	Single	57%	58%	58%
	Living together with boyfriend/ girlfriend	12%	7%	9%
	Married (cultural or church)	28%	35%	31%
	Divorced/separated	3%	0%	2%
	Grand Total	100%	100%	100%
Highest Level of Education	No school or primary school	4%	13%	8%
	O' Levels or Training after O' Levels	35%	30%	33%
	A' Levels or Training After A' Levels	33%	31%	32%
	Tertiary (see Note 1 below)	28%	26%	27%
	Grand Total	100%	100%	100%
Employment status (see Note 2 below)	Self employed	24%	34%	28%
	Wage employed	47%	43%	45%
	Student	37%	32%	35%
	Farmer	9%	19%	13%
	Unemployed	3%	4%	4%
	Homemaker	1%	0%	1%
	Retired	0%	0%	0%
	Grand Total	121%	132%	126%
Poverty Index Ranges (see note 3	45-49	1%	0%	1%
	50-54	2%	6%	4%
	55-59	8%	9%	8%
	60-64	18%	16%	17%
	65-69	17%	15%	16%
	70-74	28%	25%	27%
	74-79	13%	19%	16%
	80-84	4%	6%	5%
	85-89	8%	1%	5%
	90-94	1%	1%	1%
	95-99	0%	1%	1%
	Grand Total	100%	100%	100%

Table 4.5 Demographic analysis of the questionnaire respondents at site 3 by gender.

Independent variable	Categories	Female	Male	Grand Total
		(n =17)	(n=3)	(n=20)
Age	18 to 30	59%	100%	65%
	31 to 40	18%	0%	15%
	Over 51	24%	0%	20%
	Grand Total	100%	100%	100%
Marital Status	Single	65%	100%	70%
	Married (cultural or church)	29%	0%	25%
	Widowed	6%	0%	5%
	Grand Total	100%	100%	100%
Highest Level of Education	No school or primary school	6%	0%	5%
	O' Levels or Training after O' Levels	24%	33%	25%
	A' Levels or Training After A' Levels	6%	33%	10%
	Tertiary (see Note 1 below)	65%	33%	60%
	Grand Total	100%	100%	100%
Employment Status (see Note 2 below)	Self employed	76%	0%	65%
	Wage employed	29%	67%	35%
	Student	18%	33%	20%
	Farmer	0%	0%	0%
	Homemaker	12%	0%	10%
	Retired	12%	0%	10%
	Grand Total	147%	100%	140%
	Poverty Index Ranges (see note 3 below)	45-49	0%	0%
50-54		6%	0%	5%
55-59		0%	33%	5%
60-64		0%	33%	5%
65-69		18%	0%	15%
70-74		24%	0%	20%
74-79		24%	0%	20%
80-84		12%	0%	10%
85-89		18%	0%	15%
90-94		0%	33%	5%
Grand Total		100%	100%	100%

Table 4.6 Demographic analysis of the questionnaire respondents at site 2a by gender.

Independent variable	Categories	Female	Male	Grand Total
		(n =38)	(n =20)	(n=58)
Age	18 to 30	55%	65%	59%
	31 to 40	29%	25%	28%
	41 to 50	8%	10%	9%
	Over 51	8%	0%	5%
	Grand Total	100%	100%	100%
Marital Status	Single	45%	40%	43%
	Living together with boyfriend/ girlfriend	8%	5%	7%
	Married (cultural or church)	42%	55%	47%
	Divorced/separated	5%	0%	3%
	Grand Total	100%	100%	100%
Highest Level of Education	No school or primary school	0%	0%	0%
	O'Levels or Training after O'Levels	19%	10%	16%
	A'Levels or Training After A'Levels	34%	25%	31%
	Tertiary (see Note 1 below)	47%	65%	53%
	Grand Total	100%	100%	100%
Employment Status (see Note 2 below)	Self employed	21%	45%	29%
	Wage employed	79%	85%	81%
	Student	24%	0%	16%
	Farmer	11%	15%	12%
	Unemployed	5%	10%	7%
	Grand Total	139%	155%	145%
Poverty Index Ranges (see note 3)	45-49	0%	0%	0%
	50-54	0%	0%	0%
	55-59	0%	5%	2%
	60-64	13%	10%	12%
	65-69	13%	5%	10%
	70-74	39%	40%	40%
	74-79	18%	25%	21%
	80-84	8%	5%	7%
	85-89	5%	5%	5%
	90-94	3%	0%	2%
	95-99	0%	5%	2%
	Grand Total	100%	100%	100%

Table 4.7 Demographic analysis of the questionnaire respondents at site 2b by gender.

Independent variable	Categories	Female	Male	Grand Total
		(n=29)	(n=26)	(n=55)
Age	18 to 30	59%	65%	62%
	31 to 40	34%	19%	27%
	41 to 50	7%	8%	7%
	Over 51	0%	8%	4%
	Grand Total	100%	100%	100%
Marital Status	Single	38%	38%	38%
	Living together with boyfriend/ girlfriend	28%	12%	20%
	Married (cultural or church)	31%	50%	40%
	Divorced/separated	3%	0%	2%
	Grand Total	100%	100%	100%
Highest Level of Education	No school or primary school	14%	34%	24%
	O'Levels or Training after O'Levels	49%	35%	42%
	A'Levels or Training After A'Levels	13%	12%	12%
	Tertiary (see Note 1 below)	24%	19%	22%
	Grand Total	100%	100%	100%
Employment Status (see Note 2 below)	Self employed	48%	50%	49%
	Wage employed	41%	38%	40%
	Student	3%	4%	4%
	Farmer	14%	38%	25%
	Unemployed	3%	4%	4%
	Homemaker	3%	0%	2%
	Retired	0%	0%	0%
	Grand Total	114%	135%	124%
Poverty Index Ranges (see note 3 below)	45-49	0%	0%	0%
	50-54	0%	4%	2%
	55-59	3%	12%	7%
	60-64	24%	12%	18%
	65-69	28%	23%	25%
	70-74	14%	19%	16%
	74-79	14%	15%	15%
	80-84	0%	12%	5%
	85-89	17%	0%	9%
	90-94	0%	4%	2%
	Grand Total	100%	100%	100%

Table 4.8 Demographic analysis of the questionnaire respondents at site 2c by gender.

Independent variable	Categories	Female	Male	Grand Total
		(n=23)	(n=22)	(n=45)
Age	18 to 30	100%	100%	100%
Marital Status	Single	100%	95%	98%
	Never Married	0%	5%	2%
	Grand Total	100%	100%	100%
Highest Level of Education	No school or primary school	0%	0%	0%
	O'Levels or Training after O'Levels	48%	41%	44%
	A'Levels or Training After A'Levels	52%	59%	56%
	Tertiary (see Note 1 below)	0%	0%	0%
	Grand Total	100%	100%	100%
Employment Status (see Note 2 below)	Self employed	0%	5%	2%
	Wage employed	0%	9%	4%
	Student	100%	95%	98%
	Grand Total	100%	109%	104%
Poverty Index Ranges (see note 3 below)	45-49	4%	0%	2%
	50-54	9%	14%	11%
	55-59	26%	9%	18%
	60-64	17%	27%	22%
	65-69	9%	14%	11%
	70-74	26%	18%	22%
	74-79	4%	18%	11%
	80-84	4%	0%	2%
	Grand Total	100%	100%	100%

Notes for Tables 4.2 to 4.8 (above)

1. Tertiary education includes either university level or higher professional level qualifications.

2. Participants could make multiple selections as some participants have more than one source of income.

3. The poverty score range has been calculated using the Poverty Probability Index (PPI). This is a poverty measurement tool developed by Innovations for Poverty Action. The answers to 10 questions about a household's characteristics and asset ownership are scored to compute the likelihood that the household is living above or below any of a number of national and international poverty lines. The PPI is a country specific tool and the PPI for this demographic analysis was based on the PPI for Uganda 2012 which was based on the 2012/13 National Household Survey. The PPI questions, scores and the look-up tables are set out in Appendix A. For the purpose of this study when undertaking the analysis of the data the poverty ranges are categorized into "Under 64", "64 to 79" and

“80 to 99”. It should be noted that the categorization of the PPI scores in this way is not envisaged within the original purpose of the index. However, it is used to show the relative poverty within the study population in this research and is not used to draw conclusions about the poverty levels of the population at the study sites.

4.7.2.2 Site 2 (Rural)

A different strategy was employed at each of the sub-sites within study Site 2. For Site 2a (the hospital), all of the staff were invited to come to the hospital board room over a period of two days to complete the questionnaire during their break-times. For Site 2b (the town), the town was segmented into 10 different sections and the lead researcher and the four research assistants allocated two different sections where they asked random people that they came across whether they used the internet and could spare the time to complete the questionnaire. Wherever possible, the researchers attempted not to select people who were next to one another, or in the same location (for example, a shop, house), in order to avoid people who may be connected, that is, in the same household or in the same employment. At Site 2c, all the pupils over 18 years old at the schools were asked to participate and complete a questionnaire in their break time over two different days. Once again, the aim was to gain an approximately equal number of female and male respondents at each sub-site.

4.7.2.3 Site 3 (Peri-urban)

It was originally planned to use the members of the sewing group to undertake the female FGDs and PGEs and then use participants from the wider community for the questionnaire and case studies. However, after analyzing the data from the FGDs and the PGEs, it was decided to focus on just the sewing group alone rather than the wider community. This was partly because the women from the sewing group provided such rich testimonies in the FGDs and PGEs that required further in-depth probing and because they represented an interesting demographic; nearly all of the members were micro-entrepreneurs using tailoring or craft-making as their main source of income. Furthermore, they were slightly better educated women compared with women from the urban site and had all benefitted from training on how to use the internet by a local NGO. Although one of the main purposes of the questionnaire was to enable the gender differences in internet use to be established, the other reason was to better understand the socio-economic differences in how and why the participants use the internet. It

was therefore decided to go ahead with the questionnaire using the members of the sewing group, even though most of them were women.

4.7.3 Sampling for the Case Study Participants

As a result of the main focus of the study being women, only female case study participants were selected. They were chosen either from participants attending the FGDs or the PGEs or from respondents from the questionnaires using theoretical sampling. Theoretical sampling is defined by Birks and Mills (2015) as,

“ the process of identifying and pursuing clues that arise during the analysis of a grounded theory study” (p68).

The case study participants were chosen based on two criteria; whether they offered the potential to enhance the understanding of some of the themes and concepts that were arising from the data analysis to date and/or whether they provided the diversity of women’s voice that the feminist perspective required. For example, Participant Zawedde was selected from Site 2 because her comments had sparked two gender discussions at the women’s PGE about internet use and because she was disabled and had a perspective on disability and internet use. Another example is Participant Faith, from Site 1, a Muslim woman, who was unable to communicate in English, and had spoken during the FGD about her concerns about her husband finding out about her internet use. Between five and eight participants were selected from each main study site (see Figure 4. 6 above). The demographic analysis of the case study participants is set out in Table 4.9 (below).

Table 4.9 Demographic analysis of the case study participants.

Study Site	Participants Name*	Age	Marital Status	No. of children	Highest level of educational attainment	Employment Status	Poverty Range**
1	Flavia	25	M	0	TAAL	SE- Dancer	80-84
1	Faith	36	M	6	Primary	SE- Cook	60-64
1	Sharon	32	M	4	TAOL	SE- Tailor	50-54
1	Deborah	30	S	0	Tertiary	SE- Business owner	64-69
1	Nancy	29	S	4	TAOL	SE- Baker & cook	50-54
1	Cathy	23	S	0	Tertiary	W- Shop assistant	Not Known
1	Maureen	27	S	0	Primary	SE - Hairdresser	64-69
2	Viola	30	S	1	TAAL	W – Assistant CDO	Not Known
2	Gloria	34	M	4	Tertiary	W - Midwife	70-74
2	Eunice	19	M	1	A'Levels	W – Shop Assistant	65-69
2	Maria	19	S	0	O'Levels	Student	50-54
2	Rashida	20	S	1	O'Levels	Student	60-64

Table 4.9 (cont) Demographic analysis of the case study participants.

Study Site	Participants Name*	Age	Marital Status	No. of children	Highest level of educational attainment	Employment Status	Poverty Range**
2	Zawedde	28	S	1	Tertiary	W -Assistant CDO	Not Known
2	Brenda	40	M	5	TAOL	W -Midwife	65-69
2	Fortunate	Not Known	D	3	Tertiary	SE- Farmer & local councillor	65-69
3	Yvonne	49	Wi	3	Tertiary	SE – Tailor & Craftworker	Not Known
3	Patience	28	S	1	Not Known	W - Tailor	Not Known
3	Nana	25	S	0	TAOL	Student - beautician	85-89
3	Scovia	27	S	1	Tertiary	SE - Tailor	70-74
3	Priscilla	56	M	4	Not Known	SE – Owns nursery school	65-69

Key *- A pseudonym has been used. ** See explanation about the PPI used for the poverty range in the Notes to Tables 4.2 to 4.8 above.
S = Single, M = Married, D= Divorced, Wi = Widowed, TAOL = Training after O’Levels, TAAL = Training after A’Levels, SE= self employed, W = Wage Employed, CDO = Community Development Officer

4.7.4 Selection of the Key Informants

Fifteen key informants (KIs) were selected to help illuminate the findings and develop the conceptual understanding of the research phenomenon from the perspective of different scales (national and local). At the local level, a Community Development Officer (CDO), a community mobiliser and a head of a local women's group were interviewed at each study site. The CDO and the community mobiliser were selected to provide knowledge about the context of internet-use at the study sites and to help explain any contextual differences that were found between the sites or sub-sites. They were also used as sounding boards to confirm that the findings made sense to someone who had detailed knowledge about the social and gender dynamics that were operating within the communities where the research was taking place. The heads of local women's groups gave a different perspective. The female participants for the study had all been selected on the basis that they used the internet, where as in reality many women at the study sites were not using the internet. The heads of the local women's groups provided insight into the constraints that women in general face in accessing and using the internet in the research areas. This also helped to understand the type of women that *was* using the internet and therefore gave further insight into the female participants motivations for using the internet in the way that they were doing. They also were asked to comment on the intra-household gender dynamics surrounding internet use amongst the women within their community group. The two IT teachers from the PTC and the secondary school were interviewed so as to gain a better understanding of the level of internet skills of the female and male students and the gender dynamics surrounding the teaching of IT skills.

At a national level, six key informants were interviewed. Four had gender expertise, three of them combined with ICT expertise and one was an ICT development and policy expert. Another was an e-learning specialist in the field of health information for health workers. These key informants helped the lead researcher to understand the nuances of the research findings, particularly in terms of the gender differences and dynamics that were emanating from the research. They were also asked about the socio-economic factors that appeared to be influencing internet use. They provided the context of internet use and gendered attitudes to technology at a national level and provided the background

information about the government policies concerning ICTs, for example, about online data protection laws.

4.8 Data Collection: Methods & Tools

The data was collected over a 15 month period using FGDs, PGEs, semi-structured questionnaires (SSQs), in-depth case study interviews (CSIs) and interviews with key informants (KIIs). The timescale for the collection was set out in Table 4.1 above and an overview of the data collection methods used shown in Figure 4.2 above. Further details of the data collection methods and tools are set out below.

4.8.1 Data Collection at Study Sites

4.8.1.1 Phase I of Data Collection: Focus Group Discussions (FGDs)

Four FGDs, two all female, one all male and one mixed were undertaken with between 4 and 6 participants in each. They lasted approximately two hours and were facilitated by the two experienced Ugandan research assistants. The questions had been piloted and adjusted beforehand with the research assistants and the community mobilisers for each study site. The main purpose of the four FGDs was to ascertain answers to the basic questions around internet access and use at the different study sites and the constraints that prevented the participants from using the internet (see Appendix B for the FGD questions). There was also a question about whether women or men used the internet the most. This elicited a strong discussion amongst the participants and enabled the lead researcher to learn about the perceived constraints that were affecting women and men's use of the internet, men's controls over internet use and gendered attitudes towards technology. During the FGD, following a discussion about relevant skills, the participants were individually asked to assess their own ability to use the internet. The FGDs were recorded on a voice recorder and later transcribed. Additional field notes were taken by the lead researcher and the research assistants. There was a debrief session after each FGD whereby the notes were compared and an initial analysis of the session undertaken. This gave the lead researcher the opportunity to ensure that they had understood the points made by the participants. When referring to specific FGDs or PGEs in the results chapters, the first three letters refer to whether it's an FGD or PGE, the second three letters refer to the location of the FGD or PGE (KAM= Kamwokya (Site 1), NAK= Nakaseke (Site

2) and STB = St Bruno (site 3)) and the final letters refer to the composition of the FGD and PGE, whether it is all female (W), all male (M) or a mixed group (MI). For example, “FGDKAMW” represents the all-female FGD at Site 1. The participants at the FGDs and PGEs are referred to in a similar way with an additional number included at the end to represent a particular participant.

4.8.1.2 Phase II of Data Collection: Participatory Group Exercises (PGEs)

The next phase of the data collection consisted of participatory group exercises. Seven PGE sessions were held at the different study sites, with two all female groups, two all male groups and two mixed groups (see Figure 4.6 above). The sessions consisted of two group exercises and an individual exercise and lasted approximately two hours in total. Once again, the sessions were facilitated by the research assistants and the exercises had been piloted with the research assistants and adjusted beforehand. In the first group exercise the participants were asked how the internet had changed their lives and the answers that came out of the discussion were grouped into themes on a series of flipcharts using the headings “Before” (the use of the internet) and “After” (the use of the internet). This stimulated further discussion. Based on the understanding of use of the internet gained from the data analysed from the FGDs at each site, the participants were prompted to discuss the changes that had occurred in their lives given the ways that they used the internet.

In recognition that the changes identified through this first exercise were mainly positive, a second exercise was undertaken where the participants were asked individually to use sticky notes to write down the positive and negative impacts of the use of the internet on their lives. The participants were then asked to explain the impacts that they had written to the rest of the group, with the facilitator probing where appropriate, particularly in respect of any gender issues that arose. With the help of the facilitator and using flipcharts, the positive and negative impacts of internet use were then grouped into themes by the participants, stimulating further discussion. In the few cases where the participants were unable to write, the lead researcher and the research assistants sat with them during this exercise and wrote the impacts down on their behalf.

The third exercise was to individually complete a timesheet of a typical day within the last week to show when the participant was using the internet and what for. The researchers helped those participants who had difficulties in reading and

writing to complete the timesheet. All of the protocols for the PGEs are set out in Appendix C. The PGEs were recorded on a voice recorder and transcribed. Additional field notes were taken by the lead- researcher and research assistants and photographs were taken of the flipcharts prepared. There was a debrief session after each FGD whereby the notes were compared and an initial analysis of the session undertaken. This gave the lead researcher the opportunity to ensure that they had understood the points made by the participants.

4.8.1.3 Phase III of Data Collection: Semi-Structured Questionnaires (SSQ)

A SSQ was administered to 336 participants across the three main study sites using KoBo Toolbox¹⁴ software, downloaded onto smartphones. As discussed above, the SSQ was developed on the basis of the data analysis from the FGDs and the PGEs that suggested why the participants were using the internet and how it had changed their lives. Table 4.10 (below) sets out the structure of the questionnaire, the themes of the different sections, the type of answers that could be given and the specific research questions covered. The actual questionnaire is in Appendix D. As a result of the wide range of questions that needed to be included and the need to keep the length of the questionnaire to be less than one hour, it was initially decided to make the questionnaire structured. However, although the questionnaire had been piloted, it was observed during the initial day of administering the questionnaire that the respondents were providing useful information about why they had answered certain important questions and that this needed to be formally requested and captured for the research. From then on, notebooks were used to capture this information in respect of four key questions¹⁵. This had the additional advantage of serving to check whether the participants had properly understood the question as had been intended.

¹⁴ KoBo Toolbox is a software package that provides a suite of tools for field data collection. It enables surveys to be designed so that they can be administered through smartphones, allows data to be easily exported from individual smartphones and provides summary reports and tables from the consolidated data. The consolidated data can then be exported using MS Excel (KoBo Toolbox 2020)

¹⁵ Supplementary questioning was undertaken for four key questions and the answers recorded in notebooks. The following three questions were followed by "please explain why you answered in this way?": "How has the internet changed your self confidence?" "Do you trust the health information that you access online more than the health information that you access offline?" "Do you trust the news that you access online more than you trust the news offline". For the question " How often do you use the internet to find information about your rights and entitlements?", the follow-up question, "Please can you give an example of the rights and entitlements that you found online" was added.

Wherever possible, the questionnaire was also structured so as to assess the participants' use of the internet from different perspectives to ensure that the responses were consistent. For example, one of the questions asks how often the participants use the internet to advertise their goods and services whilst another asked whether they had used social media to post something advertising their goods and services. This helped to validate the data collected.

Given the complexity of some of the questions, it was important that there was a consistency of understanding of the questions by the research assistants, so as to reduce differences of interpretation by the respondents. Four days training were therefore given to the research assistants to ensure that they understood the questions, had supervised practice administering the questionnaire as part of the piloting process and had confirmed the translated versions of the questionnaire in case the participants did not speak English. Furthermore, in the piloting sessions and in the first break-time of the first day of administering the questionnaire at each location, the answers collated from each of the research assistants were quickly analysed and any obvious outlying sets of answers discussed to ensure the internal consistency of the results.

It should be noted that when SSQ respondents are referred to in the thesis at an individual level, they can be identified by a code which represents the first three letters of the researcher's Christian name, followed by the first three letters of the name of the study site plus a unique reference number. For example, "AMASTB05" refers to the fifth respondent at the St Bruno site (Site 3) where the questionnaire was administered by Amanda Caine.

Table 4.10 Questionnaire structure and purpose with linkage back to the research questions.

Theme of the questions	Number of questions?	Types of question?	Question example	Research objective question addressed?
1. Demographics	5	Single answer multiple-choice	What is your employment status?	4a
2. Motivation and basic access	4	Multiple answer multiple -choice	How do you access the internet?	1a, b, c, d, 3a
3. Constraints to access and use	16	Yes or no answer, single choice	Have you experienced sexual harassment when using the internet?	1e, 3d
4. Frequency of use overall and for certain online activities	17	Single answer, multiple choice.	How often do you use the internet to find out about health information?	1d, 2a, 2b, 3b
5. Trust in information online	2	Single answer, multiple choice	Do you trust the health information that you access online more than the health information that you access offline?	2a, 2b
6. Changes identified in their lives attributed to internet use	12	Likert, strength of agreement, scale	The internet has helped me make more informed decisions about my own and my family's healthcare.	2a
7. Gender equality	11	Single answer multiple choice	Who is the main decision-maker about your household purchases?	3c
8. Poverty indicators *	10	Single answer multiple choice	What source of energy does the household mainly use for cooking?	4a

* - Using the poverty probability index (PPI)

4.8.1.4 Phase IV of Data Collection: Case Studies with Individual Internet Users.

In accordance with the feminist research approach, it was important to put the voices of the female participants at the centre of the research and to highlight their experiences and their understanding of them. In order to do this, twenty case studies with female internet users were undertaken with participants selected from across the different study sites. A case study is an empirical enquiry that attempts to answer the 'how' and 'why' questions about a contemporary phenomenon when the boundary between the phenomenon and its context are not clearly evident (Yin, 2003). In-depth interviews were used as the main source of case study information although the other information collated on the case study participants from the FGDs, PGEs and their responses from the questionnaires contributed to building up a picture of the participants' use of the internet. Eighteen of the interviews were undertaken by the lead researcher and the lead research assistant and took approximately 2 hours. Two of the interviews were undertaken by the lead research assistant due to fact that one of the interviewees was ill at the time of the field visit and another was unavailable due to unforeseen family circumstances.

The guiding questions were developed in advance of the interviews and completely tailored to the interviewee based on the information already gathered on the case study participant and the previous data analysis at that study site (see below). The questions were discussed in advance with the lead research assistant. The interviews were tailored specifically to that participant and were conducted in the language chosen by the participant, that is, in English, Luganda, or Runyankole, to ensure that the participants felt comfortable and able to fully express themselves throughout the interviews.

The purpose of the interviews was multifarious. It was to reach a deeper understanding of the interesting points that the participants had raised previously, particularly probing into the key themes and concepts that were emerging and to focus on the more personal and sensitive issues and to pick up on the psychological changes that internet use had elicited. It was also to understand better how they used the internet within the context of their own lives and understand how it was affected by their relationships with their partners and how it affected them. Finally, the interviews acted as a means of obtaining

corroboratory or contradictory evidence to the ideas surrounding the opportunities for empowerment that the participants were experiencing. Although certain questions were planned at the beginning of the interview, there was also time to follow the flow of the conversation into new interesting areas that were relevant to the overall research objectives. All the interviews were recorded and transcribed and notes were taken by the lead researcher and the main research assistant. Throughout the thesis, the case study participants are referred to as “Participant” plus the name of a pseudonym.

4.8.1.5 Phase V of Data Collection: Key Informant Interviews

Once all the initial analysis of the data from the first four stages of the data collection had taken place, structured interviews with key informants were undertaken at different scales (national and local) as explained above. The interviews lasted approximately two hours and they were recorded and transcribed. Additional notes were taken by the lead researcher and the main research assistant. Throughout the thesis, the key informants are referred to as “KI” for “Key Informant” plus the name of a pseudonym.

4.9 Data Analysis

4.9.1 Qualitative Data

The transcripts from the FGDs were coded manually using the help of Excel spreadsheets. Coding is defined as “ the process of naming segments of the data with a label that simultaneously categorises, summarises and accounts for each piece of data” (Charmaz, 2006, 43). This coding and the initial themes generated by it were then used to probe the participants during the PGEs. The transcripts from the PGEs were also coded manually using the help of Excel spreadsheets, along with the flipcharts from the PGEs. By moving back and forwards between the transcripts, the flipcharts and the initial coding on the spreadsheets, the data analysis from the different study sites and the different gender groups was compared. Patterns of commonality and key differences were therefore ascertained and some of the initial themes and concepts around internet-use and the gender dynamics surrounding its use started to emerge. The data analysis from the FGDs and the PGEs were then used to develop the questionnaire.

The transcripts from the case studies were uploaded into the qualitative analysis software NVivo and were then coded on a line-by-line basis. From these initial codes, higher-level codes that subsumed the initial codes were then developed. The development of these higher-level codes was influenced by the previous themes generated from the FGD and PGE analysis. Finally, the transcripts from the KIIs were uploaded into NVivo and then coded using the same higher-level codes as developed to analyse the case study data. By moving between the different codes from the different data collection methods, reflecting on the relationships between them, re-reading the transcripts and the actual words spoken by the participants, comparing the gender and contextual differences and assimilating this within the lead researcher's theoretical understanding, the key themes and concepts of the research emerged from the data.

4.9.2 Quantitative Data

Responses from the individual SSQs were consolidated and initially analysed within the KoboToolbox software package. The data was then exported into MS Excel and cleaned. After cleaning, it was analysed using PivotTables to obtain descriptive statistics and then subjected to the Pearson Chi-square tests to determine whether there were any statistically significant associations between the demographic and socio-economic variables of the participants and their responses in terms of internet access, use and how it has changed their lives. This would enable gender and contextual differences to be highlighted. As already discussed, this was not a generalizable study and the purpose of the statistical analysis was to provide evidence to support the qualitative analysis. The chi-squared test was often performed at a meta-analysis level, that is, using the combined data from all the study sites, when there was underlying trend analysis at each of the study sites suggesting a relationship between the variables. This site analysis is not always shown within the results chapters but for all the key results in respect of gender the analysis is shown in Appendix K along with the relevant explanations where applicable. Statistical guidance was gained before analysing the data.

4.10 Limitations of the Methodology

There are several limitations of the methodology. The selection of the respondents for the questionnaire was not random. This was a deliberate design

choice since it was decided to forgo the possibility of representing a population through a standard randomized design in favour of gaining a better understanding of specific target groups identified through the qualitative research. The quantitative survey therefore has the main purpose of generating evidence to complement and support the qualitative research. It cannot be used for generalizing to a wider population. Furthermore, assumptions of independence and normality for the chi-squared test cannot be met as a result of the sampling methodology. Consequently, the interpretation of the chi-squared test should be used as a guideline to support the results rather than used as stand-alone evidence of a statistical association.

Another limitation is that the extent of internet access within the study sites was not determined. Although there was no intention of the research generating findings that would be generalizable it would have been good to find a way of establishing the extent of internet-use, so as to be able to put the findings within the overall context. In addition, the researcher acknowledges that a fundamental limitation of the research is that it relied upon the participant's perceptions of the changes in their lives that the internet has brought about. This raises the potential issue of attribution. Ideally, a longitudinal study would have been undertaken to obtain their changes in perception over time and independent measurements would have taken place to try to capture the changes in their lives at different points in time.

4.11 Conclusion

This chapter has outlined the epistemological and theoretical perspectives used to undertake this research as well as the methodological approach and the research design. It has discussed the selection of the study sites and the research participants, the methods and tools to collect the data and analyse it. Finally, the researcher's positionality was outlined as well as the limitations of the methodology. The thesis will now move onto to the results chapters, with the next chapter setting out how and why the participants are gaining access to the internet at the study sites, what they are using it for and what are the factors influencing their access and use.

Chapter 5 How and Why are Women Accessing and Using the Internet at the Study Sites and What are the Constraints?

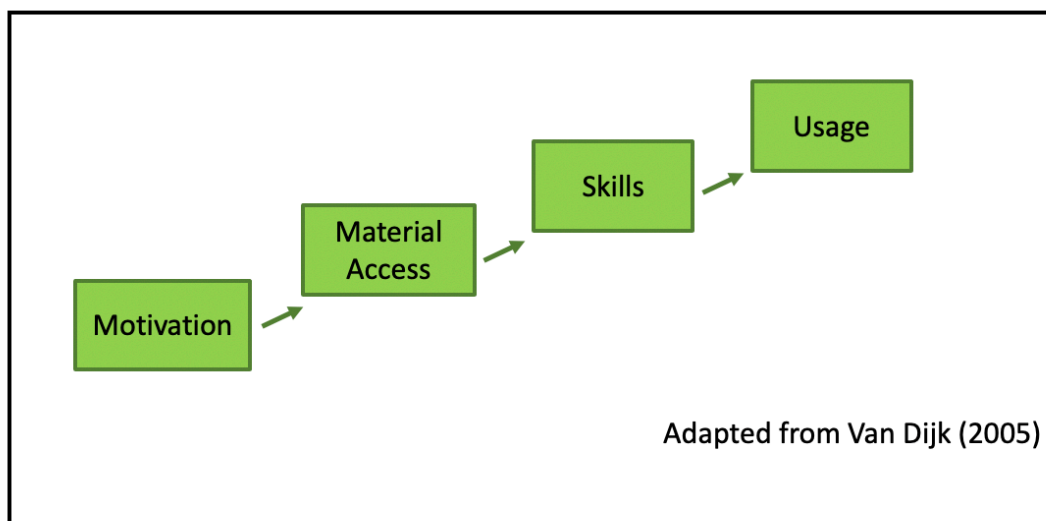
5.1 Introduction

This first chapter of results sets the scene by providing the background on how and why the internet is being accessed and used by the participants at the study sites. It adapts the framework developed by Van Dijk and Van Deursen (2005) to evaluate the findings of the research using the four key stages of appropriation of the internet: motivation, material access, skills and then general usage (see Figure 5.1 below). Using this framework, the first half of the chapter examines the reasons why the participants are using the internet, how they are accessing it, how they are learning to use it and how frequently they are using it. The second half of the chapter will use the same framework to examine the constraints that women face in accessing and using the internet. It will focus on those constraints that are particularly affecting women and are therefore contributing to the digital gender divide.

Throughout the chapter the gender dynamics surrounding how the participants access and use the internet and the constraints that they face will be considered. Furthermore, there will be an analysis of which type of female participants in which circumstances will be more likely to access and use the internet and face certain constraints at each of the different stages of the process. Hopefully this should enable the reader to gain an understanding of internet use at the different study sites and set the context in which the research was undertaken.

The evidence presented in the chapter will be drawn from both the quantitative data from the questionnaire, as well as qualitative data from the Focus Group Discussions (FGDs), Participatory Group Exercises (PGEs), the case studies and the key informant (KI) interviews. This will help to build up a picture of the accessibility and use of the internet from the perspective of the participant.

Figure 5.1 The Four Key Stages of Appropriation of The Internet.



5.2 Motivation: Why are the Participants Using the Internet?

During the FGDs and the PGEs the participants discussed the reasons why they were using the internet. The questionnaire then asked the respondents to identify their three most important reasons for using the internet by selecting from the list of reasons identified from the FGDs and the PGEs. Table 5.1 and 5.2 (below) set out the responses analysed by study site and gender. Three quarters of the female respondents chose communicating with family and friends as one of the their three most important reasons for using the internet. This tallies with the qualitative research that suggested that the ability to communicate was one of the main drivers for the participants wanting to gain access to the internet. Unexpectedly, learning new skills and sharing knowledge were high on the list of reasons why the female participants use the internet. These tables will be used to assess the relative importance of some of the uses of the internet between the female and male respondents in the relevant results chapters¹⁶.

¹⁶ It should be noted that the respondents were also asked if there were any other reasons why they used the internet that were not included on the list. It became apparent that some reasons for internet use had been missed off the list including “general searching for information”, “entertainment” and “engaging with religion”. Despite these omissions, the tables provide an idea of some of the reasons why the participants are using the internet and hence the relative importance to the participants of these different uses.

Table 5.1 The three most important reasons for using the internet. All responses analysed by study site and by gender.

Reason (NB Respondents could give multiple responses)	Percentage of respondents including this activity in three most important reasons											
	Overall			Site 1			Site 2			Site 3		
	Total	Female	Male	Total	Female	Male	Total	Female	Male	Total	Female	Male
	(n=336)	(n=189)	(n=147)	(n=158)	(n=82)	(n=76)	(n=158)	(n=90)	(n=68)	(n=20)	(n=17)	(n=3)
Communicating with Friends & Family	74%	75%	73%	73%	74%	71%	77%	79%	75%	65%	65%	67%
Learning a new skill	32%	34%	30%	30%	37%	24%	34%	31%	38%	35%	35%	33%
Sharing knowledge	32%	34%	30%	29%	26%	33%	34%	41%	25%	41%	41%	67%
Getting new friends	31%	37%	25%	30%	35%	20%	35%	42%	25%	15%	12%	33%
Health Information	18%	23%	12%	11%	15%	7%	25%	30%	18%	30%	35%	0%
Advertising Products	15%	17%	13%	20%	24%	17%	5%	4%	6%	60%	59%	67%
World News	15%	10%	20%	16%	12%	21%	14%	10%	19%	5%	0%	33%
Watching YouTube Videos	15%	14%	18%	16%	17%	15%	17%	13%	22%	0%	0%	0%
Searching for a job	13%	12%	15%	18%	18%	18%	10%	9%	12%	0%	0%	0%
Expressing my views about an issue facing my country	9%	5%	13%	9%	6%	13%	9%	6%	13%	0%	0%	0%
Educational course online	8%	10%	6%	8%	10%	7%	9%	11%	6%	5%	6%	0%
Expressing my views about an issue facing my community	7%	7%	7%	6%	4%	8%	8%	10%	6%	5%	6%	0%
Nutritional information	6%	9%	3%	6%	9%	2%	5%	7%	3%	20%	24%	0%
Livelihoods information	6%	6%	5%	4%	5%	3%	6%	4%	9%	15%	18%	0%
Sports Betting	5%	0%	10%	7%	1%	14%	3%	0%	6%	0%	0%	0%
Finding out about politics	5%	3%	9%	5%	1%	9%	5%	3%	7%	10%	6%	33%
Rights and entitlements	2%	6%	4%	6%	4%	9%	1%	0%	3%	0%	0%	0%

Table 5.2 The three most important reasons for using the internet, analysed by study sub-site and gender

Reason (NB Respondents could give multiple responses)	Percentage of respondents including this activity in 3 most important reasons								
	Site 2a			Site 2b			Site 2c		
	Total	Female	Male	Total	Female	Male	Total	Female	Male
Communicate with Friends & Family	78%	84%	65%	76%	76%	77%	78%	74%	83%
Learn a new skill	28%	24%	35%	40%	45%	35%	36%	26%	45%
Share knowledge	43%	45%	40%	36%	48%	23%	20%	26%	14%
Getting new friends	22%	26%	15%	58%	74%	41%	29%	38%	19%
Health Information	50%	53%	45%	11%	14%	8%	9%	13%	5%
Advertise Products	4%	0%	10%	5%	7%	4%	7%	9%	5%
World News	12%	8%	20%	9%	10%	8%	22%	13%	32%
Watch YouTube Videos	7%	8%	5%	15%	0%	30%	33%	39%	27%
Search for a job	12%	11%	15%	13%	10%	15%	4%	4%	4%
Express my views about an issue facing my country	12%	8%	20%	5%	0%	12%	9%	9%	9%
Educational course online	21%	15%	19%	4%	7%	0%	2%	0%	5%
Express my views about an issue facing my community	5%	5%	5%	15%	24%	4%	4%	0%	9%
Nutritional information	3%	5%	0%	7%	10%	4%	4%	4%	5%
Information about livelihoods	2%	0%	5%	16%	14%	19%	0%	0%	0%
Sports Betting	0%	0%	0%	2%	0%	4%	7%	0%	14%
Find out about politics	5%	5%	5%	7%	0%	15%	2%	4%	0%
Rights and entitlements	0%	0%	0%	2%	0%	4%	2%	0%	5%

5.3 Material Access: How are the Participants Accessing the Internet

The study shows that the mobile phone is by far the most common method of accessing the internet with 96% of the female participants using their own mobile phone¹⁷ to access the internet (see Table 5.3 below). Only 13% access it from an internet café and only 8% from their own computer or tablet¹⁸.

Table 5.3 How do you access the internet? Responses analysed by gender.

(NB Respondents could give multiple responses)	Female (n=189)	Male (n= 147)	Total (n=336)	p value
On my own phone (n= 220, F(n) = 181, M (n) = 139)	96%	95%	95%	
On my own computer/tablet (n= 40, F(n) = 15, M (n) = 25)	8%	20%	13%	0.003*
On my spouses/partners phone (n= 5, F(n) = 3, M (n) = 2)	2%	1%	1%	
On someone else's phone/ computer/tablet (n= 9, F(n) = 6, M (n) = 3)	3%	2%	3%	
At the telecentre (n= 13, F(n) = 7, M (n) = 6)	4%	4%	4%	**
At the internet café (n= 55, F(n) = 26, M (n) = 29)	14%	20%	16%	
At school/university (n= 24, F(n) = 9, M (n) = 15)	6%	11%	8%	
At my workplace (n= 29, F(n) = 14, M (n) = 15)	7%	10%	9%	
* - The chi squared test was performed to establish whether there is a relationship between gender and the access of the internet on ones own computer/tablet (comparing those who do access the internet on their computer/tablet and those who don't). See Appendix K and Table K5.3 for further details.				
** - there is only a telecentre in Site 2.				

¹⁷ Unfortunately, the research did not directly establish the type of phone¹⁷ that the participants used. However, in another part of the questionnaire, only 10% of female participants and 8% of male participants were identified as not having a smartphone. This suggests that 90% of the female participants accessed the internet using their own smartphones, 6% use their own feature phone and 4% use another device.

¹⁸ Please note that the respondents could choose multiple responses so the total percentage is greater than 100.

5.3.1 Gender Dynamics

The gender analysis in Table 5.3 (above) reveals a higher percentage of male respondents (20%) compared to female respondents (8%) are using their own computers and tablets to be able to access the internet ($p = 0.003$). This gender difference is not unexpected. Other research has made similar findings and has concluded that affordability is one of the main reasons why women are less likely to own computers compared to men (Madanda, 2011, Kifle 2012).

5.4 Skills: How are Women Learning Skills to Use the Internet?

The participants were asked how they learnt to use the internet and the results are shown in Table 5.4 (below). Two thirds (66%) of the female participants were taught by family and friends and just over a third (34%) taught themselves. Only 40% had received any training on how to use the internet, with only 22% of female participants having learned at school. From the discussions with the KIs who are IT teachers at both the secondary school and at the PTC, it appears that there is some teaching about use of the internet at educational establishments, but mainly only for those who stay on at school beyond O' Levels. Additionally, the teaching often focuses more on the technical aspects of networking rather than on informational literacy online.

Table 5.4 How did you learn to use the internet? Responses analysed by gender.

(NB Respondents could give multiple responses)	Female	Male	Total	
How did you learn to use the Internet?	(n= 189)	(n=147)	(n=336)	p Value
School (n=41)	22%	28%	24%	
Formal Training Outside School (n=23)	12%	9%	11%	
Friends and Family (n=125)	66%	45%	57%	<0.000*
I taught myself (n=65)	34%	44%	39%	0.072**
Telecentre (n=7)	4%	2%	3%	
Other (n=4)	2%	2%	2%	
*-The chi squared test was performed to establish whether there is a relationship between gender and whether you learnt to use the internet through family and friends. See Table K5.4 in Appendix K for further details. **- The chi squared test was performed to establish whether there is a relationship between gender and whether you learnt to use the internet by teaching yourself.				

This study shows a relationship between how a respondent learnt to use the internet and the perception of their IT skills (see Table 5.5 below). Those

participants who had learnt at school were much more likely to think that they had good enough IT skills to use the internet the way they wanted; 65% of them said that they had the right skills, compared to 35% who thought that they did not. There is a significant statistical association ($p = 0.024$). Furthermore, the data analysis shows a similar relationship between whether you learnt to use the internet through formal training and whether you think that your IT skills are good enough. There is also a statistical association with $p = 0.048$. This suggests that the extent to which the participants have had any formal training on the use of the internet affects their perception of their ability to use the internet in the way that they would like.

Table 5.5 How did you learn to use the internet? Female responses analysed by perception of IT skills.

	My IT skills are good enough	My IT skills are not good enough	Total	p value
	(n= 95)	(n=94)	(n=189)	
School (n=41)	65%	35%	100%	0.024*
Formal Training Outside School (n=23)	70%	30%	100%	0.048**
Friends and Family (n=125)	51%	49%	100%	
I taught myself (n=65)	47%	53%	100%	
Telecentre (n=7)	43%	57%	100%	
Other (n=4)	50%	50%	100%	
Grand Total	50%	50%	100%	
<p>*-The chi squared test was performed to establish whether there is a relationship between whether you learnt how to use the internet at school and whether you think that your IT skills are good enough.</p> <p>** -The chi squared test was performed to establish whether there is a relationship between whether you had formal training outside school and whether you think that your IT skills are good enough.</p>				

5.4.1 Gender Dynamics

It appears that the female participants are more likely to have learnt from family and friends than the male participants and conversely the male participants are more likely to have taught themselves. The female participants are therefore more dependent on others to be able to learn to use the internet. These gender differences could reflect the gender norms around the use of technology that result in women being less willing to take risks around using technology. This will be discussed in more detail in section 5.6.3.4.2 (below).

5.5 Usage: How Frequently are Women Accessing the Internet?

Table 5.6 (below) demonstrates that 74% of the female respondents use the internet on a “very frequent” basis, with “very frequent” defined as either “all of the time” or daily. Another 22% use it on a weekly basis and therefore 96% of the female respondents use it on a “frequent” basis with “frequent” defined as using the internet at least once per week. As part of the PGEs, 29 (15 female, 14 male) participants completed a timesheet of an average day, showing how much time they spent on the internet and setting out what they were using the internet for. The analysis of their use of the internet is shown in Appendix E and will be referred to in the subsequent results chapters which look at internet usage.

Table 5.6 How often do you use the internet? Responses analysed by gender.

	Female	Male	Grand Total
Frequency of Use	(n=189)	(n=147)	(n=336, p = 0.181*)
All of the time	14%	19%	16%
Daily	60%	63%	61%
Sub-total very frequently	74%	82%	77%
Weekly	22%	14%	19%
Sub-total frequently	96%	96%	96%
Monthly	1%	3%	2%
Once in a while	2%	1%	2%
Don't know	1%	0%	0%
Grand Total	100%	100%	100%
* - The chi squared test was performed to establish whether there is a relationship between gender and the frequency of use of the internet (comparing the frequency of use responses: " Sub-Total Very frequently" and " Weekly").			

5.5.1 Gender Dynamics

The difference in the frequency of use of the internet between women and men was a hotly contested subject of discussions at many of the FGDs¹⁹ and PGEs with many of the women believing that the men use it more and many of the men believing the opposite!²⁰. There is an 8% gender difference in the “very frequent” daily use of the internet, with the male participants using it more on a “very” frequent basis compared to the female participants (Table 5.6 above). However, this is not statistically significant (p =0.189). The analysis of the timesheets of

¹⁹ FGDKAMW

²⁰ The study was not designed to accurately measure the duration of internet usage of the respondents

participants at the PGEs revealed that the female participants were using the internet on average 6 times a day compared to 9 times a day for the male participants (see Appendix E). However, because of the small numbers of participants at the PGEs, this is not enough to draw a conclusion.

The gender difference in the frequency of internet usage within each study site is presented in Table 5.7 and Table 5.8 below. There is a 16% gender difference at the schools of Site 2c in “very frequent” use. Two explanations for the difference emerged. One was the cost of smartphones and of data, which prohibits the female pupils in particular from using the internet (see section 5.6.2.1 below). Secondly while it is the school policy not to allow smartphones into school, the belief of both the IT teacher and one of the female pupils at the PTC is that the female pupils are more likely to follow the rules than the male pupils. KI Wilber explains what happens,

“ students sneak in their phones and you know naturally ladies tend to fear more than the boys. To the boys, after learning that you can come in with the phone and have it for a term and you will not be caught, so they tend to come with their phones.....everyone will start bringing in their phones and the ladies will be fearing. The ladies fear to bring in their phones but the boys sometimes sneak in their phones and use their phones quite a lot.”

This was confirmed by participant Rashida, a pupil at the PTC,

“I think the boys use more internet than the girls.....because, like at the PTC, they do not allow phones , we bring them let me say like.. illegally but boys they bring them more than girls”

When asked why the “boys” bring them in more, she says

(the girls) “they fear more than boys, they (the boys) can bring the phones even when they know it’s illegal but girls do not.....”

Frequency of Use	Site 1			Site 2			Site 3
	Female	Male	Difference	Female	Male	Difference	Female
	(n=82)	(n=76)		(n=90)	(n=68)		(n=17)
All of the time	16%	18%	-3%	11%	21%	-9%	24%
Daily	60%	68%	-9%	59%	54%	4%	65%
Sub-total Very Frequently	76%	87%	-11%	70%	75%	-5%	88%
Weekly	22%	11%	11%	24%	19%	5%	12%
Sub-total Frequently	98%	97%	0%	94%	94%	0%	100%
Monthly	1%	3%	-1%	1%	3%	-2%	0%
Once in a while	0%	0%	0%	4%	3%	2%	0%
Don't know	1%	0%	1%	0%	0%	0%	0%
Grand Total	100%	100%		100%	100%	0%	100%

Table 5.7 How often do you use the internet?. Female and male responses analysed by location.

Table 5.8 How often do you use the internet?. Female and male responses analysed within site 2.

Frequency of Use	Site 2a			Site 2b			Site 2c		
	Female	Male	Difference	Female	Male	Difference	Female	Male	Difference
	(n=38)	(n=20)		(n=29)	(n=26)		(n=23)	(n=22)	
All of the time	5%	20%	-15%	11%	31%	-20%	4%	9%	-5%
Daily	68%	55%	13%	59%	42%	17%	57%	68%	-12%
Sub-total Very Frequently	74%	75%	-1%	70%	73%	-3%	61%	77%	-16%
Weekly	18%	20%	-2%	24%	19%	5%	30%	18%	12%
Sub-total Frequently	92%	95%	-3%	94%	92%	2%	91%	95%	-4%
Monthly	0%	5%	-5%	1%	0%	1%	4%	5%	0%
Once in a while	8%	0%	8%	4%	8%	-3%	4%	0%	4%
Don't know	0%	0%	0%	0%	0%	0%	0%	0%	0%
Grand Total	100%	100%		100%	100%		100%	100%	

The idea that girls “fear more than boys” could be a result of gender norms which encourage women to be more subservient and obey the rules more within institutions or because of the greater consequences that girls will face if they get caught. This is not the focus of this research and so was not explored further. However, it appears that there are gender dynamics which are influencing the use of the internet on phones of the pupils within schools.

5.5.2 What Type of Women and in Which Circumstances?

The data analysis shows that age, wealth and education may all be having an influence on how often the female respondents are using the internet. Age has a significant relationship with the frequency of use of the internet (see Table 5.9 below) with $p = 0.0156$. Only 61% of over 31 year old women use the internet on a very frequent basis (at least daily) compared to 80% of the women who are 30 years old and under.

Table 5.9 How often do you use the internet? Female responses analysed by age.

Internet Usage	Age		
	18 to 30	Over 31	Grand Total
	(n=130)	(n=59)	(n=189, p =0.016*)
All of the time	16%	10%	14%
Daily	64%	51%	60%
Sub-Total Very Frequently	80%	61%	74%
Weekly	18%	32%	22%
Frequently	98%	93%	93%
Monthly	1%	2%	1%
Once in a while	1%	5%	2%
Don't know	1%	0%	1%
Grand Total	100%	100%	100%

* - The chi squared test was performed to establish whether there is a relationship between age and the frequency of use of the internet (comparing the frequency of use responses: " Very frequently" with "weekly") See Table K5.9 in Appendix K for further details.

It was found that the frequency of use of the internet increases as the wealth of the respondent increases (see Table 5.10 below). For example, only 62% of those respondents with poverty levels of under 64 stated that they used the internet very frequently compared to 87% of those with a poverty level over 80. This

finding makes sense given the lack of affordability of phones and data that are constraining women from using the internet as frequently as they would like. This is discussed in more detail in sections 5.6.2.1 and 5.6.2.2.

Table 5.10 How often do you use the internet?. Female responses analysed by the level of poverty of the respondents (based on the PPI).

Internet usage	Level of Poverty (PPI)			
	Under 64	64-79	80-94	Grand Total
	(n=55)	(n=111)	(n=23)	(n=189, p =*)
All of the time	7%	17%	17%	14%
Daily	55%	60%	70%	60%
Sub-Total Very Frequently	62%	77%	87%	74%
Weekly	35%	19%	9%	22%
Sub-Total Frequently	96%	96%	96%	96%
Monthly		2%		1%
Once in a while	4%	1%	4%	2%
Don't know		1%		1%
Grand Total	100%	100%	100%	100%

* - The chi squared test cannot be performed as the number of people who use the internet on a weekly basis in the 80-94 PPI range was < 5 and so the test would therefore be invalid.

The level of educational attainment of the respondent also appears to be influencing their frequency of internet use; the higher the level of education, the higher the likelihood that the respondent uses the internet on a very frequent basis (all of the time and daily). Table 5.11 (below) reveals for example, that only 56% of those with only or less than primary school education use the internet on a very frequent basis compared with 83% of respondents with tertiary education. There is a statistical association (p=0.019).

Table 5.11 How often do you use the internet? Female responses analysed by levels of educational attainment.

	No school or primary school	O'Level or training after O'Level	A'Level or training after A'Level	Tertiary	Grand Total
	(n= 27)	(n= 64)	(n=51)	(n=47)	(n=189, p = 0.019)*
All of the time	15%	14%	10%	19%	14%
Daily	41%	61%	63%	64%	60%
Sub-total very frequently	56%	75%	73%	83%	74%
Weekly	41%	20%	21%	17%	22%
Sub-total frequently	96%	95%	94%	100%	96%
Monthly	4%	0%	2%	0%	1%
Once in a while	0%	3%	4%	0%	2%
Don't know	0%	2%	0%	0%	1%
Grand Total	100%	100%	100%	100%	100%
*- The chi squared test was performed to establish whether there is a relationship between level of educational attainment and the frequency of use of the internet (comparing the frequency of use responses:" Very frequently" with "weekly")					

5.6 Constraints that Prevent Women from Accessing the Internet and Using it Effectively

5.6.1 Motivation

The only constraint identified from the research that directly effects the participants' motivation to use the internet relates to the relevance of the information found online. 16% of the female participants stated that the lack of relevant information found online was preventing them from using the internet in the way that they would have liked (see Appendix F). There was no gender difference but those women with lower perceptions of their IT and English language skills were most likely to say that there was not enough relevant information online. At the FGDs it was established that most of the participants

were searching for information online in English because there was little information online in the local languages. It would therefore make sense if those who had poor English language skills were less likely to be able to find relevant information. Furthermore, those with poor IT skills would also struggle to search effectively to be able to find information that was relevant. Further information that supports these findings can be found in Appendix F. Motivation can be indirectly affected by other constraints to internet use. This will be discussed in further detail in the concluding section.

5.6.2 Material Access

This section starts by examining how issues of affordability and gender norms are affecting the acquisition of internet-enabled phones. It then progresses on to consider the affordability of data and then the infrastructural constraints that are also hindering access and usage.

5.6.2.1 Affordability of Internet-enabled Phones

As discussed in section 5.3.1 (above), most of the female participants were accessing the internet on their own internet-enabled phones. However, the affordability of these devices is a real constraint for other women at the study sites. Appendix G sets out the findings from this research on the affordability of internet-enabled phones in general at the study sites. The research reveals that women face financial constraints that limit their ability to purchase phones, particularly smartphones with full internet access and functionality. The research shows that men in general have higher incomes than women and some women will prioritise feeding their families or paying school fees before buying a phone.

Appendix G also reports that because of these financial constraints, some women are using transactional sex to obtain a phone. There was no evidence to suggest that any of the participants had used this method of gaining a phone but a sign saying “no to gifts for sex” (Figure 5.2 below) had been placed inside the school gate at the secondary school at Site 2c, so the pupils could see it before they left the school. When the Headmaster was asked about the sign, the lead researcher was told that it was common for the girls to be offered data or smartphones for

sex outside the school. The desirability of the internet-enabled phone is such that women may be prepared to engage in sex in exchange for a phone or even for data.

The research suggests that the difficulties around the acquisition of smartphones are more than just a question of affordability and that there are complex gender dynamics surrounding the acquisition, particularly for partnered women. It appears that some men do not want their partners to have a smartphone because they fear how they may use it. As participant Viola explains,

“Many of them (women) don’t have those smartphones. Their husbands limit them from having them....because the man knows what he’s doing with his phone, he thinks it’s the same story that is going to happen to his wife. “

Figure 5.2 Sign Inside the Secondary School Gates at Site 2.



The comments by some of the KIs about the gender dynamics around men's control over women's acquisition of smartphones are set out in Box 5.1 (below). The comments highlight that some women want their partners to buy smartphones for them even when they can afford to buy them themselves. The reasons behind this are complex. There are gender identities where the role of the man is to buy the gifts to prove his love of his partner and the self-worth of the women is dependent upon the extent of the gifts or treats that her partner buys for her. In the case of the smartphone, this also fits in with the gender identity of

Box 5.1 Illustrative quotes by Key Informants about men’s controls over the acquisition of smartphones.

“For me what I know is that some men do not allow their wives to own smart phones or use internet..... sometimes the men don’t want what they do with their phones, their wives to do same things.”

KI Sarah at Site 3

“Elite women need to inform their husbands if they want to buy a smartphone but non-elites have to ask their husbands permission before they buy one even if they have the money.”

KI Monica

“Even if I’m working, my husband must take care of meThe man must treat the woman well, she must be treated to things. The world must know that her husband bought her the phone, that you are under him..... Some women have been socialized to believe that their self worth is dependent on how men treat them. You are not good in bed if you don’t get things from your husband..... It is a very negative thing – the guy is controlling you..... Some men feel insecure if they don’t provide for their wives. They are worried that she might go elsewhere. There’s an element of control for them.”

KI Monica

“The women are not dependent, even if they have the money, they don’t buy the phones. It is because of the conflicts. It is social accountability, used very ably to get the phone. They are latently negotiating. They are using their agency to get the phone and the data.”

KI Ambrose

“ I really want to stress how smartphones are treasured..... to the point that we’ve seen instances where a man really does something very, very terrible to the wife. Let’s say physical beating... Or he’s caught red-handed cheating. Sleeping with another woman, but they know that they can bribe this wife with a smartphone and the case is rested.”

KI Diana

men being responsible for buying assets, particularly technological assets (Madanda, 2011). As KI Monica states, this also provides men with an element of control over the use of the phone by their partners.

Although men more retain greater control over the phone, as KI Ambrose explains in his quote in the box 5.1 above, that, some women are complicit in the idea that the man should buy the smartphones since it's a strategy for them to avoid conflict over smartphone use. In his opinion it is the way that women can exert their agency; it is not an act of submission. KI Diana's quote in the box above, also suggests that smartphone acquisition can be seen as a bargaining tool within relationships.

The research is suggesting that complex negotiations between women and men are taking place over the acquisition of smartphones. The gendered battles over control of the acquisition of this asset are not the intended focus of this thesis and so further research would be needed to draw firm conclusions about the significance of these initial findings. However, the evidence presented above provides an interesting backdrop to the gender dynamics surrounding the use of the internet which is set out in the following results chapters. Moreover, some of the concepts surrounding these tentative findings will be developed further in the discussion Chapter 9.

5.6.2.2 Affordability of Internet Data

In addition to the expense of purchasing an internet enabled phone, the research studied the affordability of the costs of buying data in order to access the internet. At the time of the research, the main methods of buying data were either through using a scratch card, which were being sold at the side of the road, or through using mobile money through which the participants could buy "data bundles". The questionnaire confirmed that 61% of all female participants could not afford to buy enough data (see Table 5.12 below).

Table 5.12 "I can't afford to buy enough data". Female respondents analysed by gender.

	Female (n= 189)	Male (n=147)	Grand Total (n=336)
I can't afford to buy enough data	61%	63%	62%

The expense of buying data was brought up as an issue at all of the FGDs. This issue was recorded in all of the PGEs apart from one and by 8/20 of the case study participants. It was also raised by the heads of each of the women's groups at the study sites as a reason why the members of the women's groups do not use the internet as much as they would like. For example, when asked what could be done to get more women to use the internet, the head of a women's group at Site 3 KI Sarah replied,

"Reduce the cost of smart phones....(and)..... reduce the cost of data itself."

Box 5.2 below provides illustrative quotes about problems with the affordability of data across the different study sites. The discussions at the FGDs and PGEs suggested that some participants did not pay for their own data, which generated the question in the questionnaire about who pays for the participants' data. The results are shown in Table 5.13 below. It appears that only 85% of female respondents pay for their own data.

Box 5.2 Illustrative quotes by Participants to show how the affordability of the internet is an issue for many of them.

"(the) internet is expensive."

Participant PGEKAMW01, Site 1

"(the internet) is somehow expensive. At times I take one to two days not online because of the data, it's expensive."

Participant Maureen, Site 1

"You have to pay UGX 200 per day (£0.04) which is much these days, that UGX1400 (£0.21) for a week is too much and even the rate at which data is used up, you put on UGX 1000 (£0.20) and in a few minutes its gone. So internet is very expensive these days."

Participant Florence, Site 2

'gonya zilyaki?' Literally to mean, "what do crocodiles feed on?"; internet is quite expensive. They feed on data."

Participant FGDSTB02, Site 3

5.6.2.3 Gender Dynamics

8% fewer female respondents pay for their own data compared to men. There is a statistical association ($p = 0.015$) between gender and whether the respondent pays for their own data or relies on someone else to pay for the data (see Table 5.13 below). The results of the analysis of “who pays for your data” reveal that the gender differences vary between different locations (see Tables 5.14 and 5.15 below). The largest gender difference is at the school Site 2c, where only 57% of the female pupils state that they pay for their own data, compared to 91% of the male pupils.

Table 5.13 Who pays for your data? Female responses analysed by gender.

	Female (n= 189)	Male (n=147)	Grand Total (n=336, p =0.015*)
A mixture	5%	2%	4%
A relative	4%	1%	2%
My boss	1%	2%	1%
My boyfriend/girlfriend	2%	1%	1%
My friend	0%	1%	0%
My spouse	3%	1%	2%
Myself	85%	93%	88%
Grand Total	100%	100%	100%

* - The chi squared test was performed to establish whether there is a relationship between gender and who pays for your data (comparing the response "myself" with "not myself" which includes all the other options)

Table 5.14 Who pays for your data? Female and male responses analysed by study site.

Frequency of Use	Site 1		Site 2		Site 3
	Female (n=82)	Male (n=76)	Female (n=90)	Male (n=68)	Female (n=17)
A mixture	4%	1%	6%	3%	12%
A relative	0%	0%	8%	1%	0%
My boss	0%	0%	2%	4%	0%
My boyfriend/girlfriend	1%	0%	3%	1%	0%
My friend	0%	1%	0%	0%	0%
My spouse	5%	0%	2%	1%	0%
Myself	90%	97%	79%	88%	88%
Grand Total	100%	100%	100%	100%	100%

The difference at the school was investigated and according to the two IT teachers at each of the schools (KI Charles and KII Wilber) it relates to the fact that the female pupils at the schools have less opportunity to earn money compared to the male pupils (see Appendix G) and are therefore more reliant on their family or on boys at the school to obtain data. This raises concerns about the possibility of the female pupils engaging in transactional sex to obtain the data.

Table 5.15 Who pays for your data? Female and male responses analysed by within site 2.

Frequency of Use	Site 2a		Site 2b		Site 2c	
	Female (n=38)	Male (n=20)	Female (n=29)	Male (n=26)	Female (n=23)	Male (n=22)
A mixture	3%	5%	3%	0%	13%	0%
A relative	0%	0%	3%	0%	26%	5%
My boss	3%	15%	3%	0%	4%	5%
My boyfriend/girlfriend	3%	0%	3%	0%	0%	0%
My friend	0%	0%	0%	4%	0%	0%
My spouse	3%	0%	3%	4%	0%	0%
Myself	89%	80%	83%	92%	57%	91%
Grand Total	100%	100%	100%	100%	100%	100%

It also appears that the inability of the female pupils to afford to buy data has negative consequences in terms of internet usage. According to KI Wilber,

“.....the girls are limited by the cost of internet. It is very expensive to buy bundles to use internet. That is why they usually buy “social bundles” from these telecom companies because they are cheap, and they are able to use only Facebook, WhatsApp, Twitter, Instagram.....they are limited by the cost of the internet. They are also limited by the bundles because the bundles, those cheap bundles for telecom companies, they are about just social networks, you can’t use those bundles to research and so on. So it is also a limitation.”

His comments suggest that the female pupils may be less able to search for information since the “bundles” of data that they can afford only allow them to

access social media Apps and do not allow them to search for information. Although this question was not explicitly asked as part of the research, it became apparent that many of the other female participants, who were not at the school, also did not have access to platforms such as Google because of the cheap bundles that they could afford. This may partly explain the gender differences in participants using the internet to search for information as will be outlined in section 6.2.2.

5.6.2.4 What Type of Women and in Which Circumstances?

When the questions about the affordability of the data were analysed according to demographic factors, it was discovered that age was an important factor in influencing responses related to “who pays for your data”. Younger women were 12% less likely to be paying for their own data compared with older women and there was a statistical association between age and whether you paid for your own data (see Table 5.16 below). In light of the evidence presented above, this makes sense since younger women such as pupils or students may be less able to earn money for themselves and therefore may be more dependent on others paying for their data.

Table 5.16 Who pays for your data? Female responses analysed by age.

	18 to 30	Over 31	Grand Total
	(n=130)	(n=59)	(n=189, p =0.028*)
A mixture	7%	2%	5%
A relative	5%	2%	4%
My boss	1%	2%	1%
My boyfriend/girlfriend	3%	0%	2%
My spouse	4%	2%	3%
Myself	81%	93%	85%
Grand Total	100%	100%	100%
* - The chi squared test was performed to establish whether there is a relationship between age and who pays for your data (comparing the response "myself" with "not myself" which includes all the other options)			

5.6.2.5 Infrastructural Constraints

As anticipated, the research found that problems with the internet network coverage and difficulties with charging phones are preventing the participants from using the internet as much as they would have liked. 76% of the female participants agreed that “sometimes the network is poor” (see Appendix H) and 38% agreed that “sometimes I have a problem charging my phone” (Appendix H). There were only negligible gender differences in both of these constraints but there were locational differences. There were greater problems with the network coverage and with charging phones at Site 2. The research team identified a problem with network coverage and charging phones at the institutions of Site 2a and Site 2c. It also appears the poorer participants were more likely to find it difficult to charge their phones no doubt because of affordability issues. More details are provided in the analysis in Appendix H.

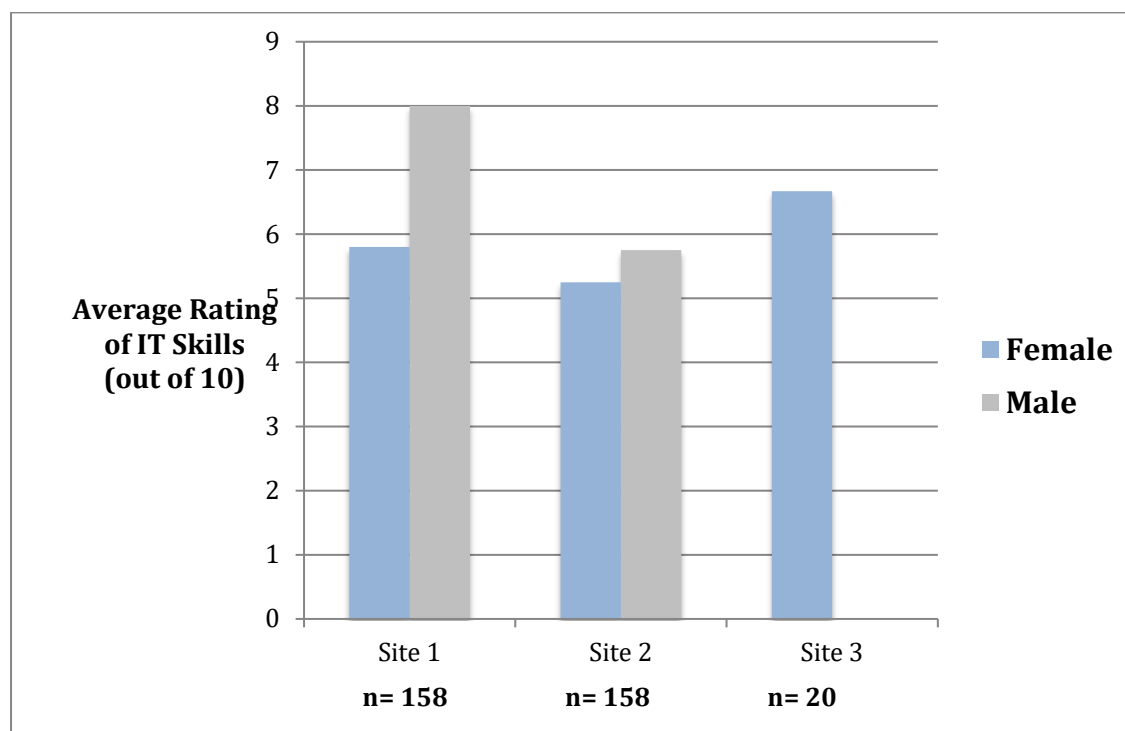
5.6.3 Perception of Personal Skills

This section examines the participants’ personal skills and capacities that may be relevant to the effective use of the internet. First of all it assesses their perceived IT skills and then their English language skills.

5.6.3.1 IT Skills

At all of the FGDs, the participants stated that their lack of IT skills was one of the main constraints for them not being able to use the internet the way that they wanted. The participants were asked to assess their own IT skills out of 10 (10 being very good and 1 being very poor). The results are shown in Figure 5.3 below along side the male participants responses.

Figure 5.3 Chart of Self-Assessment Ratings of IT Skills at Each Study Site.



This exercise was followed up in the questionnaire by asking whether the participants had good enough IT skills to be able to use the internet in the way that they would like. 50% of the female respondents perceived that their IT skills were not good enough (see Table 5.17 below). No independent measurement was taken of their actual IT skills.

Table 5.17. "My IT skills are not good enough". Female affirmative responses analysed by gender.

	Female	Male	Grand Total
	(n= 189)	(n=147)	(n=336, p =0.008*)
My IT skills are not good enough	50%	35%	43%
* - The chi squared test was performed to establish whether there is a relationship between gender and whether one perceives that has good enough IT skills to use the internet in the way that one wants.			

However, the reality, as opposed to the perception of a lack of skills to be able to use the internet effectively, was supported by the comments of the some of the key informants. KI Susan, comments,

“Even now people don’t know how to go to the internet.....*They lack skills.*”

KII Rita, the leader of a women’s group explains,

“... the challenge we have, *people lack the skill* and also money to buy smart phones.”

5.6.3.2 English Language Skills

When asked at the FGDs about the language with which the participants engaged with the internet, the consensus at all of the FGDs was that the participants used English for searching for information and a mixture of their local language and English for communicating using social media. Table 5.18 below shows that 25%

Table 5.18. "My English is not good enough". Affirmative responses analysed by gender.

	Female (n= 189)	Male (n=147)	Grand Total (n=336, p =0.010*)
Yes	25%	14%	20%
* - The chi squared test was performed to establish whether there is a relationship between gender and whether the respondent thinks that their English is good enough to use the internet in the way that they want..			

of the female respondents did not think that their English was good enough to be able to use the internet as they would have liked, thus confirming that English language skills are a major constraint in using the internet effectively.

Box 5.3 Mini case studies showing the importance of English language skills for using the internet.

Participant Faith is a 36 year old Muslim women from Site 1 who is married and has 6 children. She works as a part-time cook for a garage. She has only primary school education and speaks very little English. She explains that she's not alone, that a large number of women are like her and can't communicate in English. She uses Luganda to communicate online and because her literacy is poor, she watches a lot of videos online on YouTube which are in Luganda. She wishes that she could speak better English,

"If I was able to use internet in English that would be great."

KI Brian is the manager of the telecentre at Site 2. When asked about the issues around using the internet to get trusted information to people in the Nakaseke area he explains that,

"The challenge is the language barrier.....Literacy is a big challenge within the town. If you ask people to participate in a debate they don't want to send a message as they would prefer to call in. Whatsapp has helped, they can write in Luganda."

As a result of the lack of English that is hindering people from using the internet he has recently set up an adult class at the weekends so that people can learn to speak English, before they go on to learn to use the internet.

Participant Patience from Site 3 is a 32 year old single mother with a young son. She works as a tailor. As will be discussed further in Chapter 6 below she used the internet to try to find out what was wrong with her son who was having fits. She explains how she didn't know which questions to ask online and that her English maybe wasn't good enough to use the internet to express the problem properly,

"(the internet) doesn't advise you that you have brought (the question) in a wrong way, it will answer you the way you have asked. Whereas there are somethings that you cannot express yourself in English to make the Google owner understand, you may put wrong English words."

She ended up misdiagnosing her son's condition and blames her poor English for this,

"I would use English but I put the blame on me. My English was not that fine."

In the three mini case studies above and the interviews with key informants it became evident that English language skills are important to enable the participants to make the most out of their use of the internet. As participant Rashida points out,

“I would say that a person who doesn’t know well English finds it so hard to use internet, so if someone is illiterate, you can ignore using internet because most things on the net are in English.”

5.6.3.3 Limited Use of the Internet as a Result of a Limited Skillset

From observation during the research, it was evident that some of the female participants were only skilled in the use of social media online, particularly WhatsApp and FaceBook, but lacked the skills to be able to search for information. Some of the comments of the participants and key informants that support the observation are included in Box 5.4 below. The observations and the comments by participants are also supported by the analysis of the daily use diary completed by 29 of the PGE participants (see Appendix E). This shows that only 30% of the female participants used the internet to search for information during that day compared to 79% of the male participants, whilst 93% of the female participants used WhatsApp compared to 79% of the men. There is no evidence from the PGEs to confirm that the reason why the female participants were not using search engines as much, but it is reasonable to suggest that lack of IT and language skills play a part. It is much easier to text a message in Luganda in WhatsApp than to know how to search for information online, possibly in English. The ability to search for the information that you want includes both medium -related skills and content -related skills and in particular involves complex informational skills such as defining the information problem, choosing a search engine and searching approach, selecting information and evaluating it (see section 2.4). It should also be remembered that, as a result of affordability issues, the female participants appeared to be using “social bundles” as a way of accessing the internet which limits their ability to search for information through search engines such as Google.

Furthermore, the comments in the Box 5.4 below suggest that women may not be aware of the potential of using the internet for searching for information.

Box 5.4 Illustrative quotes by Participants and Key Informants about a lack the skills to be able to use the internet for anything other than social media.

Many people only know how to use WhatsApp because it was loaded onto their phones,

“You can get a phone, they put you on WhatsApp like the many I see, ...those who have no education and don’t know them are many but they try to find out now that they are on WhatsApp and if they can’t manage they solicit help from others.”

Participant Faith

Lack of skills in terms of searching for information amongst other things,

“So what is mostly challenging me is that I have no time but I want to know more about internet usage, I want to know because I am so challenged in some areas especially in terms of Googling ,the YouTube, Twitter, all that”

Participant Priscilla

“Although this internet has helped many, (the) majority cannot really access internet. They don’t have that knowledge, they are limited. You can know how to send a message on WhatsApp but the rest you can’t know, you can’t do research..”

PGESTB02

“Almost 70% know what the internet is. Others just think of computers. Even those who know, many just know about Facebook and WhatsApp.”

KI Brian from Site2

The gender difference

“if it’s about researching on the internet, the ladies will depend on the boys, they can’t do that work alone.”

KI Charles from Site 2

5.6.3.4 Gender Dynamics

5.6.3.4.1 IT Skills

From the analysis of the questionnaire data, the female participants are more likely to think that their IT skills are not good enough to use the internet in the way that they want compared to the male participants (see Table 5.17 above). 50% of female participants compared to only 35% of male participants thought that their IT skills were not good enough. There is a statistical association ($p=0.008$). Additionally, as shown in Figure 5.3 above, the male participants at the FGDs have given themselves a higher rating in their IT skills compared to the female participants. It is difficult to know whether these gender differences reflect gender differences in perception of IT skills or true differences in levels of IT skills between women and men. Dr Bosco, KI, who is a gender and ICT expert in Uganda suggested that it could be both,

“It can be both a perception and a truth. Women have lower levels of formal education and the literacy rates are much lower for women. Women also undercount their abilities where as a man can overplay his abilities and say that everything is OK.”

Similarly, when participant Fortunate, a local councilor at Site 2, was asked about differences between the female and male assessment of their IT skills she replies,

“lack of confidence is one of the reasons... women are less educated than the men so they can't even handle such phones.”

It is not possible to reach a definitive conclusion, but it is likely, as supported by the two quotes above, that the perceived difference in IT skills in part represents a true difference in IT competence driven by lower levels of education and in part represents a difference in levels of self-confidence between the genders.

The gender difference persists at all the different study sites apart from within Site 2b where there is no gender difference, as shown in Tables 5.19 and Table 5.20

below. The difference is greatest at Site 1 (17%). This could be explained by the variation in the education levels since the highest gender difference in educational attainment is at Site 1 and the lowest at Site 2b, where women have higher levels of educational attainment than the men. However, there was still a 12% difference at Site 2c, the schools where the education levels of the female and male pupils are approximately the same. This suggests that something other than education is influencing these gender differences.

Table 5.19 My IT skills are not good enough. Affirmative female and male responses analysed by study site.

	Site 1		Site 2		Site 3
	Female	Male	Female	Male	Female
	(n=82)	(n=76)	(n=90)	(n=68)	(n=17)
My IT skills are not good enough	51%	34%	47%	38%	59%

Table 5.20 My IT skills are not good enough. Female and male responses analysed within site 2.

	Site 2a		Site 2b		Site 2c	
	Female	Male	Female	Male	Female	Male
	(n=38)	(n=20)	(n=29)	(n=26)	(n=23)	(n=22)
My IT skills are not good enough	53%	40%	45%	46%	39%	27%

When the IT teachers at the schools were questioned about the gender differences, they both agreed that the male pupils had better IT skills. When asked for an explanation, they both independently mentioned the same two differences; one was the “can do” attitude of the male pupils towards learning new things by themselves and the other was their inquisitiveness about technology. KI Charles, IT teacher from the secondary school replies to the question about the gender differences around IT skills,

“That takes us back to the other attitude. The attitude towards new thingstechnology brings in the fear I think.....Because a lady will be having a smartphone but still they’ll consult a man.....How can I do this? How can I look for this information over the internet? How do I connect to this level of the internet? But comparing to a man who has just possessed a phone. Or a boy....a boy after possessing a phone they will be inquisitive. What does this one do?”

KI Wilber, IT teacher from the PTC has a similar account of the gender difference in engagement in technology amongst his pupils,

“you give an assignment to do, if it’s about researching on the internet, the ladies will depend on the boys, they can’t do that work alone..... so it is the boys who will come and then try to do. Secondly, naturally here, the boys are more inquisitive than girls at least they can play around the computer, try to do some little inquiry until when he gets stuck with it but when he has learnt something - But again it just goes back to exposure.”

The gender difference in willingness to teach oneself about how to use the internet was confirmed by the analysis in Table 5.4 (above), which showed that there is 10% gender difference in whether the female and male participants have taught themselves how to use the internet, although there is no statistical association ($p=0.072$).

On the other hand, case study participant Maria, a female pupil at the PTC at Site 2, gave a very different perspective about why the female pupils don’t have the same IT skills as the male pupils. Her explanation is shown in Box 5.5 below. Her comments speak to the gender power dynamics around accessing and engaging with technology, and around gender identities around technology, with men as the ones who are better at using ICTs. The section below explores other comments that speak to this issue.

Box 5.5 Mini case study of Participant Maria to explain why the girls at the school appear to be less interested in learning IT skills than the boys.

According to her, competition for places in the computer lab and bullying by the male pupils is part of the reason why the female pupils' IT skills aren't as good as the male pupils. Her explanation is as follows,

“For the time I've been at Nakaseke I found it out that there are few girls who like to use the computer. Because they always told us you have computer lessons or the computer lab is now open you can go and make research and information. But you could see few ladies attending or turning up. But you could find it full with the gentlemen, then I'm like what's wrong with my ladies?So I talked to the ladies, so some of them started turning up. And when they turn up, you know the gentlemen, those boys, they like bullying. So they were like 'now ladies you've come in and you know nothing about the computer' So it always hurt them and they are like whenever we come to the computer lab and the boys are just there, they are just...they are just bullying us and now we are losing that morale.”

Her analysis of the power dynamics of the use of the computer lab was confirmed by the IT teacher at the PTC, KI Wilbur. However, she also mentioned that,

“girls always thought it to themselves that it's boys who like that (Information Technology).....that it's more fit for the boys.”

5.6.3.4.2 Gender and Technology

The assignment of technological skills as a “male” domain was raised by several participants and by two of the KIs. Participant Gloria describes the way than men have less fear of technology than women and are more willing to take risks so that they learn faster. She also suggests that women lack agency and so rely on the men to solve their technological problems,

“....men are so inquisitive on finding out everything, they will touch every button to see what it is able to produce....Men are trusted by women, they trust them to know so as such they have got to learn more things ahead of women, so that they can always solve their problems..... (Women) fear it (technology) than men...from culture, traditionally it is like that. Even men taking risk gives them an advantage in learning many things a head of women.”

The comments of the other participants and the KIs around gender and technology are set out in Box 5.6 below. They suggest that women, in general, are more fearful of using technology than men and that men, in general, are more inquisitive and more prepared to take risks around their use. The underlying causes of these gender differences, as purported by both the participants and the KIs, are that:

- men have traditionally purchased the technology and therefore have more freedom to take risks around its use;
- the domestic burden upon women gives them less time to engage with new technology;
- the restrictions on women within society including their lack of mobility may reduce their exposure to new technologies;
- men are seen as more trusted around technology because they know more in general;
- women lack agency to solve technological problems themselves.

These interesting concepts will be picked up in the subsequent results chapters and will be explored along with the literature in the discussion chapter. For now, it is evident that these gender norms around technology are playing their part in influencing perceived and actual skills in relation to the internet. They also may be influencing the participants' motivation to engage with new technology in the first place. Without the ability to engage with the technology women are less likely to be aware of its potential benefits. As mentioned already, there is also a suggestion that the female participants are using the internet for searching for information less than men (see sections 5.5.1) because of their lack of IT skills and because of their lack of IT skills and because of the lower cost of bundles restricted to social media (see section 5.6.2.3).

Box 5.6. Mini case studies of Participants and a Key Informant commenting why ICTs remain part of the “male” domain.

PGESTB01, a participant in an FGD, attributes the different attitudes of women and men towards technology to the domestic burden of women that, deprives them of being exposed to technology and creates gender stereotypes,

“(Women are) engaged in home activities so you find that they are always busy cooking, washing, caring for their babies when the boy is more free watching TV so there is a way girls tend to.....they are a bit deprived of engaging more than boys..... it’s a social thing because what applies here may not apply in other social setups. Because they believe (a boy) is supposed to do this and a girl do this. Even in my culture it is there. They say there are certain things a man is supposed to do when he can do it.”

PGESTB02, another participant at the Site 3 PGE echoes the previous comments about the inquisitiveness of boys and attributes the gender difference in attitudes to technology to very early gender stereotyping and the early restrictions that are put onto girls that limit their exposure to the world around them,

“You know boys wants to find out, they are inquisitive and they venture to find out ...what is this? So it’s not that girls copy their mothers, no, but if you have a girl will get a toy of a girl but the other one (the boy) will get a car and dismantle it and build it again, the boys wants to find out what is next..... As for the girl, girls naturally in Africa we are told “don’t go here, don’t do this” and that they are limited in their exposure so that’s why they are still behind even if she is educated up to senior what (level), she is still enclosed by society.”

KI Dr Bosco’s comments concur with the idea that educational differences alone can’t explain the difference in IT skills. He echoes Participant Gloria’s comments about men’s greater risk taking around technology but connects this with the fact that it is the men that would have bought the machines, or phones in the first place, thus explaining the differences in attitudes towards risk. This ties in with some of gender dynamics around the acquisition of mobile phones as explored in section 5.6.2.1. He explains,

“Even at Makerere (the main university in Kampala), women say that they are less skilled and exposed so it must be other factors beyond education. Women are more careful with the machines, technology because they didn’t buy them. This gets passed on to their daughters. Culturally, men are more prepared to take risks (and risk destroying the phone) and are more willing to destroy equipment, to explore by themselves.”

Although the ideas above represent a general picture of the gender dynamics surrounding the relationship of women and men to technology, there were also a few comments that suggest that the use of a smartphone, which is relatively cheaper and more personal than other forms of technology (For example, TV or computer), may be helping to change the gender dynamics around technological appropriation. KI Ambrose's comments in Box 5.7 (below) provide a picture of how the use of the smartphone may be "redistributing technological knowledge to women" because of the functionality of the phone and because it can be used within the current social restrictions that women face.

Box 5.7 Illustrative comment from a Key Informant about how the use of internet-enabled phone may be redistributing technological knowledge to women.

"The receptionist used to be in charge of the technology as typists but the boss realized that they need to teach themselves how to use computers in order to take control of communication. Women can't now send the emails; the PC came to be with the boss. However,We are redistributing technological knowledge to women. Women are using social media more than men. They are using it to advertise their services, they have become small entrepreneurs. Some women don't even leave the house and are making money. Even the functionality of the phones, e.g. taking selfies speak more to the female domain. Men don't know about editing photos, women know more. The internet is now about texting. Women text more than men. Men have been forced to adapt to texting, they have to respond quicker. It's a see saw – one time it favours men and one time it favours women."

KI Ambrose

There is also evidence to suggest that the attitude towards technology between the sexes is changing amongst young people and that some of the traditional stereotypes are reducing. KI Ronald who is the programme director of an e-learning project with midwives in Uganda, raises the possibility that age is also a factor influencing attitudes towards technology with the suggestion that older women may be more fearful of engaging with it. He explains how it was very difficult to get midwives to sign up to the e-learning programme at first because,

"Older midwives (who were in charge) were shunning teaching midwives and nurses on the phone; there was a phobia at the beginning, there was a resistance to it all. This was culturally constructed particularly in terms of women not using technology."

He also suggests that the younger midwives are using the internet more and therefore were more comfortable with the ideas around e-learning. Table 5.21 shows that the gender gap in the self-perception of IT skills increases as the participants get older; whilst there is only a 12% gender difference between the female and male participants under 31 who state that their IT skills are not good enough, there is a 19% difference in those who are over 31 years old.

Table 5.21 The percentage of female and male participants stating "My IT skills are not good enough". Female and male responses analysed by age.

	Age	
	18 to 30	Over 31
	(n=92)	(n =54)
Female (n =94)	44%	63%
Male (n =52)	32%	44%
Gender Difference	12%	19%

Section 5.6.3.5 will examine in more detail how some of the demographic factors like educational attainment and age maybe influencing the perceived IT skills of the participants.

5.6.3.4.3 English Language Skills

In addition to the gender differences concerning IT skills, there are also gender differences in terms of the ability to communicate in English. As shown in Table 5.18 above, there is relationship between gender and the perception that one's English is not good enough to use the internet in their chosen way. The gender difference is 11% and there is an association. It is interesting to note that the gender difference persists across all the different study sites (see Tables 5.22 and 5.23 below) and ranges from 16% to 11%. At the schools, the gender difference is 13%, with none of the male pupils stating that their English is not good enough compared with 13% of the female pupils. When the KI Wilber, who is the IT teacher at the PTC, was questioned about whether there is a real difference in English language skills between the female and male pupils, he replied that he thought that the English of the female pupils was better than the boys.

"I think it just goes back to being less confident expressing their views in a given setting but when it comes to written English answering and so on, the ladies write better English, the ladies write better English than the

boys.... even the (exam) results, the ladies pass English more than the boys.”

He suggests that it is the lack of confidence of the female pupils in expressing themselves that could be the underlying driver behind the gender difference rather than an actual skills difference.

Table 5.22 My English not good enough. Female and male responses analysed by study site.

	Site 1		Site 2		Site 3
	Female	Male	Female	Male	Female
	(n=82)	(n=76)	(n=90)	(n=68)	(n=17)
My English is not good enough	33%	21%	17%	4%	25%

Table 5.23 My English not good enough. Female and male responses analysed within site 2.

	Site 2a		Site 2b		Site 2c	
	Female	Male	Female	Male	Female	Male
	(n=38)	(n=20)	(n=29)	(n=26)	(n=23)	(n=22)
My English is not good enough	11%	0%	28%	12%	13%	0%

5.6.3.5 What Type of Women and in Which Circumstances?

5.6.3.5.1 Education

The preceding two sections raise the question as to whether the education of women plays a role in the lower self-perception of both their IT and English skills. When the questionnaire data was analysed, (see Table 5.24 below), a statistical association was found between educational attainment and whether you perceived that you had good enough IT skills to use the internet in the way that you wanted ($p = 0.005$).

Table 5.24 "My IT skills are not good enough". Female responses analysed by educational attainment.

	No school or primary school	O'Level or training after O'Level	A'Level or training after A'Level	Tertiary	Grand Total
	(n=27)	(n = 64)	(n=51)	(n=47)	(n=189, p =0.005)*
My IT skills are not good enough	74%	55%	35%	45%	50%
* - The chi squared test was performed to establish whether there is a relationship between educational attainment and whether one perceives that has good enough IT skills to use the internet in the way that one wants. (The test compared the responses of those with "no school/primary school or O'Levels and training after O'Levels" with those with " A Levels or training after A levels or Tertiary education") See Table K5.24 in Appendix K for further details.					

The study confirms that the longer an individual remains in the education system in Uganda, the more likely they are to have formal education on how to use the internet (see Table 5.25 below). For example, 40% of those who had tertiary education had had training on the use of the internet, compared to only 14% of those who have O' Levels or training after O' Levels.

Table 5.25 How did you learn to use the internet? Responses analysed by educational attainment.

	No school or primary school	O'Level or training after O'Level	A'Level or training after A'Level	Tertiary	Grand Total
(NB Respondents could give multiple responses).	(n=27)	(n = 64)	(n=51)	(n=47)	(n=189)
School (n=41)	0%	14%	25%	40%	22%
Formal Training Outside School (n=23)	4%	6%	8%	30%	12%
Friends and Family (n=125)	81%	66%	62%	60%	66%
I taught myself (n=65)	33%	44%	27%	32%	34%
Telecentre (n=7)	0%	2%	4%	9%	4%
Other (n=4)	0%	2%	4%	2%	2%
Grand Total	118%	134%	130%	173%	140%

Not surprisingly, there is also a relationship between the level of educational attainment and whether they perceive their English language skills to be good enough (see Table 5.26 below). For example, 74% of those who had either no

school or just primary school thought that their English wasn't good enough compared to 9% of those who had tertiary education.

Table 5.26 "My English is not good enough". Female responses analysed by educational attainment.

	No school or primary school (n=27)	O'Level or training after O'Level (n = 64)	A'Level or training after A'Level (n=51)	Tertiary (n=47)	Grand Total (n=189, p <0.000*)
My English isn't good enough	74%	30%	8%	9%	25%
* - The chi squared test was performed to establish whether there is a relationship between educational attainment and whether one perceives that has good enough IT skills to use the internet in the way that one wants. (The test compared the responses of those with "no school/primary school or O'Levels and training after O'Levels" with those with " A'Levels or training after A'levels or Tertiary education") See Table K5.26 in Appendix K for further details.					

5.6.3.5.2 Age

Age appears to be influencing the self perception of IT skills, with older women more likely to say that their IT skills are not good enough to use the internet in the way that they want. As shown in Table 5.27 below, 63% of the female participants over 31 years old stated that their IT skills were not good enough compared to only 44% of female participants who were 30 years old or under. There is a statistical association (p =0.016).

Table 5.27 "My IT skills are not good enough". Female responses to this statement analysed by age.

	Age		
	18 to 30 (n=130)	Over 31 (n=59)	Grand Total (n=189, p =0.016*)
	My IT skills are not good enough	44%	63%
* - The chi squared test was performed to establish whether there is a relationship between age and whether the respondents IT skills are not good enough to use the internet the way that they want. See Table K5.27 in Appendix K for further details.			

5.6.4 Usage

5.6.4.1 Time Resources

One of the key constraints in how frequently the female participants use the internet, is how much time they have available. Half of the female respondents stated that they did not have enough time to use the internet in the way that they wanted (see Table 5.28 below).

Table 5.28 "I don't have enough time". Responses analysed by gender.

	Female	Male	Grand Total
	(n=189)	(n=147)	(n=336, p = 0.048*)
I don't have enough time	50%	39%	46%

* - The chi squared test was performed to establish whether there is a relationship between gender and whether one has enough time to use the internet in the way that you want. See Table K5.28 in Appendix K for further details.

Table 5.29 How often do you use the internet? Female responses analysed by whether the respondents had enough time to use the internet in the way they would have liked.

Frequency of Use	I have enough time	I don't have enough time	Grand Total
	(n=189)	(n=147)	(n=336, p =0.028*)
All of the time	18%	11%	14%
Daily	64%	56%	60%
Sub-total very frequently	82%	66%	74%
Weekly	16%	28%	22%
Sub-total frequently	98%	95%	96%
Monthly	0%	2%	1%
Once in a while	1%	3%	2%
Don't know	1%	0%	1%
Grand Total	100%	100%	100%

* - The chi squared test was performed to establish whether there is a relationship between whether one has enough time to use the internet in the way that you want and the frequency of use of the internet (comparing the frequency of use responses: " Sub-total very frequently" and " Weekly") .

Furthermore, 82% of the respondents who had enough time, were able to use the internet on a very frequent basis compared to only 66% of the respondents who said that they did not have enough time. There is a statistical association (p =0.028) between frequency of use of the internet and whether the respondent does not have enough time to use the internet in the way that they want (see Table 5.29 above).

5.6.4.2 Gender Dynamics

From the analysis of responses in the questionnaire (Table 5.28) 11% more women perceived they had did not have adequate time ($p = 0.048$). The increased domestic burden of women compared to men was cited as the reason why they thought they had less time to use the internet. Some of the illustrative comments about women's lack of time because of their domestic burden are shown in Box 5.8 (below). The additional domestic burden that women face is captured in the analysis in Appendix I that shows that there is a statistical association between gender and the number of hours that are spent on domestic duties every day. Most women do over 3 hours of domestic work every day compared to most men doing less than 2 hours.

Box 5.8 Illustrative quotes from Participants and Key Informants about women using the internet less than men because of a lack of time resulting from their domestic burden.

"Women are ever busy, they have a lot of domestic work in addition to businesses so she has to take care of the home and business itself so you find that in between there a few hours she has to be online.....
And when its night time the husband is back, you are not supposed to be on phone but its only him who feels he should be in his leisure to chat with friends for you, you are even taking care of the children and you want even to dose off because you are tired."

Participant Fortunate Site 2

"even when men reach home, the only thing they want is juice and his phone. They are less concerned with home affairs. Me, I will be busy looking at the children supervising the house helper, while the man is busy texting women while the woman is busy moving up and about in the house making sure she boils bathing water for the same man."

Participant Patience, FGD Site 3

"(Women) have more responsibilities at home, they have to cook etc. However, if it wasn't for this (social media) tax, the trend (men using the internet more than women) was going to be the other way round."

KI Brian

"Women don't have time. Gender roles need to change. There is free wifi in Kampala, in the grounds of KCAA after 6pm. How would women access it now? After 6pm, they are cooking food and looking after children."

KI Susan

5.7 Emerging Findings

Figure 5.5. highlights the main constraints to accessing and using the internet at each of the main stages of the appropriation of the internet. The inner circle reveals the key aspects of the gender dynamics that are hindering access and use and the outer circle shows the main socio-economic factors (education, wealth, age) that are also important. The main findings at each stage of appropriation are discussed briefly below with the focus being on the gender dynamics at each stage.

Figure 5. 4 sets out the main constraints in a bar chart, showing the percentage of the female and the male participants that identified these constraints in the quantitative research. It can be seen from the chart that problems with the strength of the network signal is the biggest barrier to internet usage followed by the cost of data. From the perspective of the digital gender divide, the constraints that are affecting the female participants more than the male participants are the perceived lack of IT and English language skills and women’s lack of time to engage with the internet compared to men.

Figure 5.4 Constraints to Internet Access & Usage.

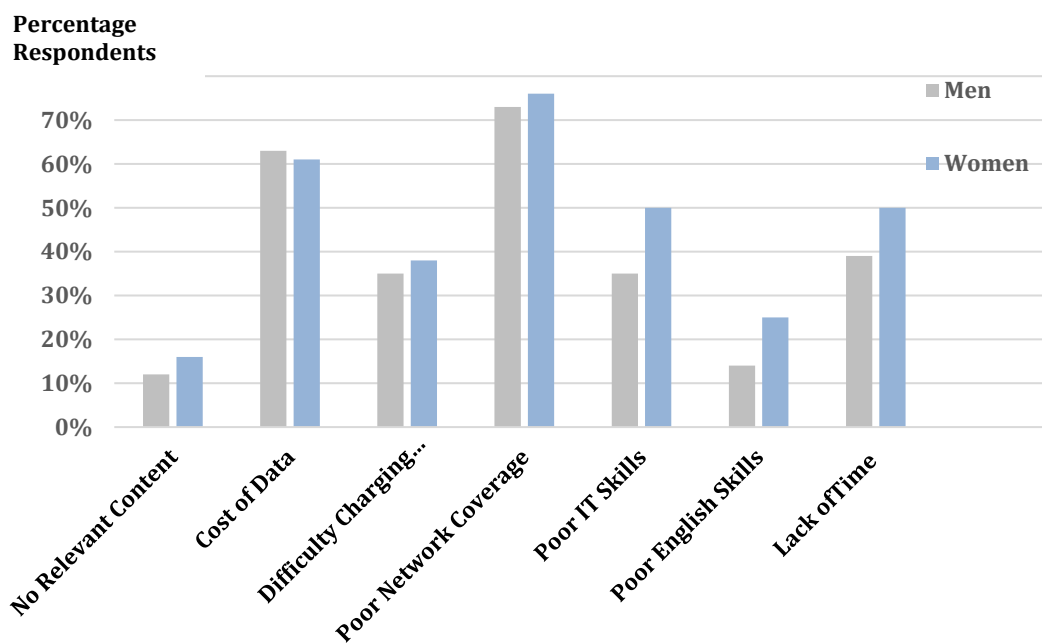
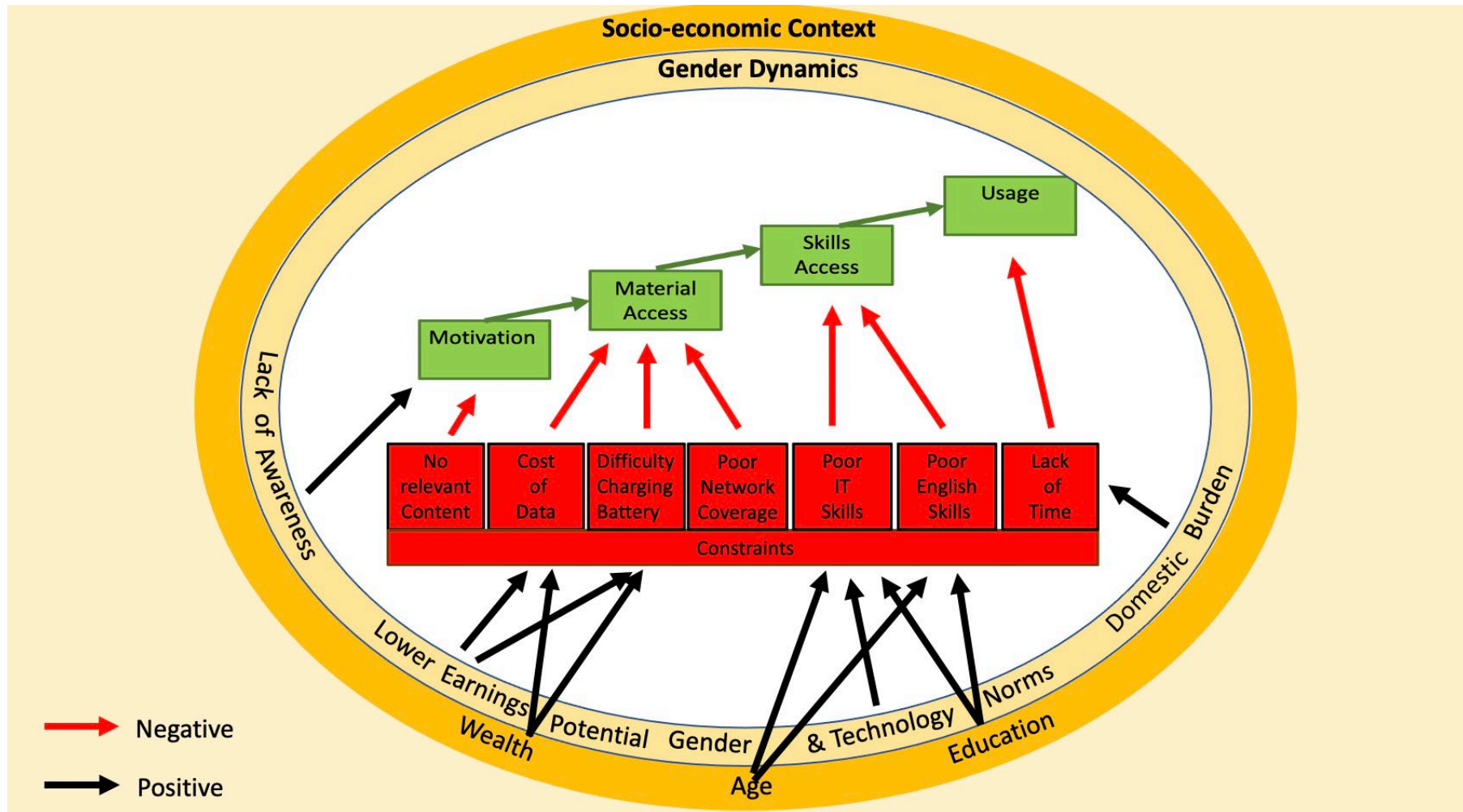


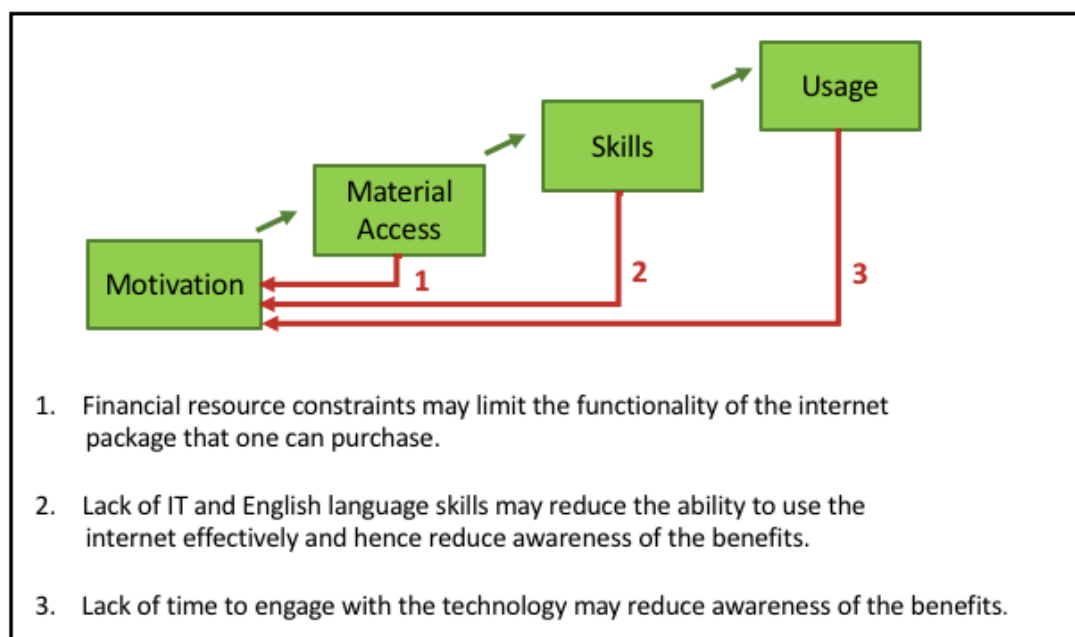
Figure 5.5 The Main Constraints to Accessing and Using the Internet at the Four Main Stages of Appropriation.



5.7.1 Motivation

The main motivation for using the internet is to communicate with family and friends. Table 5.1 and Table 5.2 (above) set out the main three reasons for internet use selected by the participants. The findings suggest that women may lack awareness of the benefits of using the technology compared to men. Gender norms around women's engagement with technology, a lack of exposure to the internet as a result of reduced freedom of movement and a lack of time for this engagement may all influence awareness. Furthermore, a lack of skills to be able to use the technology effectively and the lack of affordability of internet packages that include the ability to search for information could disadvantage women in terms of their understanding of the benefits of internet use. This creates a negative feedback loop in terms of the motivation to use the internet (see Figure 5.6 below).

Figure 5.6 Negative Feedback Loop of the Motivation to Use the Internet.



5.7.2 Material Access

Nearly all of the female participants (96%) are accessing the internet on their phones. Infrastructural constraints such as poor networks and inability to charge phones are hindering both the female and male participants ability to access the

internet. There is better network coverage at Site 1 and Site 3 and there are also more problems with charging ones phone at Sites 2a and 2c.

The affordability of internet –enabled phones is a particular issue for women probably because of their subordinate economic status and because they are more likely to prioritise other household expenditure, for example, school fees over their need for a smartphone. It also appears that some men do not want their partners to acquire smartphones and if they are going to allow their wives to have them, they want to purchase them for them. On the one hand, the purchase of smartphones by men may increase their control over their partner’s use of their smartphones. On the other hand, there was the suggestion by several of the key informants that the purchase of phones by men could be seen as a way that women are using their agency to gain their husband’s permission to use the internet. This could be just part of the complex negotiations between women and men over smartphone use.

In a similar vein, the female participants are less likely to pay for their own data compared to their male counterparts and there is a statistical association between gender and who pays for one’s data. The biggest gender difference in paying for your own data is at Site 2c, where only 51% of the female pupils pay for their own data compared to 91% of the male pupils. This is likely to be because the female pupils are less able to earn money and are therefore more reliant on other people to pay for the data for them. This could expose them to potential exploitation, even sexual exploitation and may be hindering them from freely using the internet to search for information, because of the additional cost.

5.7.3 Skills

Most (66%) of the female participants had not had any formal training in how to use the internet either at school or elsewhere and had either learnt how to use the internet from family and friends (66%) or taught themselves (34%). Those with higher levels of education are more likely to have had formal training on the internet. Not surprisingly there is evidence that there is a relationship between having had training in the use of the internet and the participants assessment of

their IT skills, with those who have had training more likely to perceive that they had better IT skills. Furthermore, there is evidence that the lack of IT and English language skills may be affecting *how* the participants are using the internet, with the suggestion that those with poorer skills may be less likely to be able to search for information online, for example.

There is a statistical association between gender and the assessment of whether ones' IT skills are good enough to use the internet in the way that you want. An assessment of IT skills at the FGDs also produced gender differences with the overall average score for women lower than that for the men. The evidence suggests that this difference is likely to reflect a combination of differences in the perception of skills by women and men as well as differences in actual skills. These differences are likely to be partly driven by lower levels of educational attainment for women, partly by gender differences in attitudes to technology and partly by differences in self-confidence. Section 5.6.3.4.2 sets out some of the underlying reasons for the gender differences in attitudes to technology. The research found an example at the PTC of how these gendered attitudes can lead to schoolgirls being unable to learn about technology to the same extent as school boys (see section 5.6.3.4.1). However, the gender gap in the perceptions of IT skills appears to be reducing in those under 30 years old.

There is some evidence to suggest that the use of a smartphone rather than a computer, may be helping to change the gender dynamics around technological appropriation. The skills required for using a smartphone, such as texting, taking and posting videos for example, may not be perceived as being assigned to a particular gender. There is also evidence to suggest that gender stereotypes may be changing with younger women more willing to engage with technology than older women (see the relationships between age and skills below). The suggestions around changes in engagement with internet-enabled smart phones requires further research.

There was also a statistical association between gender and perception of ones' English language skills, with educational attainment influencing those skills.

Unfortunately, there is some evidence to suggest that these lower levels of IT skills and English language skills amongst the female participants may be affecting how they use the internet, with less women searching for information, for example.

5.7.4 Usage

The results suggest that the female participants are using the internet less frequently than their male counterparts. There is an 8% difference between women and men using the internet on a very frequent basis (at least daily). Although this is not statistically significant, there is other evidence to suggest that there may be a gender difference in frequency of use; the analysis of the daily use timesheets completed at the PGEs showed that the female participants on average used the internet six times per day compared to nine times per day by the male participants. There is a statistical association between wealth and how frequently the participants use the internet (see section 5.5.2) and also age; younger women and wealthier women are using the internet more frequently. Furthermore, the participants at Site 3 are most likely to use the internet on “a very frequent” basis.

In terms of time resource, there is a statistical association between gender and not having enough time to use the internet. Once again, gendered constraints may play a part in this with women having too many domestic duties to have the time to use the internet in the way that they want.

5.7.5 Summary

This first results chapter has revealed the participants’ motivation for using the internet, their means of gaining access to the internet, how they acquired the skills to use it and how frequently they are using it. It has highlighted the key constraints that the participants face at each of these stages. These constraints include the affordability of smartphones and data, the infrastructural constraints of poor network coverage and the cost of charging a phone as well as the constraints concerning the skillsets of the participants and their lack of time.

Gender dynamics are prevailing at each of these different stages so as to constrain the access of women in particular, whilst education, wealth and age intersect with gender and location to also influence access and use. It is hoped that this chapter has set the scene for the subsequent results chapters that will examine the participants' specific use of the internet and how this may be providing opportunities for empowerment.

Chapter 6 Enabling Access to Information

6.1 Introduction

This chapter examines how the use of the internet is changing the access to information for the study participants and how this could be empowering them. It starts by examining how the use of the internet has changed the power dynamics surrounding the control over access to information. The research then explores what type of information they are searching for and how this is changing their lives.

The initial focus is on economic empowerment and the information that the participants access that relates to livelihoods. The next section on social empowerment examines how the participants are using online information for health and nutritional purposes. The research then looks at how the research is enabling the participants to search for educational opportunities and undertake educational courses online. In the political empowerment section, the chapter reveals how the internet is providing the participants with information about politics, world news and rights and entitlements. Finally, the chapter examines the findings around the psychological implications that this increased access to information has brought about for the participants. For each of the different subsections, there is an initial focus on the results concerning the female participants and then attention is given to the gender dynamics that may be affecting these results. At the end of each section consideration is given to how the provision of information may be favouring certain types of women in certain circumstances. Conclusions as to how these changes, brought about by increased access to information, are leading to empowerment are then drawn in the emerging findings section.

6.2 Changes in Control Over Access to Information

The responses from the participants at the FGDs and the PGEs suggest that there has been a fundamental change in their ability to access information. The participants stated that previously it had been difficult, if not impossible, to access certain types of information before their use of the internet. 93% of the female respondents to the questionnaire agreed (strongly agreed and agreed) that the internet has helped them to access information that would be very difficult to access offline (see Table 6.1 below). A similar pattern was reported across all the study sites.

Table 6.1 “The internet has helped me to access information that would be very difficult for me to access offline”. Responses analysed by gender.

	Female	Male	Grand Total
Responses	(n =189)	(n =147)	(n =336)
Strongly Agree	42%	58%	49%
Agree	51%	39%	46%
Sub-Total Agree	93%	97%	95%
Neither agree or disagree	5%	1%	3%
Disagree	3%	1%	2%
Strongly disagree	0%	1%	0%
Grand Total	100%	100%	100%

The participants also spoke about changes in their control over accessing information in terms of their freedom to search and access information for themselves rather through intermediaries, to choose the information that they want from a wide variety of sources, to verify information and to access information privately or anonymously without further consequences. As an attempt to capture this change, the questionnaire asked whether the respondents strongly agreed or agreed with the statement “the internet has given me more control over the information that I could access” and 94% of the female respondents answered in the affirmative (see Table 6.2 below). The section below

discusses the different ways in which the participants feel that they have more control over their access to information.

Table 6.2 “The internet has given me more control over the information that I can access.” Responses analysed by gender.

	Female	Male	Grand Total
	(n =189)	(n =147)	(n =336)
Strongly Agree	27%	29%	28%
Agree	67%	66%	66%
Sub-total Agree	94%	95%	94%
Neither agree or disagree	3%	3%	3%
Disagree	3%	2%	3%
Grand Total	100%	100%	100%

6.2.1 Freedom to Search for Information for Oneself

In all the FGDs and PGEs there were comments about how the internet allows the participants the freedom to search for whatever information they want and they can search for themselves rather than being reliant on information provided by someone else. For example, Participant Eunice from Site 2 describes how she no longer needs to rely on other people to get information,

“I can directly go to Google Search, then search for something that I need instead of going around asking each and everyone about a given thing.”

The importance of being able to search and access information without the need for intermediaries was specifically highlighted in the discussion at the women’s PGE in Site 2 about educational opportunities. The point was raised that the internet allows different types of people to be able to find out about educational scholarships compared to the situation pre-internet when these opportunities would just been made known to those in a position of power within a community, for example, through church or community leaders. Previously those in power would have been the gatekeepers responsible for deciding who to inform about

the opportunities and maybe even selecting the people who would benefit. As part of the discussion at the PGE, Participant Viola explains,

“Before (the internet) they (scholarships) would pass through politicians accessing them was not easy,.....the chairperson would give these scholarships to his family.”

She goes on to give an example.

“If it is telecentre that is having a scholarship.....then manager would also look for his family members to first access them. And by the time you come to apply everything will be already gone because also that person would be catering to his people.”

From the discussion at the PGE, there is the perception that the internet allows people to access information directly and that this gives everyone more of a fair chance of getting the scholarship as it is based on your skills rather than nepotism. There was also a comment from one of the participants (Zawedde) that suggests that previously men would have been more likely to access these opportunities,

“Before, boys were favoured a lot, but these days its open everyone.”

This discussion suggests that controls over access to these opportunities may have been challenged through internet use and that this weakening of controls may have gender implications. Further research is required to confirm these tentative findings.

6.2.2 Access to Different Sources of Information with Implications for the Quality of Accessible Information

The participants also described how their sources of information had changed; before the internet, they were reliant on other people or on books in libraries and schools within their vicinity to provide them with information. As the participants

from the PGEs explained they can now find the information that they want online, directly from the source, even from outside their own locality and even from outside Uganda²¹ Some of the participants spoke about the positive consequences of this in terms of the quality of information that they can access. They describe the information as more up to date, more detailed and more reliable and less edited or “sieved” than the information offline. Some of the relevant illustrative quotes from participants are included in Box 6.1 below.

6.2.3 The Ability to Verify Information

The internet also provides the female participants with a means of assessing the validity of information that they are given. For example, at the women’s PGE at the rural town (site 2), two examples were given by participants of how the internet could be used as a tool to find out about market information which prevented farmers from being cheated by middlemen giving false information about the market price. For example, Participant PGENAKW04 explains,

“For example, (before the internet)..... if I have a ton of beans and our village traders come to me and say..... you know what Madam V we need to buy your beans.... because I also need money.... they (the middlemen) will cheat me”

She goes on to say that now she can use the internet to find out the prices so that she is given a fair price. There were also comments from six of the case studies about how the internet allows individuals to confirm the validity of the information that they were provided with. In one of them, Participant Maria, a trainee teacher from Site 2 explains how she compares different online sources to assess the validity of information,

“Sometimes you find information, you find it on this site then again when you check on another site it’s the same information. So when you find information from more than two sites then you take it to be right.”

²¹ PGENAKW, PGENAKMI, PGEKAMW, PGEKAMMI.

Further examples of the use of the internet enabling the participants to verify information will be given throughout this chapter. Furthermore, the extent to which the participants trust information online compared to offline will also be examined in further details with reference to health information and news in particular.

Box 6.1 Illustrative quotes from Participants showing how the source and quality of the information that they can access has changed.

Information is up to date

“the books we use especially in a low setting like Uganda sometimes (are) donations but even those which are bought are sometimes outdated, are too old, way back. But now we are able to get information that has been generated for last month”

Participant PGENAKW02

“What is in the books is not enough, it’s not updated, you have to go and Google. What is in books doesn’t give detailed explanation.”

Participant PGENAKW01

Information is more detailed and reliable

“Before we didn’t know things in detail but now we have detailed informationdetailed information about our normal lives, at times we might know somethings, just hearsays but when you go to Google and search, it gives you a lot of explained information.”

Participant PGEKAMW01

“information that comes out on TV and radios is edited and sieved and only shows what they want but online information is given “un-sieved”.”

Participant FGDKAMW03

“these days because of the internet you really get first hand information.”

Participant PGENAKW03

6.2.4 Anonymity

The fact that you can search for and access information anonymously also provides the participants with an increased sense of freedom over what they can find out about as well as what they can discuss online. In the health section below, examples are given of women finding out about more sensitive subjects such as family planning or menstruation online which may be topics that some women may find difficult to search for and ask about offline. On several occasions during the research, the participants talked about using the internet to search about same-sex relationships, which is a particularly “taboo” issue in Uganda, given the illegality of homosexuality. Of course, it is possible to access this type of information offline but it is much easier and possibly safer to do so online because of the anonymity that the internet affords.

6.2.5 Gender Dynamics

This section will examine the gender dynamics surrounding the changes in the control over access to information that the internet is bringing about. From observation during the research and from the comments of the participants and KIs, it appears that women are constrained more than men from travelling away from their homes because of domestic responsibilities and/or social constraints around their freedom of movement. This often limits women’s sources of information to their husbands, neighbours and immediate family who live close by. It appears from the comments made by some of the participants and by the key informants that the use of the internet allows women to access information in spite of their limited physical movement. As Participant Brenda from the Mixed Site 2 PGE explains,

“ The other time (before the internet), women were left at home and you couldn’t know what is going on until when maybe the husband comes back from work and he tells you what is going on..... but today even he can come back and you give the information that he doesn’t know, but you got it on internet. “

The comments from some of the participants and key informants also suggest that previously men, as a result of social norms, had control over women's access to information. For example, Participant PGENAKW02, a midwife at the hospital, explains how husbands often control their wives' movements and also control their access to information,

“The husband is in full control of the family so women depend on men for everythingdecision making, *for information*, for economic support even when the woman has her own money, the husband is the one keeping it so you will not travel any distance before your husband knows.”

KI Ambrose's comment also supports the idea that men often take control over women's access to information and he connects this to women's loss of self efficacy,

“The men think that they know more. Women lose agency. They wait for the person who knows.....(the man)...you are creating a hierarchy in information access. The man becomes the trust, he choses what information the women will get.”

However, there is evidence that with the introduction of the smartphone and the use of the internet for accessing information, there have been changes in men's control over the source of access. Participant PGESTB02 paints a picture of how the control over information by men has diminished,

“(Before) the household head controlled the radio, that is, the husband/father... (now my mobile phone) ..is my personal property, currently he (her husband) doesn't have any control the difference is that now everybody owns information and it's accessible anytime and from any corner.”

Rather than have to go through men to gain access to information, she can search for information for herself.

The comments by three of the Key Informants (KIs) in Box 6.2 below also appear to confirm that a similar change in control over information has taken place, with men's role as the source of information being reduced.

Overall, this section has revealed that there have been shifts in the controls over access to information. The participants can now search for information directly without having to go through intermediaries, they can gain access to information that they couldn't access previously, they can choose what information they require from a wide variety of sources, they can verify the information and they can access more "taboo" types of information anonymously if they so wish. There is also evidence that this relaxation of controls over access to information may have particularly benefited women who may have faced gendered constraints over access to information previously. The consequences of this increased access to information will be discussed in the sections below.

Box 6.2 Illustrative quotes by Key Informants that suggest that men have lost their control over women's access to information.

KI Dr Bosco, discusses how the use of the internet is changing the sources of information that women have access to,

“The father at home no longer has control over his daughter who is in her bedroom talking to people all over the world. They are getting all sorts of information. It is no longer your aunty, your grandmother or parents who are the sources of information and of socialisation.”

KI Janet, a CDO from Site 1, describes the change in control over access to information that has occurred,

“In this era, everybody can access information....if they want. Whether you're learned or you're really interested in getting information. so it's not like those days where the man would control every source of information, the channels to be watched, the stations to be listened to. So it has changed.”

KI Diana a CDO from Site 3 explains how some men didn't want women to have access to information but that now it's very difficult for them to continue to control women's access to information,

“Some men are really comfortable keeping you there with no information. We've seen men who have refused wives from working because they don't want them to interact with the world....So they really kind of imprison you at home. They promise to give you everything but they don't want you to interact with anyone. But if I have my phone, even if I'm locked up in my bedroom I can certainly know what is happening around. And there are so many men who are not comfortable with that. ...they want to keep you away from informationbecause the information they can access, women can as well access, it so it's no longer exclusive to them. Information like from newspapers, radios, those other modes of communication were almost exclusive to men. But with a phone ...I see what I want. So I think it's a blow. I don't think men are very happy with it. Like they've dominated the other modes of communication and information. They would wish it to be exclusive to them but they can't have control over it. “

6.3 Opportunities for Economic Empowerment

6.3.1 Livelihoods

There is evidence that the participants' use of the internet is changing their lives in terms of their livelihoods. When asked in the questionnaire about how often they use the internet to find out information about their jobs, livelihood or profession, 62% of the female respondents stated that are using the internet to find out this information on a regular basis (daily, weekly, monthly) with only 21% never using the internet for this purpose (see Table 6.3 below).

Table 6.3 How often do you use the internet to find out information about your job, livelihood, profession? All responses analysed by gender.

Frequency of Use	Female	Male	Grand Total
	(n=189)	(n=147)	(n = 336, p=0.019*)
Daily	23%	27%	25%
Weekly	30%	21%	26%
Monthly	9%	7%	8%
Sub-total Regularly	62%	55%	59%
Once in a while	17%	30%	23%
Never	21%	15%	18%
Grand Total	100%	100%	100%
<p>* The chi-squared test was undertaken to assess whether there was a relationship between gender and the frequency of using the internet to find out about your job, livelihood or profession. It compared the responses " Sub-total regularly", "Once in while" and "Never". See Appendix K and Table K6.3 for further details.</p>			

In terms of assessing the implications of this increased access to information, the questionnaire uses a likert scale to assess the respondents' response to whether the use of the internet is helping them make more informed decisions about their jobs and/or livelihoods. Overall, 74% of female respondents agreed with this and the responses are set out in the table 6.10 below.

Table 6.4 The internet has helped me make more informed decisions about jobs/livelihoods. Responses analysed by gender.

	Female	Male	Grand Total
	(n=189)	(n=147)	(n =336)
Strongly Agree	27%	31%	29%
Agree	47%	45%	46%
Sub-Total Agreement	74%	76%	75%
Neither agree or disagree	6%	13%	9%
Disagree	17%	10%	14%
Strongly disagree	3%	1%	2%
Sub-Total Disagreement	21%	11%	16%
Don't know	1%	0%	0%
Grand Total	100%	100%	100%

There is also evidence from the qualitative data collection methodologies about the types of information that they are searching for online. The three main types of livelihood information identified were market information (particularly price), agricultural- related information and information to support income generation.

6.3.1.1 Market Information

In Site 2 FGD and in the all the female PGEs , finding out the market price of goods and produce was mentioned as a benefit of using the internet . 3/20 of the case study participants (Participants Viola, Zawedde and Fortunate) from Site 2, were engaged in farming activities and spoke about the use of the internet to get market information, particularly prices. For example, Participant Fortunate states:

“even financially I can get good market for the products I have, for instance, I can write (online) to a friend and I know the cost of my maize and of course I sell according to the price I want.”

One of the key informants Monica, who works as a programme manager for a government women's entrepreneur project in rural areas of Uganda, confirmed

that in agricultural areas, the internet is being used to check for market information,

“ Women are using the internet to know how the markets are and the prices for their products.... So they don't sell at a lower price”.

6.3.1.2 Agricultural information

In the rural study site, site 2, all of the six farmers (female and male) who attended the FGD and the PGEs stated that they were using the internet to find out about agricultural information, such as, how to deal effectively with pests, how to successfully plant new crops or to know the correct amount of fertiliser to apply. As part of the discussion, there were comments from several farmers that before the internet they didn't necessarily know that they were doing the right thing because they had no source of information apart from the agricultural research colleges which were far away. Participant PGENAKW04 stated,

“ Before (..the internet ..) we used to just dig, you plant anyhow”

However, with access to the internet, the farmers can see what other farmers are doing online successfully and follow their lead. All of the farmers also spoke about using the internet to gain ideas about what they could do on their land and gave examples of learning bee-keeping and planting banana trees for example. Participant PGENAKW04 states,

“I want to plant banana because of the stories that I've read on internet with people in business.”

This suggests that the use of the internet could be helpful in spreading innovation although this issue was not investigated further since it was not the main focus of the research.

6.3.1.3 Other Livelihood Information

In 13/20 of the case studies, the participants explained how they used the internet to access other non-agricultural information that could support their livelihoods. One of the ways that it does this is by providing micro- entrepreneurs with new ideas for their creative businesses. The illustrative quotes in Box 6.3 below show how they use the internet to get ideas about cake making, hair styles, knitting, tailoring designs and even dance routines. The information and ideas are coming from all parts of the world, not just Uganda. Furthermore, information obtained from the internet is being used to support professional development by allowing people to search for the latest information and compare their performance with that in other countries. Both of the midwives interviewed used the internet to improve their midwifery in this way.

Box 6.3 Illustrative quotes from Participants about obtaining information concerning micro-entrepreneurship from the internet.

“I use the internet on research, ... I use it to research for (dance) groups because there are more than 100 groups and so in order to see what other groups are doing they always post their videos on face book and YouTube, so at least I can go to the YouTube I see what they are doing so that I can pick a leaf from what they are doing”.

Participant Flavia (Site 1) who runs a traditional dance group

“ I use it to look for best cakes, their designs I just go to the internet and Google “cake making””

Participant Nancy (Site1), a cake maker and hotel worker

“When I start business especially when the day is not busy I work up to like midday after then I continue searching from internet at least I get new designs and fashions to use the next week or when there is still work.”

Participant Sharon (Site1), a tailor

6.3.1.4 Learning New Livelihood Skills Online

Unexpectedly, many of the participants in the FGDs and PGEs discussed the importance of using the internet to access information about obtaining new skills. As a consequence, the questionnaire asked several questions about this issue.

When respondents were asked to choose their top three reasons for using the internet, surprisingly 34% of the female respondents chose learning new skills as one of the reasons. Table 5.1 shows that this was the 2nd most popular reason selected. In addition, 59% of the female respondents stated that they used the internet to learn a new skill on a regular basis (daily, weekly or monthly) with only 19% stating that they had never used the internet for this purpose (see Table 6.5 below). When some of the respondents to the questionnaire were asked to give an example of a recent skill that they had acquired online, the majority (12/22) discussed how they had used the internet to learn practical livelihood skills such as farming practices (e.g. goat rearing) or learning micro- entrepreneurial skills (e.g. how to do a facial) and business skills (e.g. HR management) and professional skills (e.g. teaching and nursing).

Table 6.5 How often do you use the internet to learn a new skill? Responses analysed by gender.

	Female	Male	Grand Total
Frequency of Use	(n= 189)	(n =147)	(n=336)
Daily	19%	20%	20%
Weekly	28%	31%	29%
Monthly	13%	8%	11%
Sub-Total Regularly	59%	59%	59%
Once in a while	22%	28%	24%
Never	19%	13%	16%
Grand Total	100%	100%	100%

12/20 of the case study interviewees discussed how they used the internet to obtain practical skills and most of these skills related to their livelihoods and included farming, tailoring, weaving, catering, hairdressing, crafting, cooking, juice-making or midwifery skills. The participants discussed using Facebook, Youtube or Pinterest to learn these skills. Box 6.4 provides some examples from

some mini case studies of the participants use of the internet to learn new skills online. The ability to watch videos to be able to “see” how to do something was thought to be very helpful in terms of learning new skills. From the examples of new skills that were provided during the research, it was evident that this use of the internet could provide a rich potential for stimulating innovation as the participants combined what they were learning online with their own ideas related to their own circumstances. This was not the main focus of the research, but certainly merits further research in the future.

Box 6.4 Mini case studies of Participants about learning new skills online.

Participant Maureen is a 27 year old single hairdresser from Site 1 who also does some craftwork that she sells in the salon. She uses Pinterest for learning new skills in terms of hairstyles or her craftwork.

Participant Scovia from Site 3 is a 27 year old tailor who is single with a young child. She uses the internet to download videos of tutorials of how to make clothes. She gave an example of how she had just downloaded a tutorial of how to make a top.

Participant Rashida who is 19 years old, is a single mother and is a trainee teacher from Site 2. She uses the internet through search engines to learn to weave and make clothes out of the material.

6.3.1.5 Gender Dynamics

The evidence suggests that a higher percentage of women than men are using the internet to search for information about their jobs, livelihoods or professions on a regular basis; 62% of the female respondents compared to 55% of the male respondents used the internet in this way and there is a statistical association between gender and using the internet for searching for this type of information with $p = 0.019$ (see Tables 6.3 above). On the other hand, there is very little gender difference in the response to whether the internet has helped the participants make more informed decisions about their jobs/livelihoods (see Table 6.4 above) or gain new livelihood skills (see Table 6.5 above)

One of the gender dynamics that came to light from the qualitative research and which may explain the gender difference in searching for livelihood information was the importance of accessing livelihood information by the women who are urban or peri-urban micro-entrepreneurs. 7/20 of the case study participants were micro-entrepreneurs, three from Site 1 and four from Site 3. Most of these women are tied to domestic duties such as looking after children which is why they choose to earn a living from flexible micro-entrepreneurial activities such as tailoring, baking and hairdressing which they can undertake from home whilst doing child care with little initial capital outlay. Previously, with their limited ability to travel, they would have been unable to access information about their livelihoods apart from within their physical locality and like the farmers discussed above, they would have been reliant on others to provide them with relevant market prices for their goods and services. Box 6.5 below provides a mini case study of one of the participant's use of the internet at Site 3 in respect of her livelihood.

Box 6.5 Mini case study of a Participant about how she uses the internet to assist her livelihood.

Participant Yvonne lives in the suburb of Mutungo Hill, South Eastern Kampala (Site 3). She has her own small sewing workshop and makes mainly dolls, bags and clothes out of African materials to sell to individuals and shops.

The internet allows her to access a wide variety of information about a range of subjects. In terms of her business, it allows her to search for new ideas for the designs of her products and to see what the latest trends are in terms of style and colour. She has recently been looking at the “Oh sew fun” Facebook site. She also creates her own information about her products and uploads photographs to try to market them online. She has even obtained customers overseas.

According to her, the advantage of the internet is that she can search for this information herself and can create her own information and market her goods independently without going through a middleman. She can also do this from her own home and at a time of her convenience which is important to her as she is a widow and has a blind son that she has to care for and finds it difficult to get out and about.

6.3.1.6 What Type of Women and in Which Circumstances?

From the cross tabulation of the data, it appears that the female participant's type of livelihood, their English language skills, age, IT skills and their education levels may be influencing the extent to which the participants are using the internet to obtain livelihood information. Each of these factors will be discussed in turn.

As reported above, the internet appears to be a particularly useful tool for those who are self employed. As shown in Table 6.6 below, there is a statistical association ($p=0.010$) between the frequency of using the internet to learn a new skills and whether you are self employed. Similarly if you identify as a farmer you are more likely to be using the internet frequently for learning new skills. When both the female and male participants who identified as farmers are considered there is an association between being a farmer and frequency of use of the internet

Table 6.6 How often do you use the internet to learn a new skill? Female Responses analysed by whether they are self employed.

	I am not self employed	I am self employed	Grand Total
	(n= 113)	(n=75)	(n=188 p = 0.010*)
Daily	19%	20%	19%
Weekly	22%	35%	28%
Monthly	14%	11%	13%
Sub-Total Regularly	55%	65%	59%
Once in a while	24%	19%	22%
Never	21%	16%	19%
Grand Total	100%	100%	100%

* - The chi squared test was performed to establish whether there is a relationship between being self employed and the frequency of use of the internet for learning new skills (comparing the frequency of use responses: " Regularly" "Once in a while" and "Never") See Appendix K and Table K6.6 for further details.

for obtaining new skills (see Table 6.7 below). Unfortunately, there weren't enough female farmers to warrant statistical analysis. All the respondents who were farmers said that they had used the internet to learn new skills, and 6/6 of the farmers at the rural Site 2 FGD and PGEs discussed using the internet in this way.

Table 6.7 How often do you use the internet to learn a new skill? All responses analysed by whether they are a farmer.

	I am not a farmer	I am a farmer	Grand Total
	(n=309)	(n=26)	(n=335, p <0.000*)
Daily	18%	33%	19%
Weekly	27%	33%	28%
Monthly	13%	11%	13%
Sub-Total Regularly	58%	78%	59%
Once in a while	22%	22%	22%
Never	20%	0%	19%
Grand Total	100%	100%	100%
* - The chi squared test was performed to establish whether there is a relationship between being a farmer and the frequency of use of the internet for learning new skills (comparing the frequency of use responses: "Regularly" "Once in a while" and "Never")			

The importance of the female participants' perception of their English language skills can be seen in terms of the frequency of searching for livelihood information, making more informed livelihood decisions and learning new skills online. As shown in Table 6.8 (below), there is a 8% difference in regular use of the internet for searching for livelihood information between those who think that their English language skills are good enough compared with those who do not. This is a statistical association.

Table 6.8 How often do you use the internet to find out information about your job, livelihood, profession? Female responses analysed by whether they perceive that their English language skills are good enough.

	My English is good enough	My English is not good enough	Grand Total
	(n =142)	(n-47)	(n=189, p=0.001*)
Daily	25%	15%	23%
Weekly	29%	32%	30%
Monthly	9%	9%	9%
Sub-total Regularly	63%	55%	61%
Once in a while	21%	6%	17%
Never	15%	38%	21%
Grand Total	100%	100%	100%
<p>* The chi-squared test was undertaken to assess whether there was a relationship between the frequency of using the internet to find out about your job, livelihood or profession and whether you think that your English is good enough to use the internet the way that you want. It compared the responses “ Sub-total regularly”, “Once in while” and “Never”. See Appendix K and Table K6.8 for further details.</p>			

The perception of English language skills also play a factor in determining whether the female participants are using the internet for learning new skills. Table 6.9 (below) shows that 62% of female participants who perceive that their English is good enough, have regularly used the internet to learn skills compared to only 51% of those who perceive that their English is not good enough to use the internet in the way that they want. There is a statistical association ($p < 0.000$). This makes sense since many of the livelihood websites that the participants mentioned and the livelihood videos that they use online are in English rather than in local languages.

Table 6.9 How often do you use the internet to learn a new skill? Female Responses analysed by whether you perceive that your English language skills are good enough.

	My English is good enough	My English is not good enough	Grand Total
	(n=142)	(n=47)	(n=189, p =0.00*)
Daily	23%	9%	19%
Weekly	26%	32%	28%
Monthly	13%	11%	13%
Sub-Total Regularly	62%	51%	59%
Once in a while	23%	19%	22%
Never	15%	30%	19%
Grand Total	100%	100%	100%
* - The chi squared test was performed to establish whether there is a relationship between perception of English language skills and the frequency of use of the internet for learning new skills (comparing the frequency of use responses:" Regularly" "Once in a while" and "Never") See Appendix K and Table K6.9 for further details.			

There is also a statistical association between IT skills and agreeing that the internet has helped to make more informed decisions about your livelihood (see Table 6.10 below). Perhaps this is because the more detailed searching for information and cross referencing of information needed to be able to make decisions that the participant can act upon, requires higher levels of IT skills. This would need to be confirmed by further research.

Similarly, educational attainment may also be helping the participants to make more informed decisions about their livelihoods. Figure 6.1 (below) shows that, the higher the level of educational attainment of the female respondents, the higher the percentage of female respondents, who agree that their use of the internet has helped them make better decisions about their livelihoods. However, there is no statistical association.

Table 6.10 The internet has helped me make more informed decisions about jobs/livelihoods. Female Responses Analysed by the perception of whether their IT skills are good enough.

	My IT skills are good enough	My IT skills are not good enough	Grand Total
	(n=95)	(n=94)	(n =189, p =0.018*)
Strongly Agree	31%	23%	27%
Agree	49%	45%	47%
Sub-Total Agreement	80%	68%	74%
Neither agree or disagree	7%	4%	6%
Disagree	11%	23%	17%
Strongly disagree	2%	3%	3%
Sub-Total Disagreement	13%	27%	20%
Don't know	0%	1%	1%
Grand Total	100%	100%	100%

* The chi-squared test was undertaken to assess whether there was a relationship between the response to the whether the internet has helped you to make more informed decisions about your job/ livelihood and whether you think that your IT skills are good enough to use the internet the way that you want. It compared the “ Sub-total Agreement”, with the “Sub-total Disagreement”. See Appendix K and Table K6.10 for further details.

The age of the participant also appears to influence the searching of the internet for information and new skills. There is a statistical association ($p=0.021$) between age and frequency of use of the internet for searching for livelihoods information with 65% of those under 30 compared to 54% over 30 years old, searching for this type of information on a regular basis (see Table 6.11 below). Similarly those female participants under 30 years old were more likely to use the internet to a learn a new skill on a regular basis compared to those over 30 years old. There is a statistical association between age and the frequency of using the internet to learn a new skill ($p = 0.048$). Younger people may be more aware that this type of information exists online and therefore are more likely to be searching for it.

Figure 6.1 Bar Chart to Show the Percentage of Female Participants who Agreed that the Internet had Helped Them Make Better Livelihood Decisions, Analysed by Educational Attainment.

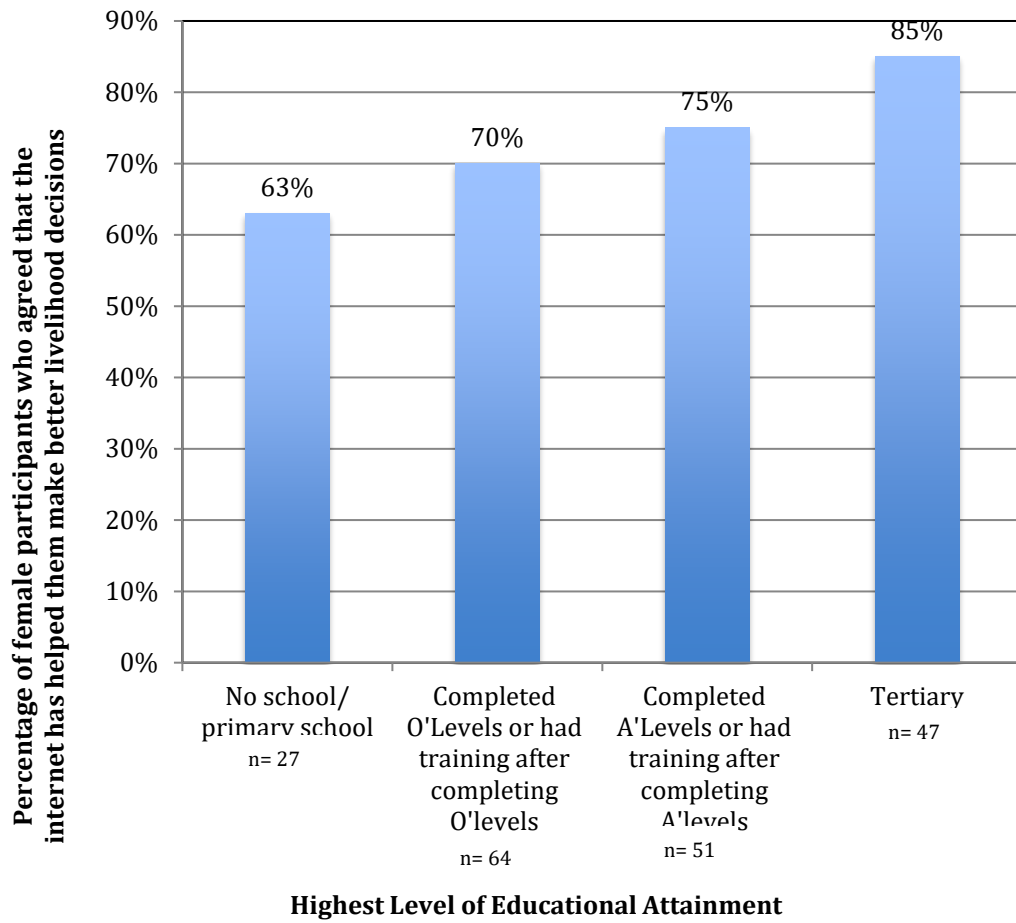


Table 6.11 How often do you use the internet to find out information about your job, livelihood, profession. Female responses analysed by age.

Frequency of Use	18 to 30	Over 31	Grand Total
	(n=130)	(n= 59)	(n=189, p =0.021*)
Daily	23%	22%	23%
Weekly	31%	27%	30%
Monthly	11%	5%	9%
Sub-total regularly	65%	54%	61%
Once in a while	12%	29%	17%
Never	23%	17%	21%
Grand Total	100%	100%	100%

* The chi-squared test was undertaken to assess whether there was a relationship between age and the frequency of using the internet to find out about your job, livelihood or profession. It compared the responses “Sub-total regularly”, “Once in while” and “Never”. See Appendix K and Table K6.11 for further details

6.4 Opportunities for Social Empowerment

This section examines how the participants are using the internet to search both for health or nutrition information and to access educational opportunities. It starts by looking at the participants’ increased access to health information and in particular their trust in this information, as well as the gender dynamics and the context surrounding their access to this information. This is followed by a similar analysis of the participants’ increased access to nutritional information. Finally, the section will examine the educational opportunities that the internet provides.

6.4.1 Improved Decision-Making for Health

At every FGD and PGE, the participants spoke about using the internet to search for health information. The responses to the questionnaire suggest that 59% of the female respondents are using the internet to find out about this information on a regular basis (daily, weekly, monthly) with only 21% never using the internet for this purpose (see Table 6.12 below).

Table 6.12 How often do you use the internet to find out about health information? Responses analysed by gender.

Frequency of Use	Female	Male	Grand Total
	(n=189)	(n=147)	(n =336 , p =0.056*)
Daily	22%	19%	21%
Weekly	27%	20%	24%
Monthly	10%	13%	11%
Sub-Total Regularly	59%	52%	56%
Once in a while	20%	29%	24%
Never	21%	20%	20%
Grand Total	100%	100%	100%

*- The chi squared test was used to assess whether there is a relationship between gender and frequency of use of the internet for finding out about health information (comparing the responses for the “sub-total regularly” with the other responses).

When the female respondents were asked to choose their three main reasons for using the internet, almost a quarter (23%) chose finding out about health information as one of these reasons (Table 5.1).

It appears from the research that their increased access to health information is helping the participants to make better decisions about their healthcare. As shown in Table 6.13 (below), 80% of the female participants either agreed or strongly agreed that the internet has helped them make more informed/ better decisions about their own or their family’s healthcare. Although, the perception is that the use of the internet is having a positive impact on people’s health, it is unclear whether this perception in improved decision-making resulted in actual health improvements. This would need to be the focus of further research, although from the case studies it does appear that the online use of the internet for health information is having a real impact on some of the participants’ lives.

Table 6.13 The internet has helped me make more informed/(better) decisions about my own and my family’s healthcare. responses analysed by gender.

	Female	Male	Grand Total
	(n =189)	(n=147)	(n =336, p =0.181*)
Strongly Agree	26%	29%	27%
Agree	53%	46%	50%
Sub-Total Agree	80%	74%	77%
Neither agree or disagree	6%	7%	7%
Disagree	13%	16%	14%
Strongly disagree	1%	3%	2%
Sub-Total Disagree	14%	19%	16%
Grand Total	100%	100%	100%

*- The chi squared test was used to assess whether there is a relationship between gender and agreement as to whether the internet has helped the respondent make more informed decisions about healthcare (comparing the responses for the “sub-total agree” with the other the “sub-total disagree”).

There are a variety of health issues that the participants are using the internet to find out about. These include family planning²², sexual health and menstruation issues²³, cancer²⁴, children’s health issues²⁵, medication²⁶ disease prevention²⁷, exercise regimes²⁸, and finding out about disabilities²⁹. The reasons why people are seeking health information online rather than offline are varied. The main reason appears to be that it was difficult to get access to the latest health information before they had access to the internet. The health information offline

²² Talked about by Participants Sharon, Scovia, Maria and Cathy

²³ Talked about at the FGDSTB, the FGDKAMW and by Participants Deborah, Maureen, Maria, Patience, Flavia and Nancy.

²⁴ Talked about by Participant Eunice

²⁵ Talked about by Participants Sharon, Deborah, Stella, Yvonne, Scovia and Patience

²⁶ PGESTB

²⁷ PGENAKMi

²⁸ PGESTB

²⁹ PGESTB

was not necessarily up to date and it was expensive to access as it cost money and time to see a doctor and to travel to them. Participant Justine from Site 1 explains,

“how internet has helped me..... I won't incur transport costs to go to hospital but I do and know everything here (at) home. I just move to the pharmacy and buy the medicine.”

Participant Eunice, from Site 2 who has a young child, also explains the convenience of using the internet to find out health information rather than go to a health worker,

“It could be difficult to like go to the health worker to ask for information about a certain disease but ever since I used Google it's easier for me than the other timeI used to wait for the health worker to ask, but now I can use my internet to find any information I like.”

Some of the participants also expressed a lack of confidence in the medical professionals that they had access to and so they often substituted seeing a doctor with searching for information online or commonly using a combination of the information obtained from the internet and from a doctor to make a healthcare decision. Participant Cathy from Site 1 does not trust the health workers in her area and so uses the internet as her first port of call to access health information. She explains,

“Kamwokya it's not a good place to look at people as professionals. and I am like,..... true you are a doctor, but then.. I do not usually trust them because even if I want to ask and I have a problem I would rather go to Mulago (the national referral hospital) than ask a doctor, than asking in Kamwokya. So if I want to ask a doctor in Kamwokya, I have to first ask my phone.”

As explained in the section below, the participants trust of the information found online or offline will influence the extent to which they use the internet for this purpose.

6.4.1.1 Trusting Health Information Online

In terms of the issue of trusting health information online compared to offline, overall 48% of respondents of the questionnaire said that they trusted health information online more than health information offline. 34% said that they trusted health information less online and 15% of respondents said that they trusted it the same (see table 6.14 below).

Table 6.14 Do you trust the health information that you access online more than the health information that you access offline? Responses analysed by gender.

	Female	Male	Grand Total
	(n=189)	(n=147)	(n= 336)
Trust more	48%	46%	47%
Trust it the same	15%	14%	15%
Trust less	34%	34%	34%
I don't know	3%	5%	4%
Grand Total	100%	100%	100%

Participant Fortunate explains that she trusts health information more online because the information can be visual and more specific,

“online first of all we get first hand information like for instance if there is an epidemic in the community, someone can post with pictures, with examples and locality of that incident so I think I trust online. But with offline someone will say there is cholera in Kasambya yet it’s not even there when it’s just someone rumormongering or someone has a hidden agenda.”

From the analysis of the detailed notes taken from the respondents’ responses as to why they trusted the internet more, less or the same as online it appears that

the reasons are varied. One of the main reasons stated was that you can validate the online information (27%) by doing further research or cross referencing with other sources, or finding the evidence behind it. It was also seen as being more detailed (8%) and up to date online (6%). Some respondents described how they used a mixture of online and offline sources of information and cross- referencing between the two in order to validate the diagnosis or medication requirement (10%).

On the other hand, 23% of respondents who said that they had more trust in online health information, could not articulate why they trusted it more, other than because it was online. The research didn't explore this fully with the respondents as a result of time constraints but it suggests that some people may blindly believe information online without validating the information or questioning the source. This could have dangerous consequences, particularly when people are not seeking medical help from a doctor because they are relying on information online. The mini case study of Participant Constance in Box 6.6 below provides an example of this and highlights the importance of having the knowledge and language skills to be able to access the right information in the first place. The responses from those who trusted health information less online compared to offline, are also interesting. Four respondents raised the issue that some of the health information online is not appropriate for Ugandans as it's from the Minority World and in one of the case studies, Participant Deborah explained that health information online may be unrealistically raising the expectations of Ugandans as the treatments may not be available in Uganda. Furthermore, 36% of those who stated that they trusted online health information less, spoke about their fear about false information posted online.

Box 6.6 Mini Case Study of a Participant concerning the dangers of obtaining health information online.

Participant Constance is a 29 year old single mother with a young son who works as a tailor at Site 3. She describes how she used the internet to diagnose what was wrong with her son,

“so it so happenedmy boy at two and half years developed a health problem and when I tried to post online to see what could be happening, the information I would get was so confusingto the extent that I got wrong medication for my boy.”

She explains how she didn't know which questions to ask online and that her English maybe wasn't good enough to use the internet to express the problem properly,

“(the internet) doesn't advise you that you have brought (the question) in a wrong way, it will answer you the way you have asked. Whereas there are some things that you cannot express yourself in English to make the Google owner understand, you may put wrong English words.”

As a result she spent two years searching for information online and selling her assets to buy medicines for her son that weren't working. She eventually went to a hospital and discovered that he had epilepsy. What is concerning is that in the meantime, whilst Constance had been searching for solutions online, her son had missed a lot of school and had also had several severe fits which could have put his life in danger. She had also spent her scarce finances purchasing drugs that weren't appropriate and could have even been dangerous for him.

6.4.1.2 Gender Dynamics

It appears that using the internet to access health information is particularly important for women. Table 6.12 (above) shows that there is a gender difference in the frequency of accessing health information online with 59% of women compared to 52% of men doing this on a regular basis (daily, weekly and monthly) although there is no statistical association ($p = 0.056$). It also appears that there is a significant gender difference in the importance of using the internet to access health information online as 23% of women chose this as their three main reasons for using the internet compared to only 12% of men ($p = 0.004$) (see Table 5.1).

There are clues from the qualitative research as to why women rank accessing health information as a more important reason for using the internet compared with men. one of the participants suggests that there are particular gender roles surrounding the responsibility for healthcare, with women taking the brunt of this responsibility. As Participant Florence from Site 2 explains,

“Naturally men do not take health issues seriously even in our homes for instance if a child gets sick it’s the woman’s duty to wake up at night...he says you wake up and take care of the child when the man is busy snoozing.”

The literature supports the idea that there are gendered interests around healthcare in Africa (Tolhurst et al, 2008) and so women’s increased interest offline may be mirrored by women’s greater interest online. Another motivation for accessing online health information for women is the difficulty of getting access to certain types of health information offline. 4/20 of the case study participants³⁰ spoke about getting family planning information online and 4/20³¹ (Diana, Massy, Immy, Constance) spoke about getting sexual health information online. The mini case studies in Box 6.7 (below) illustrate the use of the internet for gathering this type of information.

³⁰ Participants Cathy, Sharon, Maria and Scovia

³¹Participants Deborah, Maureen, Maria and Patience

Box 6.7 Mini case studies showing how the Participants are using the internet to access sexual and reproductive health information.

Participant Cathy is a single young woman who works in a shop at Site 1. She explains how she used the internet to find out about the emergency pill,

“So there is a time I wanted to take emergency pills and I had to question what do emergency pills do? for how long do they take in the body, what period does it take for an emergency pill to affect the body. So before I do all that I have to first research..... I will not ask a doctor but then I will ask my phone”

Participant Sharon is a married woman with 3 children at Site 1. She works as a tailor from her own home. She obtained information about different family planning methods online and then went to a clinic, which she found out about online, to get her preferred method.

Maria is a 19 year old single woman who is at the PTC at Site 2c. She explains how the internet has helped her find out about not getting pregnant,

“There is this thing that girls always say, that when you’re in a relationship with a boy then you go in for sex while standing, you don’t get pregnant.....That’s what most girls thought, or even the boys themselves thought but when you go in to search (online), at any moment when you go in for sex whether standing, whether sleeping or whator kneeling, you get pregnant.”

Although none of the participants explicitly say that they are gathering this information online because these subjects are “embarrassing” or “taboo”, or for the privacy and anonymity that online affords, this can be implied from the conversations in several cases. Furthermore there were comments from one case study participant (Gloria) and one KI (Brian) that for some women there is a genuine fear that their husbands/partners may discover that they are accessing family planning. As KI Brian from Site 2 explains,

“Family planning is so important in Nakaseke. They had a radio programme about family planning and the nurses told them that women often sneak out and go to the hospital for family planning, without telling their

husbands and when the nurses suggest that they bring their husbands, they tell the nurses, (he acts in a whispered voice) “don’t tell them or they’ll kill me”.

In a context where there are social constraints on accessing this information and these services, the ability to find out about family planning anonymously and privately online is helpful. Similarly, in the context of a society with a high number of teenage pregnancies, the ability of young women to ask questions about family planning is important. The research suggests that the internet is providing the female participants with greater control over their ability to find out about important information about their sexual and reproductive health.

6.4.1.3 What Type of Women and in Which Circumstances?

There is evidence to suggest that educational attainment and one’s perceived level of English language skills are influencing the frequency of accessing health information online. As set out in Table 16.15 (below), the higher the level of educational attainment, the more frequently the participants are using the internet to access health information, with only 33% of participants with no or only primary school education accessing it frequently compared to 74% with tertiary education. There is a statistical association between educational attainment and the frequency of using the internet to access health information ($p = 0.001$). Similarly, there is a relationship ($p = 0.010$) between the perception of English language skills and the frequency of accessing health information online (see table 16.16). There is a 16% difference in the percentage of participants using the internet on a regular basis to access health information based on perception of their English language skills. The harrowing case study concerning Participant Constance (see Box 6.7) above also highlighted the dangers of using the internet to search for a diagnosis and complicated health information and to try to interpret this information to make important health decisions in a language in which you already have limited vocabulary.

Table 6.15 How often do you use the internet to find out about health information? Female responses analysed by the highest level of educational attainment.

	No school or Primary school	O'Level or training after O'Level	A'Level or training after A'Level	Tertiary	Grand Total
	(n=27)	(n=64)	(n=51)	(n=47)	(n = 189, p =0.001*)
Daily	11%	16%	25%	36%	22%
Weekly	19%	29%	25%	30%	27%
Monthly	3%	78%	17%	8%	10%
Sub-Total Regularly	33%	53%	67%	74%	59%
Once in a while	19%	20%	21%	19%	20%
Never	48%	27%	12%	7%	21%
Grand Total	100%	100%	100%	100%	100%
*- The chi-squared test was used to assess whether there is a relationship between educational attainment and the frequency of use of the internet for finding out about health information (comparing the responses for the “sub-total regularly” with the other responses).					

Table 6.16. How often do you use the internet to find out about health information? Female responses analysed by whether you think that your English is good enough to use the internet the way that you would like.

	My English is good enough	My English isn't good enough	Grand Total
	(n=142)	(n=47)	(n=189, p=0.01*)
Daily	26%	11%	22%
Weekly	27%	26%	27%
Monthly	10%	11%	10%
Sub-Total Regularly	63%	47%	59%
Once in a while	21%	17%	20%
Never	15%	36%	21%
Grand Total	100%	100%	100%
*- The chi -squared test was used to assess whether there is a relationship between whether you perceive that your English is good enough and the frequency of use of the internet for finding out about health information (comparing the responses for the “sub-total regularly” with the other responses). See Appendix K and Table K6.16 for further details			

Levels of educational attainment and perception of English may also be affecting whether the participants agree that the internet is helping them make better health decisions. As shown in Table 6.17 (below), agreement as to whether the internet has helped participants make informed decisions about healthcare increases as educational attainment increases, although there is no statistical association.

Table 6.17. The internet has helped me make more informed/(better) decisions about my own and my family’s healthcare. Female responses analysed by educational attainment.

	No school or Primary school	O'Level or training after O'Level	A'Level or training after A'Level	Tertiary	Grand Total
	(n=27)	(n=64)	(n=51)	(n=47)	(n=189, p=0.149*)
Strongly Agree	19%	20%	33%	32%	26%
Agree	44%	58%	48%	60%	53%
Sub-Total Agree	63%	78%	81%	91%	80%
Neither agree or disagree	15%	6%	4%	4%	6%
Disagree	19%	14%	15%	4%	13%
Strongly disagree	4%	2%	0%	0%	1%
Sub-Total Disagree	22%	16%	15%	4%	14%
Grand Total	100%	100%	100%	100%	100%
*- The chi-squared test was used to assess whether there is a relationship between educational attainment and agreement as to whether the internet has helped the respondent make more informed decisions about healthcare (comparing the responses for the “sub-total agree” with the other the “sub-total disagree”).					

6.4.2 Improved Decision-Making about Nutrition

Overall, 47% of female respondents stated that they used the internet on a regular basis (either daily, weekly or monthly) to find out about nutrition, with only 29% stating that they had never used the internet for this purpose (see Table 6.18 below). When asked whether the internet had helped them make better decisions about their nutrition, 69% stated that they agreed (strongly agreed and agreed), compared with 19% who disagreed (strongly disagreed and disagreed) (see Table 6.19 below). It is unclear whether this perception in improved decision-making leads to actual improvements in the respondents' diets. This would need to be the focus of further research.

Table 6.18. How often do you use the internet to find out about nutrition? Responses analysed by gender.

	Female	Male	Grand Total
Frequency of Use	(n=189)	(n=147)	(n= 336, p =0.143*)
Daily	16%	7%	12%
Weekly	22%	20%	21%
Monthly	9%	13%	11%
Sub-Total Regularly	47%	40%	44%
Once in a while	24%	21%	23%
Never	29%	39%	33%
Grand Total	100%	100%	100%
*- The chi squared test was used to assess whether there is a relationship between gender and frequency of use of the internet for finding out about nutrition (comparing the responses for the "sub-total regularly" with the other responses).			

6.4.2.1 Gender Dynamics

There is a gender difference in whether the internet had helped the participants make more informed decisions about nutrition. This difference is statistically significant (see Table 6.19). 69% of the female respondents compared to 59% of the male respondents agreed that the internet had helped them make better decisions about their own or their family’s nutrition ($p = 0.018$). In the FGDs and PGEs, nutrition appeared to be raised as a reason for using the internet for women more than men and this was reflected in the results of the question about the respondents’ top 3 reasons for using the internet with 9% of women and only 3% of men putting nutrition in the top 3. It is suspected that the reason for the gender difference relates to the offline gendered interests that are simply reflected online; there is research in East Africa to suggest that family nutrition is a female domain of responsibility (Muraya et al, 2017).

Table 6.19 “The internet has helped me make more informed/(better) decisions about my own and my family’s nutrition”. Responses analysed by gender.

	Female	Male	Grand Total
Response	(n=188)	(n=147)	(n = 335, p =0.018*)
Strongly Agree	16%	12%	14%
Agree	53%	47%	50%
Sub-Total Agree	69%	59%	65%
Neither agree or disagree	11%	12%	11%
Disagree	17%	25%	21%
Strongly disagree	2%	5%	3%
Sub-Total Disagree	19%	30%	24%
Grand Total	100%	100%	100%
**- The chi squared test was used to assess whether there is a relationship between gender and agreement as to whether the internet has helped the respondent make more informed decisions about nutrition (comparing the responses for the “sub-total agree” with the other the “sub-total disagree”). See Appendix K and Table K6.19 for further details			

Another aspect of gender and nutrition and the use of the internet came to light during the all female PGE in Site 2. As part of the discussion of “before and after” and how the use of the internet had changed their lives one of the participants, Zawedde, described how her understanding of what is nutritious had changed,

“And now we are reading internet and we are seeing the values that are in nutrition, yet before those men used to be very greedy and take all the delicious things from us but now we know what is in the protein, what is what and we know what is in what that concerns nutrition which was not there before.”

When probed further she explained,

“In the tradition, men used to take all the delicious foods from women like foods that contain proteins like chicken, women were not supposed to eat that, fish, milk. Everything belonged to men. It was the tradition.”

Another Participant, Gloria, then joined in,

“And little did women know that it’s because men were greedy, they thought there was a problem if you ate them, so they kept away for many years, until now when people are able to search information for themselves, they know there is no problem eating them.”

It appears that because men previously had control over most information, women had been told that it was not good for them to eat certain foods that were particularly nutritious and high in protein. Now that the women have increased access to information about nutrition through the internet, they have realized that this is not the case and have started eating those foods.

6.4.2.2 What Type of Women and in Which Circumstances?

Interestingly, unlike with health information, educational levels and English language skills do not appear to be having an influence on whether the participants are using the internet to access information about nutrition. Maybe this is because of the simplicity of information about nutrition compared to health information although this was not explored in the research.

6.4.3 Educational Opportunities

The research shows that the internet is being used by some of the female participants to access educational opportunities. From the discussions at the FGDs and PGEs, “educational opportunities” include the ability to do both formal online educational courses and more informal self-taught learning online, as well as having access to scholarship opportunities. In the questionnaire (50% of the female respondents agreed (strongly agreed and agreed) that they had used the

Table 6.20. “I have used the internet to access new educational opportunities”. Responses analysed by gender.

	Female	Male	Grand Total
Agreement or Disagreement	(n=189)	(n=147)	(n=336, p =0.119*)
Strongly Agree	18%	27%	21%
Agree	32%	29%	30%
Sub-total Agree	50%	55%	51%
Neither agree or disagree	10%	6%	8%
Disagree	34%	36%	35%
Strongly disagree	6%	3%	5%
Sub-total Disagree	41%	39%	40%
Grand Total	100%	100%	100%
* - The chi squared test was performed to establish whether there is a relationship between using the internet to access new educational opportunities and gender (comparing the "sub-total agree" "neither agree or disagree" response with the "sub-total disagree" responses)			

internet to access new educational opportunities (see Table 6.20 above). 10% of female respondents had selected “Accessing an educational course online” as one of their most common three reasons for using the internet (see Table 5.1).

Furthermore, 4/20 of the participants from the case studies had done an educational course online or were doing part of an educational course online. Participant Yvonne from Site 3 had done a degree completely online as she has to be at home because of her blind son. Participant Viola from Site 2b is doing a part-time degree at Luwero University and does a lot of the course online through the telecentre at Site 2. She is a single mother with a young child who has to work full time and so without the use of the internet would also find doing a degree difficult. Similarly, Participant Zawedde from Site 2b is disabled and spoke about doing a diploma online. Participant Gloria, a married woman from Site 2a with three children is doing a postgraduate midwifery course online. Several of the participants (Brenda, Zawedde, Viola, Sharon) spoke about their use of the internet to try to access educational scholarships or sponsorships for themselves or their family members, with one of them (Brenda), stating that she had been successful.

6.4.3.1 Gender Dynamics

There is no significant gender difference in the percentage of participants using the internet to access new educational opportunities (see Table 6.20 above). However, it was noted that three out of the four female participants who have used the internet for undertaking online education have restrictions in their freedom of movement as a result of their domestic commitments. The other participant is disabled which limits her ability to travel. This suggests that the ability to access education online could be particularly beneficial to women who have limited freedom of movement. There is also the assertion in section 6.2.1. that women may have been denied access to these opportunities in favour of men. This would need to be confirmed through further research.

Table 6.21 “I have used the internet to access new educational opportunities.” Female responses analysed by levels of educational attainment.

	No school or primary school	O'Level or training after O'Level	A'Level or training after A'Level	Tertiary	Grand Total
Agreement or Disagreement	(n= 27)	(n= 64)	(n=51)	(n=47)	(n=189, p <0.000*)
Strongly agree		13%	20%	27%	17%
Agree	26%	28%	33%	35%	32%
Sub-Total Agree	26%	41%	53%	62%	49%
Neither agree or disagree	4%	9%	18%	10%	10%
Disagree	52%	39%	29%	28%	34%
Strongly disagree	19%	11%	0%	0%	6%
Sub-Total Disagree	70%	50%	29%	28%	41%
Grand Total	100%	100%	100%	100%	100%
<p>* - The chi squared test was performed to establish whether there is a relationship between having used the internet to access new educational opportunities with the levels of educational attainment of the respondents (comparing the "sub-total agree" responses with the "sub-total disagree" responses across the education levels. N.B. It wasn't possible to compare neither agree or disagree because the number of responses was too small). See Appendix K and Table K6.21 for further details</p>					

6.4.3.2 What Type of Women and in Which Circumstances?

Whilst the potential of the internet to open up educational opportunities for women is seen as a positive aspect of its use, it appears that those women who have a better education, better IT skills and better English language skills may be better placed to use the internet to access these types of opportunities online. As set out in Table 6.21 (above), the higher your level of educational attainment, the higher the level of agreement that you have used the internet to access these opportunities. For example, out of those who had no schooling or only attended primary school, only 26% had used the internet for this purpose compared to 62% who had tertiary level education. There is a statistical association between the participant's level of education and using the internet to access new educational opportunities. This suggests that those who already have a good education are better placed to access the educational opportunities that the internet affords. On the other hand, the association could suggest that those who have accessed new educational opportunities have increased their levels of educational attainment. The direction of causation would need to be investigated further.

Table 6.22 below sets out the results for the relationship between the perception of IT skills and using the internet to access new educational opportunities. It shows that 56% of those women who perceived themselves as having the right IT skills had used the internet to access educational opportunities compared to only 43% of those who didn't think that their IT skills were good enough. The accessing of this type of information online and of applying for these opportunities online requires higher levels of informational literacy and digital skills which is likely to explain the association between IT skills and accessing these opportunities online.

Table 6.22. “I have used the internet to access new educational opportunities”. Female responses analysed by whether you think that you have the right IT skills to use the internet in the way that you want.

	I do have the right IT skills	I don't have the right IT skills	Grand Total
Agreement or Disagreement	(n= 95)	(n=94)	(n=189, p=0.011*)
Strongly Agree	22%	13%	18%
Agree	34%	30%	32%
Sub-Total Agree	56%	43%	50%
Neither agree or disagree	14%	6%	10%
Disagree	27%	41%	34%
Strongly disagree	3%	10%	6%
Sub-Total Disagree	31%	51%	41%
Grand Total	100%	100%	100%
* - The chi squared test was performed to establish whether there is a relationship between having used the internet to access new educational opportunities with perception of IT skills (comparing the "sub-total agree" responses with the "neither agree or disagree " and "sub-total disagree" responses between those who don't think that they have the right IT skills and those who do.) See Appendix K and Table K6.22 for further details.			

In a similar vein, there is a statistical association between the female participants perception of their English language skills and their use of the internet to access new educational opportunities; if they think that their English language skills are good enough to use the internet the way they want, they are more likely to agree that they are using the internet to access new educational opportunities (see Table 6.23). Once again it seems reasonable that to be able to access, comprehend and respond to complex information online that is often in English, a certain level of English language skills would be required. This fits with the other findings that educational attainment and IT skills are also important for using the internet in this way.

Table 6.23 “I have used the internet to access new educational opportunities”. Female responses analysed by whether they think that their English is good enough to use the internet the way that they want.

	My English is good enough	My English is not good enough	Grand Total
Agreement or Disagreement	(n= 142)	(n=47)	(n=189, p<0.000*)
Strongly Agree	22%	4%	18%
Agree	33%	28%	32%
Sub-Total Agree	55%	32%	50%
Neither agree or disagree	13%	2%	10%
Disagree	29%	51%	34%
Strongly disagree	4%	15%	6%
Sub-Total Disagree	32%	66%	41%
Grand Total	100%	100%	100%
<p>* - The chi squared test was performed to establish whether there is a relationship between having used the internet to access new educational opportunities and perception of English language skills (comparing the "sub-total agree" responses with the "sub-total disagree" responses. N.B. It wasn't possible to compare "neither agree or disagree" because the number of responses was too small) See Appendix K and Table K6.23 for further details</p>			

6.5 Opportunities for Political Empowerment

This section explores the evidence surrounding the use of the internet to gain a greater awareness about politics, world news and rights and entitlements. It examines the frequency of access to this information and the trust in online news and focuses on the gender dynamics surrounding access and trust. Finally the section will examine whether particular types of women in particular circumstances may be accessing this information more than others and the factors that may be influencing trust in world news online.

6.5.1 Increased Awareness About Politics

According to the analysis set out in Table 6.24 (below), 42% of the female respondents to the questionnaire stated that they used the internet to find out about politics on a regular basis (daily, weekly, monthly), although a higher percentage (43%) stated that they had never used it for this purpose. In response to the question which asked respondents about what were their three most common reasons for using the internet, only 3% of the female respondents chose “finding out about politics” (see table 5.1).

Table 6.24 How often do you use the internet to find out about politics? Responses analysed by gender.

Frequency of use	Female	Male	Grand Total
	(n =189)	(n = 147)	(n = 336, p < 0.000*)
Daily	16%	36%	25%
Weekly	20%	16%	18%
Monthly	6%	5%	6%
Sub-total Regularly	42%	57%	49%
Once in a while	15%	17%	16%
Never	43%	26%	35%
Grand Total	100%	100%	100%
* - the chi squared test was used to assess whether there is a relationship between frequency of use of the internet to find out about politics and gender (comparing the female and male responses across all the response options). See Appendix K and Table K6.24 for further details			

At one of the FGDs and at two of the PGEs, several participants³² stated that previously, before their use of the internet, they found it difficult to access and understand political information; where as now they use the internet to find out about politics. Eleven out of the twenty case study participants spoke about their use of the internet to access political information. One of the changes that the internet appears to have brought about is that the source of political information

³² Participants FGDSTB02, PGENAKW03, PGESTB03

has widened. Before people were relying on the traditional forms of media (TV, newspapers, radio) for this type of information where as now the source of information is more diverse. People can read blogs, Facebook pages and upload content themselves and can access information in real time. In some cases this has made it easier for them to understand what is happening politically and therefore increased their interest in politics. For example, Participant PGESTB03 spoke about how she had become more interested in politics because of online blogs:

“Before I never used to understand politics..... but all of a sudden came these groups of young guys on the internet who analyze these issues and you get the depth and they get from way back in the 80s and they analyze issues and it’s so interesting. This is the way I follow politics these days.”

Furthermore, Participant Cathy similarly stated that she was not interested in politics before but now followed online political bloggers so that she became interested. Participant Yvonne also commented how she had become more interested in politics once she started using the internet as she would follow the comments that her contacts were making on Facebook. There is a sense in which politics has become more meaningful to some of the participants because the information is relayed and interpreted by people that the participants can relate to. There is also a feeling amongst some of the participants that the information from these new sources may be more trustworthy than from the traditional media outlets. This is discussed further in section 6.5.2.1.

6.5.2 Increased Awareness of News

In addition to asking about access to information about politics, the questionnaire asked several questions about news. In terms of the frequency of using the internet to access world news, 63% of female respondents stated that they used the internet to find out about world news regularly (daily, weekly, monthly basis) (see Table 6.25 below). When female respondents were asked to choose their top

three reasons for using the internet, 10% chose finding out about world news as one of these reasons (see Table 5.1).

Table 6.25 How often do you use the internet to find out about world news? Responses analysed by gender.

	Female	Male	Grand Total
Frequency of Use	(n=189)	(n=147)	(n =336, p <=0.000)*
Daily	29%	52%	39%
Weekly	28%	22%	25%
Monthly	7%	9%	8%
Sub-Total Regularly	63%	84%	72%
Once in a while	14%	13%	14%
Never	23%	3%	14%
Grand Total	100%	100%	100%
* - the chi squared test was used to assess the relationship between gender and how often people find out about world news (by comparing the female and male responses across all the response options) See Appendix K and Table K6.25 for further details			

The importance of being able to use the internet to find out about information about the world outside Uganda was discussed repeatedly in all of the FGDs and in many of the PGEs³³. It appears that before the internet, many participants would only have had access to localized information about their own immediate surroundings and as a result would have had a local perspective on the world around them. With the introduction of the internet, or some of the participants the boundaries of their knowledge have been expanded. Some of the illustrative comments that the participants have made about the importance of accessing world news are shown in Box 6.8 (below).

³³ PGEKAMMI, PGEKAMW, PGEMAKMI, PGESTB

Box 6.8 Illustrative quotes from Participants about the importance of having access to world news.

" I now (with access to the internet) know more about the outside world"

FGDNAKMI01

"With internet, you can even get world news whereby we can get news on what happens in different countries. Like what is happening in USA and South Korea."

PGEKAMW02.

"(Before the internet).... we were ignorant of what is going on around the world and we didn't know that we didn't know"

An unidentified participant from the Site 3 PGE

According to one of the key informants Michael, the increased access to information about politics and news in general is having an impact on people's awareness of what's happening in their country. According to him,

"In urban areas people are very interested in the news and the governance in their country. They are using social media to find out the news."

6.5.2.1 Trusting the News Online

In terms of the level of trust by the participants, 41% of the female participants said that they trust the online news more than offline whilst 35% said that they trusted it less (see Table 6.26 below).

Based on the analysis of the answers that the respondents gave as to why they trusted the online news more than offline, and on the discussions taking place in the FGDs, PGEs and in the case studies there are many reasons for the increased trust. It is believed that the news online is more detailed than the news that they can find on the radio, TV or in newspapers: this gives them confidence that the news is accurate. It is also perceived to be more up to date which means that there is less time for it to be edited or tampered with. Furthermore, many of the

respondents and participants stated that they have the ability to cross check this information online to ensure that it is correct.

Table 6.26. Do you trust the news that you access online more than the news that you access offline? Responses analysed by gender.

	Female	Male	Grand Total
	(n=189)	(n=147)	(n =336, p=0.246*)
Trust more	41%	50%	45%
Trust it the same	23%	20%	21%
Trust less	35%	29%	32%
I don't know	2%	1%	1%
Grand Total	100%	100%	100%

* - The chi squared test was performed to establish whether there is a relationship between gender and trusting the news more online than offline (comparing the responses, "trust more, "trust it the same" and "trust less")

The source of the news was also important in terms of the levels of trust in the information. Many respondents stated that they trusted international news sites more than locally produced sites because there was less chance of political interference in the news presented. Online, there is also the possibility to ask questions about the news and get a greater understanding and perspective from reading the comments. For example, participant Flavia explains that she looks online at the news websites, checks that several websites are saying the same things and looks at the comments to assess their validity,

“I like several pages including the BBC page, I like these different pages so if I go through the same pages and I see they are giving the same information.... then am more convinced that the information is true because they cannot all post the same thing which is false.... For the radio and the newspaper its one way, they are the ones who write and they don't get our feedback or other people's opinions, but for the internet they post and more views are given about it.”

On the other hand, 35% of the female respondents stated that they trusted the online news less. From the analysis of the data, there were concerns about the prevalence of “fake news” online, the fact that anyone could post information online without the same accountability as exists with the traditional media corporations.

6.5.3 Increased Awareness of Rights and Entitlements

47% of female respondents of the questionnaire are using the internet to find out about their rights and entitlements (see Table 6.27 below). At three of the FGDs and PGEs (Site 3 FGD and PGE, Site 2 womens’ PGE), the use of the internet for searching for information about rights and entitlements was discussed. Participant FGDSTB02 spoke about using the internet to find out about land rights and in the women’s PGE at Site 2 the participants stated that they had gained awareness of the rights of children, women and people with disabilities from the internet.

Table 6.27 How often do you use the internet to find information about your rights and entitlements? Analysed by gender.

	Female	Male	Grand Total
	(n =188)	(n = 147)	(n = 335, p = 0.011*)
Daily	6%	10%	8%
Weekly	14%	13%	13%
Monthly	5%	12%	8%
Sub-Total Regularly	25%	35%	29%
Once in a while	22%	29%	25%
Never	53%	36%	45%
Grand Total	100%	100%	100%
* - The chi squared test was used to establish whether there was a relationship between gender and the frequency of using the internet to find out about your rights and entitlements (comparing female and male responses across all response options). See Appendix K and Table K6.27 for further details.			

It appears that before the internet, it was very difficult to find out about this type of information. As discussed in Chapter 3, the government has put the constitution online and many NGO websites contain information about people's rights.

It was interesting to find that, in 7/21 case studies³⁴, the participants discussed how they had used the internet to find information about their rights. In one of the case studies, Participant Rashida talked about finding out about employment rights and in two cases the Participants (Nancy and Maria) described how they used the internet to find out about children's rights. In all but one of the seven case studies mentioned above, the participants stated that they had accessed information about women's rights online. On two occasions women discussed how they had used the internet to find out about their rights in terms of domestic violence and abuse by men. Box 6.9 (below) provides some illustrative quotes from participants about how they are using the internet to find out about their rights and entitlements. Despite the fact that the female participants are using the internet to look for information about their rights and entitlements, there are no concrete examples of whether and how the access to this information has led to an actual change in the women's lives. This would have to be the subject of further research.

³⁴ Participants Flavia, Nancy, Rashida, Zawedde, Maria, Sharon and Gloria

Box 6.9 Illustrative quotes from Participants on using the internet to find out about rights and entitlements.

“We have been accessing rights on the net. It has eased everything for us but also we have known rights that we have. For example, we have read much from the outside world on the internet regarding female genital mutilation which we were holding onto thinking it is good cultural practice to help women but instead it causes trouble.”

Participant PGENAKW02

...“way back we could not access the constitution but these days you go online and access the constitution and read any lines you want We are able to access different rights.”

Participant Viola from the Site 2 Women’s PGE

*“ I always look for the rights of the woman.....actually I always look on what the women can do ...and nowadays ...the rights have changed, *you have a right to do everything you want and we have that voice.*”*

Participant Flavia from Site 1

“(Before) women were suppressed in traditional African setting. Women were not valued, they were not supposed to engage in something that was public, they were supposed to stay in the kitchen and concentrate in the welfare of men and children, but now with access to information they have understood their rights, and that has built their self confidence and esteem and they are able to present issues in public.”

Participant Gloria from the Site 2

“(I use the internet to look for)... women’s rights, especially we, the married ones. We might not know what to do in case of any problems in your house so in most cases we end up being mistreated. You might not know what to do. You find like a husband has done something, he has, he might beat you, he might do something hurting you, you might sit back without knowing what to do, where to go, whom to start from. Because us, now these days our police people are no longer useful to us, ...so most cases you might sit then and ask yourself what do I do?.”

Participant Sharon from Site 1

6.5.4 Gender Dynamics

6.5.4.1 Gender Differences

There are significant gender differences in the frequency of accessing this type of information online. The male participants are accessing information about politics, world news and rights and entitlements more frequently online than the female participants. The summary of these gender differences is set out in Table 6.28 (below).

Table 6.28 Summary of the gender differences in accessing certain types of information on a regular basis (daily, weekly, monthly).

Types of information accessed online	% age of Females	% age of Males	P Value	Table
	(n=189)	(n=147)		
Politics	47%	57%	<0.000	6.24
World news	63%	84%	<0.000	6.25
Rights and entitlements	25%	35%	0.011	6.27

A most interesting question is why are there these gender difference in using the internet to access political information, world news and information about ones' rights and entitlements?

6.5.4.1.1 Gendered Interests

A plausible explanation for these gender differences online would be that they are reflections of gendered interests offline. As KI Dr Bosco suggests,

“What you look for on the internet is informed by your gendered interests”.

It has been well established in the literature that gendered divisions of labour act to confine women's identity to playing domestic roles and to keeping them away from participation in politics, for example (Stevens, 2007). In Uganda, the findings from this research from other research confirms how gender norms prevent

women's participation in politics (Ntawubona, 2013), and constrain women's interest in the news both offline and online (Nsibirano and Kabonesa, 2015).

6.5.4.1.2 Lower Levels of Education and English Language Skills

Another aspect to these gendered interests online as well as offline is that the female participants have slightly lower levels of educational attainment (see Table 4.2) and perceived English language skills compared to men (see Table 5.18). This may prevent them from being able to access and understand this type of complex information that is often written in English. World news online is often presented in English on international media sites and political information, for example about the constitution, is in English online and would require a high level of informational and language skills to be able to find and interpret this information. As KI Ambrose points out,

“When you are not educated, you can't read and you can't access the information, politics is about accessing the information. Women are not into reading as they are not so well educated and they can't read in English, so they can't find out the information. They may want to but they can't.”

The data analysis revealed that there is an association between one's perception of English language skills and the frequency of accessing either world news or rights and entitlements (see Tables 6.29 and 6.30 below). Additionally, there is a relationship between educational attainment and the frequency of the use of the internet to access information about one's rights and entitlement (see Table 6.31 below).

Table 6.29 How often do you use the internet to find out about world news? Female responses analysed by perception of English language.

	My English is good enough	My English is not good enough	Grand Total
	(n =142)	(n =47)	(n =189, p = 0.033*)
Daily	30%	23%	29%
Weekly	29%	23%	28%
Monthly	6%	9%	7%
Sub-total regularly	65%	55%	63%
Once in a while	15%	11%	14%
Never	19%	34%	23%
Grand Total	100%	100%	100%

* - The chi squared test was performed by comparing those who believed their English was good enough to use the internet in the way that they wanted and those who didn't believe that their English language skills were good enough in terms of their response as to whether they used the internet for accessing world news (i.e. frequency of use responses: daily, weekly, monthly, once in a while) or whether they didn't use in at all (frequency of use response: never). See Appendix K and Table K6.29 for further details

Table 6.30 How often do you use the internet to find out about your rights and entitlements? Female responses analysed by perception of English language skills.

	My English is good enough	My English is not good enough	Grand Total
	(n =141)	(n =47)	(n =188, p=0.020)*
Daily	7%	4%	6%
Weekly	15%	9%	14%
Monthly	5%	4%	5%
Sub-Total regularly	27%	17%	25%
Once in a while	25%	13%	22%
Never	46%	70%	52%
Grand Total	100%	100%	100%

* - The chi squared test was performed by comparing those who believed their English was good enough to use the internet in the way that they wanted and those who didn't believe that their English language skills were good enough in terms of their response as to the frequency of using the internet for accessing information about their rights and entitlements (i.e. frequency of use responses: regularly, once in a while or never).

Table 6.31 How often do you use the internet to find out about your rights and entitlements? Female responses analysed by educational attainment.

	No school or primary school	O'Level or training after O'Level	A'Level or training after A'Level	Tertiary	Grand Total
	(n=27)	(n=64)	(n=51)	(n=47)	(n = 189, p =0.011*)
Daily	4%	5%	10%	6%	6%
Weekly	11%	11%	16%	17%	14%
Monthly	0%	2%	4%	11%	5%
Sub-Total Regularly	15%	17%	29%	34%	25%
Don't know	11%	21%	27%	26%	22%
Once in a while	74%	60%	43%	40%	52%
Never	0%	2%	0%	0%	1%
Grand Total	100%	100%	100%	100%	100%
<p>* - The chi squared test was performed to establish whether there is a relationship between different levels of educational attainment and whether the respondents had used the internet to find out about their rights and entitlements (frequency of use responses: daily, weekly, monthly, once in a while) or had never used it for this purpose. See Appendix K and Table K6.31 for further details</p>					

6.5.4.1.3 Blurring the Boundaries of Traditional Gendered Interests?

It could be argued that the boundaries of these traditional gendered interests could be blurring through the use of the internet. First of all, traditionally it was men who had access to and control over political information and news. They were the ones who had a greater freedom to travel and to interact with others to gain news and also more recently had control over the ICT device (for example,

the radio) through which this type of information is accessed. As the KI Brian explains, until recently it was the husband who controlled access to the news,

“Before the (internet), the radio was for the husband to listen to news.... You could not listen to the radio unless it was news time. When they had their meals, is when he is listening. Men were always the ones to buy the newspapers.”

Participant PGESTB02 confirms how the man in the family would control the access to the news,

“(Before the internet) ...the household head controlled the radio, that is the husband/father and it was not on all the time, they would just take it to the bedroom, when it’s time for news it’s brought in the sitting room.....”

It is possible that women were traditionally less likely to have an interest in the news because of their lack of access and particularly control over the means through which they could access it. If this were the case, it would suggest that their interest in the news and politics may well be increasing as they now have access and control over the means of access to this type of information on their own mobile phones.

Furthermore, there were also comments by some of the participants about how the source of news had changed and that this had made the news more accessible to them. Section 6.5.1 (above) reveals that many of the participants get this type of information from blogs, from social media, and from international media outlets. It is well known that in the traditional media, women are less represented than men in terms of the news stories covered and in terms of the reporters (GMMP, 2015), so a move away from these traditional sources of news, may well be changing the gender dynamics around interest in the news and politics.

One of the KIs Dr Bosco also suggests that the boundaries surrounding these areas of gendered interest may well be blurring because of the use of the internet;

through greater communication online, you may be exposed to information that may be outside your traditional gendered “interests”:

“(Online) it is difficult to isolate what you only want to see. For example, even on Facebook you might have some news but in a less “professional” way. You are seeing (online) what you are not seeing traditionally (offline) and so that breaks boundaries between men and women .“

According to him, the use of the internet may be challenging traditional social norms as he goes on to say,

“But outside the internet we are still traditionally socialized and that still impacts on us. We carry both worlds. There is a crisis of change. You have the part of the global world with you but you are also pulled by the traditional socialization.”

The lack of evidence as to the extent to which women were accessing news and political information before the internet, makes it difficult to substantiate these ideas around the blurring of these gendered boundaries. However, the research does show that younger women are more likely to be accessing political information online. Table 6.32 (below) shows that age is associated with the frequency of accessing political information online. This may suggest that some of these shifts in boundaries between women and men’s interests may already be occurring. These interesting ideas about the use of the internet and its potential to influence gendered interests will be explored in more detail in the discussion chapter.

**Table 6.32 How often do you use the internet to find out about politics?
Female responses analysed by age.**

	Age of Female Respondents		
	18 to 30 Years Old	Over 31 Years Old	Grand Total
	(n =130)	(n =58)	(n = 188, p =0.037)*
Daily	16%	16%	16%
Weekly	23%	12%	20%
Monthly	8%	3%	6%
Sub-Total Regularly	47%	31%	42%
Once in a while	16%	12%	15%
Never	37%	57%	43%
Grand Total	100%	100%	100%
* - The chi squared test was performed to establish whether there is a relationship between age and frequency of use of the internet to find out about politics (comparing the frequency of use responses:" Sub-Total Regularly", "once in a while" with "never" used it for this purpose.) See Appendix K and Table K6.32 for further details			

6.5.5 What Type of Women and in Which Circumstances?

The type of woman who uses the internet to find out about rights and entitlements, world news or politics, is discussed in the gender differences section 6.5.4.1, which reports that age, educational attainment and the perception of one's English language appear to be factors influencing the frequency with which the female respondents access information about politics, world news and rights and entitlements. In addition, Table 6.33 (below), shows there is a statistical association between using the internet to find out about politics and perception of whether your IT skills are good enough to use the internet in the way that you want. According to KI Michael this may be because some of the political

information in Uganda is spread through social media platforms such as twitter or through blogs which people with only basic IT skills may find hard to access.

Table 6.33 How often do you use the internet to find out about politics. Female responses analysed by perception of IT skills.

	My IT skills are good enough	My IT skills are not good enough	Grand Total
	(n =95)	(n =94)	(n = 189, p =0.023)*
Daily	17%	16%	16%
Weekly	20%	19%	20%
Monthly	8%	4%	6%
Sub-Total Regularly	45%	39%	42%
Once in a while	20%	10%	15%
Never	35%	51%	43%
Grand Total	100%	100%	100%
* - The chi squared test was performed to establish whether there is a relationship between perception of IT skills being good enough and whether the respondents had used the internet to find out about politics (comparing the frequency of use responses:" daily, weekly, monthly, once in a while" with "never" used it for this purpose.)			

6.6 Opportunities for Psychological Empowerment

The fact that the participants now have access to a wide variety of information that was previously inaccessible, has implications for the recipients from a psychological perspective. As set out in the sections above, the use of the internet is providing the participants with increased access to information about what's happening outside their immediate environment in respect of world news, domestic politics, livelihood information etc. The discussions with some of the participants at the FGDs and the PGEs, confirmed an increased awareness of the world around them, but also that the internet has revealed a heightened sense of concern over their previous lack of knowledge. As an unidentified participant from the Site 3 PGE explains,

“(Before).... we were ignorant of what is going on around the world and we didn't know that we didn't know”

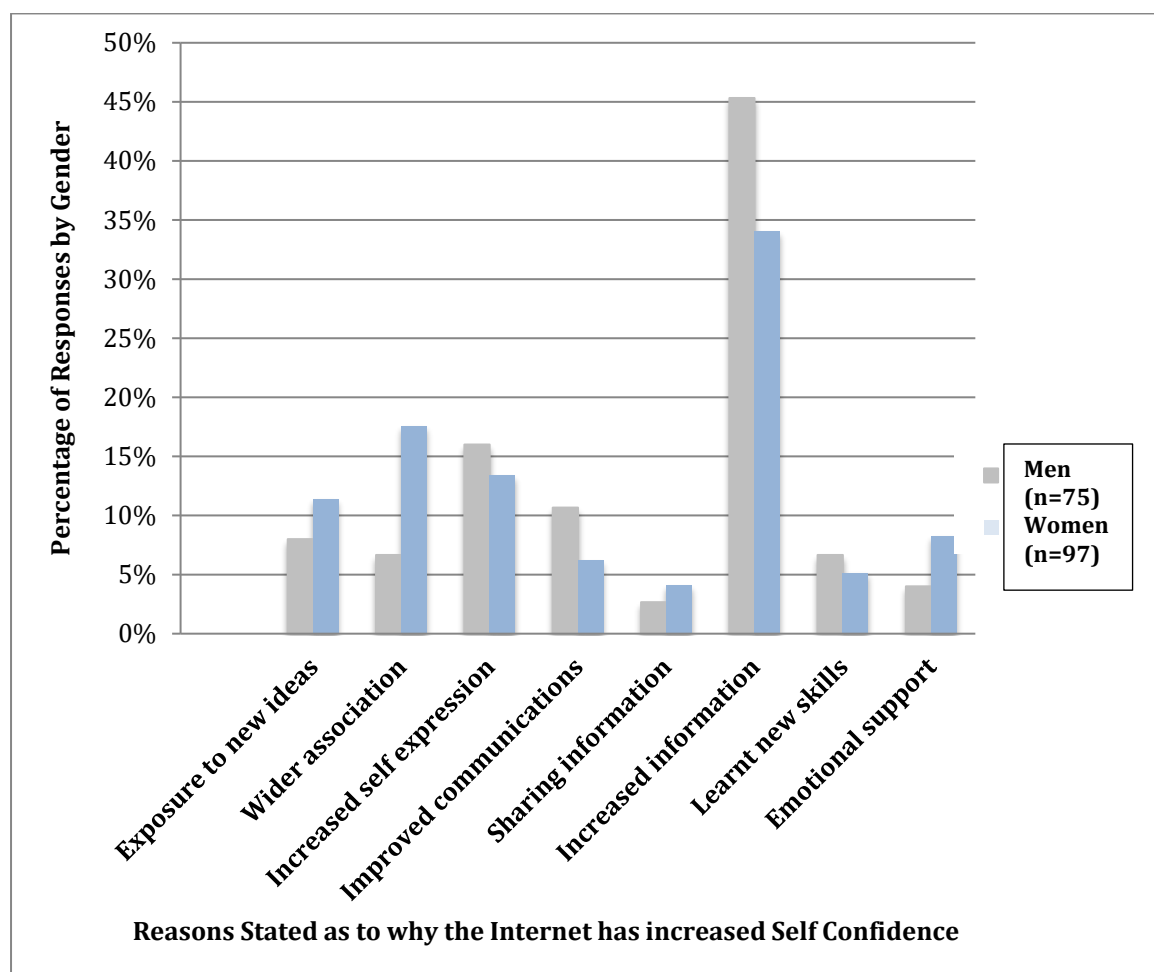
Based on the discussions at the FGDs and the PGEs and in response to the sense that the use of the internet was facilitating psychological change amongst the participants, a question was included in the questionnaire about whether the use of the internet had changed the respondents' self confidence. 92% of the female respondents believe that the internet had increased their self confidence (see Table 6.34 below).

Table 6.34 How has the internet changed your self confidence? Responses analysed by gender.

Change in Self Confidence	Female	Male	Grand Total
	(n=189)	(n=147)	(n=336)
It has increased it	92%	94%	92%
There's been no change	7%	6%	7%
It has reduced it	1%	0%	0%
I don't know	1%	0%	1%
Grand Total	100%	100%	100%

The respondents were then asked why it had increased their self-confidence and the 162 responses (97 female respondents and 75 male respondents) were analysed. A graph summarising the different reasons stated by gender is shown in Figure 6.2 (below). The reasons vary but over a third of the female responses are related to their increased access to information. They are confident because they feel more knowledgeable.

Figure 6.2 Gender Analysis of Reasons why the Use of the Internet has Increased the Self Confidence of the Respondents.



Many of the respondents also stated that the ability for them to find out about the world around had made them feel more self-confident. Furthermore, the potential to access new ideas was stated as a common reason why their self-confidence increased.

Box 6.10 Illustrative quotes from the questionnaire, Participants and a Key Informant showing how the internet has increased their self-confidence.

Reasons related to increased knowledge

From the questionnaires:

The internet has increased by self confidence because

- I have learnt what I didn't know (JOVNAKT106)-
- I've learnt a lot from the internet that I couldn't have learnt offline (JOVKAM202)
- Sometimes I have information but I doubt myself but when I Google and compare with what I know, I get confident (JASNAK09)
- I can look for information online that I can't get offline (SUSNAKPTC02)
- I know more than I did before and I can share my views more confidently (AMASTB05).

“Before, without internet and without ...some people going to school, we were ignorant. ... (now with the internet)...Someone goes into the community, in a community meetingshe's informed. She knows something. “

Participant Viola

Reasons related to more information about the world outside their own

From the questionnaires:

The internet has increased by self confidence because

- I get to learn what is happening in the world (JOVKAM206)
- (Before) I never had knowledge about how the world would move, (now) at least when I get news, I know what's going on (JASNAK09)
- You feel like you are in a new world (JASNAKPTC02)

Reasons related to having access to more ideas

From Questionnaires:

The internet has increased by self confidence because

- (I) learn new skills and ideas (SUSNAK06)
- (It) helped me be vibrant and changed my attitude (SUSNAK13).
- (It) increases awareness and can find information (AMANAK05).

“In Kampala, everyone is using the internet for research, for new ideas. That gives people confidence as it gives them information. It is empowering for people.”

KI Susan

Some examples of the comments from the participants about the reasons for their elevated self confidence, which are related to increased access to information, are set out in Box 6.10 (above). As KI Michael explained, before the advent of the internet, people's knowledge was very limited to the information that they could access within their local area and they would understand everything from a local perspective. According to him, with the use of internet the boundaries of "what you know" have disappeared and this can have a profound change on your outlook and identity. He also suggests that information is an asset that provides a type of increased social status that in turn increases their confidence,

"You have collected information and it may not be of economic use to you but this information has social benefit, it may give you increased status within the community, It may be someone calling a women about agricultural information, for example. Previously that woman wouldn't have had any information, no-one would have asked her about information; it builds empowerment. The social aspect is very strong, it builds networks within the community and beyond."

The concept of social capital being enhanced through internet use will be examined in more detail in Chapter 7.. Although in this research "learning new skills" online has been included within the enabler of providing "increased access to information", the bar chart above separates "learning new skills" out when analyzing out the reasons for the participants increased self confidence. It shows that 5% of female participants said that their confidence had increased because they had learnt new skills online. Participant Maureen, a hairdresser and craft-maker at Site 1 showed the author some of the crafts that she had learnt to make online and spoke about gaining self-confidence, in terms of increased agency from being able to have an idea and then be able to find out for herself how to execute it,

"And then I went to Pinterest and search for it, how I can do it. So I got sort of self-confidence that I can think of something and do it. Whatever thing you think of and (want to) put it in reality, ... it's there."

6.7 Disempowering Consequences of the Increased Provision of Information

6.7.1 False Information

One of consequences of the provision of increased access to information that the internet affords, and the reduction of controls over who can produce content and disseminate information, is that the participants are faced online with a variety of information from different sources. This exposes the participants to information that may be untrue, either intentionally or unintentionally, and requires them to make decisions as to what to trust and who to believe. Although the research has shown that some of the participants are using the internet to verify the truth of the information they receive, it has also revealed that some the participants are unsure of who to trust online, now that the traditional gate-keepers of information, such as the traditional mass media, have diminished.

Following on from four comments at the FGDs and PGEs about false information and the uncertainty about trusting information online, the questionnaire asked whether the participants had ever experienced “false information” online. 51% of female respondents answered in the affirmative (see Table 6.35 below) and eight of the case study participants gave examples about false information online.

It is evident that some people are recognizing that the information that they access online may not be true. On the other hand, it is possibly more worrying that almost half of all the respondents have not experienced false information online. This raises the possibility that some of them may be unaware that they could have been exposed to misinformation online.

Table 6.35 Have you ever experienced false information (misinformation) when using the internet? Responses analysed by gender.

Response	Female	Male	Grand Total
	(n =189)	(n = 147)	(n = 336, p =0.004*)
Yes	51%	67%	58%
No	49%	33%	42%
Grand Total	100%	100%	100%
<p>* - The chi squared test was performed to establish whether there is a relationship between having experienced false information and gender. It was calculated by comparing the responses to "yes" and "no" by gender. See Appendix K and Table K6.35 for further details</p>			

6.7.2 Gender Dynamics

As shown in Table 6.35 (above), there is a statistical relationship between gender and whether one thinks that one has experienced false information online ($p= 0.004$). Only 51% of the female participants stated that they had experienced this compared with 67% of the male participants. There are two possible aspects to this. One is that women are less exposed than men to false information online, maybe because of their gendered interests such that they are not looking at the type of information most associated with false information, for example, political news. One of the KIs Wilber gave this explanation when asked about the gender difference in experiencing false information online,

“I guess that is also understandable.....I think like we said males are more active using internet reading news, reading about politics, about sports about entertainment, news, celebrities and so on than females. Females usually use the internet for social media, social networking, Facebook and WhatsApp.”

Another explanation of this gender difference is that women are somehow less able to determine that the online information that they access is false; assuming women and men are being exposed to the same levels of false information, it's just that for some reason women are unable to recognise it. If this is the case, it's important to try to understand why women are less able to recognise it as it implies that women may be more susceptible to manipulation through misinformation.

Some of the KIs suggested that it may be due to lower levels of education. As KI Daniel explains,

“Women have lower levels of education, they can't read as much so they don't know what is true and what is false. They are also less exposed as they often come straight from the village. They believe that all information on the internet is true.”

KI Charles, the IT teacher at the secondary school, thinks that it's because the female pupils use the internet less than the male pupils...

“girls don’t access the internet so oftenthere is no way a girl who doesn’t use internet regularly would realise that there is hoax on the internet.”

The analysis of the data, as shown in the section directly below, reveals that whilst educational attainment and frequency of use of the internet *are* factors that are associated with whether you have experienced false information online, there is only a small difference in education levels and frequency of use levels between women and men overall, so this cannot explain the overall gender difference. More research in this area is needed to better understand these differences.

Self-perception of English language skills, may be linked with the detection of false information.. The data in Table 6.36 (below) shows there is a statistical association ($p = 0.032$) between the recognition of false information online and whether you think that you have good enough English language skills to use the internet how you want. Whilst only 38% of participants who identified that they did not have good enough English stated that they had experienced false information online, 56% of those who stated that their English was good enough, had experienced false information. Moreover, there is a statistical association between gender and the perception of English language skills (see section 5.6.3.4.3) and so this could also explain the gender difference about recognition of false information.

In summary, it appears that gendered interests as well as educational attainment, frequency of use and English language skills are all possible factors that are influencing the gender differences in the recognition of false information.

Table 6.36 Have you ever experienced false information (misinformation) when using the internet? Female responses analysed by whether you think that your English is good enough to use the internet how you want.

	My English is good enough	My English is not good enough	Grand Total
Response	(n = 142)	(n=47)	(n=189, p =0.032*)
Yes	56%	38%	52%

* - The chi squared test was performed to establish whether there is a relationship between experiencing false information and whether you perceive your English to be good enough. It was calculated by comparing the responses to "yes" and "no" by the responses to whether your English is good enough to use the internet in the way that you want. See Appendix K and Table K6.36a and Table K6.36b for further details.

6.7.3 What Type of Women and in Which Circumstances?

As stated above, there is an association between the perception of good English language skills and the detection of false information online. This was reinforced by the findings shown in Table 6.37 (below), that the higher the level of educational attainment of all participants, then the higher the percentage who have experienced false information online. There is a statistical association for all participants with $p = 0.012$, but if the responses of only female participants are examined there is no statistical association (see Table 6.38 below). This relationship is understandable as with increased education often comes increased informational literacy, that is, the ability to think critically and make balanced judgements about the information that we find and use.

Table 6.37 Have you ever experienced false information (misinformation) when using the internet? All responses analysed educational attainment.

	No school or primary school	O'Level or training after O'Level	A'Level or training after A'Level	Tertiary	Grand Total
Response	(n= 44)	(n=107)	(n=96)	(n =89)	(n=336, p = 0.012*)
Yes	39%	56%	63%	67%	58%
* - The chi squared test was performed to establish whether there is a relationship between you experiencing false information online and your educational attainment. It was calculated by comparing the responses to "yes" and "no" and educational attainment. See Appendix K and Table K6.37 for further details					

Table 6.38 Have you ever experienced false information (misinformation) when using the internet? Female responses analysed educational attainment.

	No school or primary school	O'Level or training after O'Level	A'Level or training after A'Level	Tertiary	Grand Total
Response	(n= 27)	(n=64)	(n=51)	(n =47)	(n=189, p = 0.368*)
Yes	37%	52%	55%	57%	52%
* - The chi squared test was performed to establish whether there is a relationship between you experiencing false information online and your educational attainment. It was calculated by comparing the responses to "yes" and "no" and educational attainment.					

Women who use the internet more frequently are also more likely to have experienced false information. As shown in Table 6.38 (below), 63% of women who stated that they used the internet all the time said that they had experienced false information, compared to 37% of those women who used it less than daily. There is a statistical association. This relationship makes sense on several levels. On the one hand, the more you are online and the more information that you come across, the more likely you are to come across false information. On other hand, the greater familiarity you have with being online and accessing and interpreting information, the greater skills you acquire in terms of assessing the online information to be false or true.

Table 6.39 Have you ever experienced false information (misinformation) when using the internet? Female responses analysed by frequency of use of the internet.

	All of the time	Daily	Less than Daily	Grand Total
	(n=27)	(n=113)	(n=48)	(n=188, p =0.027*)
Yes	63%	56%	37%	52%

* - The chi squared test was performed to establish whether there is a relationship between you experiencing false information online and the frequency of your use of the internet. It was calculated by comparing the responses to "yes" and "no" and educational attainment. See Appendix K and Table K6.39 for further details

6.8 Emerging Findings

In today's world, information is a powerful resource and the control over it has become one of the new battlegrounds in the fight for power and influence. This final section assesses, from the results set out in the chapter, whether and how the use of the internet is empowering the participants through their access to information.

First of all, this section draws out the key points about how the use of the internet is challenging controls over access to information. It then assesses the opportunities to empower from an economic, social, political and psychological perspective using the "power to, power within, power with and challenge power over" framework for the power analysis. It then considers the disempowering consequences of this increased access to information. Finally, it summarises the gender dynamics that are influencing this empowerment and determines whether the use of the internet in this way is benefitting certain women over others.

6.8.1 Challenging Power Over Access to Information

This research has shown that fundamental changes have occurred in the power dynamics surrounding how the participants access information. With the internet, they can search information for themselves without the need for intermediaries. In principle, they can access the information that they want and not what other people determine that they need. They have a means of verifying the information that they receive online and offline and can check against different online sources to triangulate and work out whether information is valid. The searching for information can also be done privately or anonymously which allows the participants to search for "taboo" information or to access information that has previously been hidden to them. These changes have been particularly profound for the female participants since there is evidence that the use of the internet has challenged patriarchal control over information. Previously, for some women, their male partners or fathers acted as intermediaries in providing them with information. For some women, this was partly because of their lack of mobility to seek information but also as a result of gender norms asserting men's role as the "gatekeepers" of information. Men also had physical control over the means of access to information

such as the radio or the TV which also could have conveyed a sense that men were the purveyors of information and that they know more.

6.8.2 What are the Opportunities for the Use of the Internet to Empower Women?

6.8.2.1 Economic Empowerment

Information is a powerful resource and it is evident from this research that through using the internet the participants have access to information that they could not previously access. This provides some of them with the *power to* search for the information that they want, with the additional benefit of the information found online being more up to date, more detailed and possibly more reliable than the information that they could find offline. It has been shown that 79% of the female participants use the internet to search for livelihood information and in particular market information, agricultural information and information that could support their micro-entrepreneurial activities (Table 6.3). The access to more information has empowered them in the sense that it has enabled them to make more informed decisions about their livelihoods; 74% of the female participants agreed with this (Table 6.4). Furthermore, 81% of the female respondents to the questionnaire stated that they had used the internet to learn new skills, with many of them using it to gain new livelihood skills (Table 6.5). This was the second highest reason that the female participants stated that they were using the internet. Platforms such as Facebook, Pinterest and YouTube offer a visual way to learn a new skill through photographs and videos. Prior to the internet the ability to learn such practical skills would have been difficult; the internet thus offers the possibility of increasing the skills base of the participants and hence has the potential to improve their livelihoods and increase their resources.

6.8.2.2 Social Empowerment

There is evidence that the use of the internet is a means by which the participants now have the *power to* search for health and nutritional information. Table 6.12 and Table 6.18 show that 59% and 47% of the female participants use the internet to access health and nutritional information respectively on a regular basis. The increased access to this information is also supporting the female participants to make better decisions around their health and their nutrition with 80% and 69% of them agreeing that their use of the

internet had helped them make more informed decisions about healthcare and nutrition for themselves and their families (see Table 6.13 and Table 6.19). This is important for the women in a context where the cost of travelling to get medical care and accessing the consultations is high and in some cases the trust in the available healthcare professionals is low.

This research highlights how the use of the internet for accessing health information is particularly valued by women with 23% of the female participants choosing health as a top three reason for using the internet compared to only 12% of men (Table 5.1). Anonymity online facilitates access to any desired information, including “taboo” or sensitive information that may be difficult or dangerous to obtain online. This research provided examples of participants using the internet to find out about sexual and reproductive health, for example, which may be more difficult to obtain offline because of gendered constraints which in some cases prevent women being able to access this information without their husbands consent (see section 6.2.5). In this way, the use of the internet is shown to be a way that the participants can *challenge the power exerted over* them by men. This information is important as it has the potential to increase women’s ability to protect themselves against unwanted pregnancy or STDs in a country that has a high HIV transmission rate and one of the highest teenage pregnancy rates in SSA (Ochen et al, 2019). Although the internet cannot provide the actual family planning services per se at least it can provide valuable information on these issues to women anonymously and within their own homes and can suggest pathways to access these services.

It also allows the participants to take more control over the information that they have access to, by enabling them to verify the information by checking different sources and cross referencing between them. This change in control over information is having profound consequences for women. For example, some of the participants even spoke about having better nutrition because of finding out online that the ideas that were promulgated by men, about certain highly nutritious foods being bad for women, were untrue (see section 6.4.1.3).

On the other hand, the importance of skills and competencies to be able to search for information, to comprehend it and make effective decision-making based on it were brought out by the research. In the mini case study, in Box 6.6 (above), Participant Constance appears not to have the English language skills to be able to search for the relevant information and consequently spent several years misdiagnosing her son's epilepsy condition online in part as a result. The participants were more likely to trust health information online rather than offline, but some of them were unable to articulate why they trusted it more online (Table 6.14). The mini case study in Box 6.6 warns that serious health implications can occur if online health information is trusted, without the tools and skills to be able to verify it. This is an interesting area that requires further research.

From the quantitative and the qualitative research, it appears that 50% of the female respondents have used the internet to access new educational opportunities (Table 6.20). Raising the levels of education of women is an important contributory factor in the process of empowerment and addressing power imbalances, particularly in a country like Uganda where men are more educated than women, particularly in terms of educational attainment above primary school (UBOS, 2012).

6.8.2.3 Political Empowerment

This research reveals that the use of the internet is providing the participants with the *power to* search for information about politics, world news and their rights and entitlements. The high percentage of female participants using the internet for this reason was unexpected, with 42% accessing political information (Table 6.24), 63% world news (Table 6.25) and 25% information about their rights and entitlements on a regular basis (Table 6.27). . It appears from the testimonies of the participants, that prior to the internet, many of the participants were not so interested in politics and were not able to access information about their rights and entitlements. It appears that the internet has helped provide them access to this information in new ways that they can engage with.

It is difficult to *challenge power over* unless you understand how that power is operating and the information that the participants are accessing online may help to bring about

this understanding. Almost half (47%) of the female participants are searching for information about their rights and entitlements online and they gave examples of land rights, employment rights, disability rights and women's rights all of which would have been difficult and expensive to find out about offline (Table 6.27). Furthermore, the evidence suggests that the female participants are finding out about their rights and entitlements that could bring about shifts in gender power dynamics. Some of the case study participants (6/20) are using the internet to find out about women's rights and gender issues such as gender based violence (GBV) and female genital mutilation (FGM); this suggests that the use of the internet is helping to raise awareness amongst the participants which is a necessary step towards the goal of gender equality.

Although it appears that the internet is increasing awareness amongst some of the participants, women are significantly less likely to access political information, world news and information about rights and entitlements online compared to men (Table 6.28). In part this may be a reflection of gendered interests offline whereby women are less interested in politics and news because of gender norms that dictate gender roles or because of men's control over access to this type of information. From the quantitative analysis, there is a statistical association between English language skills and the frequency of accessing world news and rights and entitlements online. Since the female participants have a lower perception of their English language skills (Table 5.18), this could also partly explain the difference. Furthermore, lower IT skills may be influencing female participants' ability to access political information, with women having a lower perception of these skills compared to men. Finally, lower educational attainment is associated with accessing information about rights and entitlements.

On the other hand, there may be evidence that the use of the internet may be helping to shift and blur the boundaries surrounding these "gendered interests" around politics and news. As discussed above, the fact that men no longer have as much control over access to this type of information may enable women's interest in these areas to develop. Some of the female participants have also become more interested in politics as a result of the alternative sources and formats of this type of information such as blogs, rather than the traditional news broadcasts on the TV or the radio. Moreover, it is difficult to isolate your information requirements online, so there is the possibility of getting exposed to news

and politics online without necessarily searching for it and these spillovers may stimulate awareness and even interest. The shift in these boundaries may be being evidenced by the fact that there is an association between age and searching for political information online with female respondents under 30 years old much more likely to do this than respondents over 30 (Table 6.32).

6.8.2.4 Psychological Empowerment

The participants' use of the internet has resulted in some of them having an increased awareness of what is happening in the wider world through access to world news and political information, for example. As one of the participants stated, the use of the internet,

“makes you feel like you're in a new world”.

Having awareness of one-self within one's surroundings and within the wider context is an important stepping-stone on the road to empowerment as it could increase in their *power within*. According to the Participants (Box 6.1), before the use of the internet, people's knowledge was very limited and most of the information that they would receive would be from a local perspective. However, through the use of the internet, for some participants the boundaries of what they know have changed. This could be an important step towards the participants gaining an increase in critical consciousness as they recognize their own situation within a wider context.

As people's knowledge and access to information and ideas expands there is evidence that they become more self-confident, thus also increasing their *power within*. 92% of female respondents to the questionnaire said that the internet had increased their self confidence (Table 6.34), with a third stating that their new access to information and knowledge was the main reason for this increase (Figure 6.2). Exposure to new ideas was another reason, with over 10% of the female respondents stating this to be the case (Figure 6.2). Given the background of women not having had access to information and not having this awareness of the world around them, it is hardly surprising that this has given them additional confidence. It is also not surprising that the fact that some of the

participants can search for information and learn new skills for themselves is bringing about an increased sense of agency in some women.

6.8.3 Disempowering Consequences of Increased Access to Information

As discussed in section 6.7.1 above, in the same way that information can be more easily accessed and disseminated online, false information or misinformation and can be easily created and spread online. This raises the possibility that the participants could be more easily manipulated into behaving in certain ways and this could allow those with power to have greater rather than less control over them. Furthermore, there are serious gender considerations around the ability to judge the validity of information. Only 51% of the female participants stated that they had experienced false information online compared to 67% of male participants and there is a very strong statistical association ($p = 0.004$) (Table 6.35). . It is unclear from the research why exactly there is this significant gender difference but it appears that educational attainment, frequency of use and English language skills may all be influencing the participants' ability to recognize false information. The female participants have a much lower perception of their English language skills compared to men, so this could partly explain the gender difference; it makes sense that the female participants with poor English may be less able to judge the validity of information particularly when a lot of the information found online is in English. On the other hand, it may be that the female participants are using the internet less regularly to search for the types of information, for example, news that is more likely to be "fake".

6.8.4 Gender Dynamics in Respect of the Opportunities for Empowerment

Gender dynamics appear to be at play in several ways in terms of the opportunities that the internet affords through the provision of information. There is evidence that access to livelihood information could be benefitting women in particular since they are more likely to be accessing livelihood information online on a regular basis compared to the male participants (Table 6.3). There is evidence that female micro-entrepreneurs are finding the use of the internet for accessing information about their livelihoods and using the internet to learn new livelihood skills particularly useful (Table 6.5). Many of them chose to earn a living from micro-entrepreneurial activities such as tailoring, baking and hairdressing that they can do from home whilst undertaking childcare. Previously, with

their limited freedom of movement, they would have been unable to access new ideas and new information about their livelihoods apart from others within their physical locality. Now they can access this information without the need to leave their homes. Female farmers are also benefitting from market and agricultural information obtained online.

The internet allows women who lack the mobility to verify information offline, to do so online and as shown above, this has had profound implications for some women in terms of their health or nutrition. Furthermore, the female participants can now access some information that would have been difficult or “risky” for them to access offline because of social constraints, such as “taboo” or “hidden” information like SRH information. They also have the ability to access information that would have been expensive to access previously such as information on their rights and entitlements; reducing the costs of information-seeking in terms of expense and mobility has had particular benefits for women. In a similar vein, the access to educational opportunities online may be particularly benefitting the female participants who have less freedom of movement or because of being located in an area where their offline education is difficult to access and/or is expensive. The internet provides them with access to educational opportunities that previously it would have been very difficult to access and it allows them to fulfill their domestic responsibilities whilst improving their education. As discussed above and in the literature, improving education is way of breaking the vicious circle of gender equality and the digital gender divide.

Despite these positive changes in gender dynamics, patterns of “gendered” interests offline are still being replicated online with women more interested in searching for health and nutrition information and less interested in politics, news or rights and entitlements compared to their male counterparts. Just because women now have access to more information does not mean that they necessarily change what they are looking for. The motivation to seek information must first be developed offline and this is determined to a certain extent by gender norms. There is some evidence that the boundaries of these “gendered” interests may be blurring with more women searching for news and politics than before because of the change in format and source of news and

political information online and because of information spillovers that expose the participants to information that they may not necessarily be seeking.

Another reason for the female participants not searching for certain types of information as much as men appears to be related to the fact that women perceive that they have lower English language and IT skills than men (Tables 5.19 and 5.22). There are statistical relationships between these skillsets and the frequency of searching for certain types of information such as health (Table 6.16), news (Table 6.29) or rights and entitlements (Table 6.30). The importance of these skills is discussed below but it is a gender issue and an unfortunate gender dynamic that is playing out online.

6.8.5 What Type of Women and in Which Circumstances?

The self- perception of English language skills, appears to be an extremely important factor in determining how frequently the female participants are using the internet to search for livelihood information, health information, world news and rights and entitlements. There is a statistical association between perception of English language skills and the frequency of searching for all these types of information online. Furthermore, women with perceived good English language skills are more likely to agree that the internet has helped them make more informed decisions about their healthcare and possibly about their livelihoods. This makes sense as many of the websites providing these types of information are in English. The importance of good English language skills for using the internet effectively to search for information were demonstrated in the mini case study of the one of participants who spent several years misdiagnosing her son's epilepsy online in part as a result of her poor language skills.

Self-perceived levels of IT skills also appear to be important in terms of the frequency of searching for politics (Table 6.33) or world news as well as for using the internet to make informed decisions about livelihoods (Table 6.10). Yet again, this probably makes sense as searching for certain types of information and cross referencing to check its validity may require more advanced IT skills in terms of using search engines, different social media platforms, forums etc. Educational attainment is also a factor that appears to be influencing frequency of searching for certain types of information online, with participants with higher levels of education more likely to be searching for health

information (Table 6.15) and rights and entitlements online (Table 6.31). This is understandable since searching for complex issues online will require higher informational literacy and reading comprehension which are aligned to higher levels of education (Van Dijk and Van Deursen, 2014). Finally, the age of the female participants is statistically associated with searching for political information (Table 6.32); women under 30 are much more likely to be searching for this type of information than those over 30 years old. This no doubt reflects the familiarity of younger people with social media and their higher levels of IT skills.

6.8.6 Summary

It appears that the use of the internet is giving women the *power to* search for information by themselves and this in turn is enabling them to making better decisions about their livelihoods and health-care, for example. It appears that the livelihood information could be particularly important for micro-entrepreneurs and that access to sensitive sexual and reproductive health information may be particularly significant for women. The provision of information that the internet affords is also enabling them to gain knowledge and awareness that has helped increase their self confidence and hence their *power within*. More importantly the use of the internet has enabled them to *challenge power over* them by eliminating some of the controls over access to information that they previously experienced. With the internet on their mobile phones, they can search freely online for the information they want without the need for intermediaries. Anonymity allows them to search for “taboo” or sensitive information and allows “hidden” information to come to the surface. They also have the ability to validate any information that they are given, thus reducing the possibility of being manipulated through misinformation. Furthermore, the ability to access political information, world news and information about their rights and entitlements provides them with the awareness that has the potential to lead them to be able to challenge infringements of their rights, for example.

Despite the increased freedom of access to information, gender norms appear to be constraining the female participants’ interest in certain types of information, particularly political information or rights and entitlements that could lead to greater political engagement. This could just be a reflection of offline norms but could be a reflection of

the control over this type of information that has been exerted by men in the past. There is some evidence to suggest that the use of the internet may be helping to change these gendered interests through the weakening of these controls and because the boundaries between these gendered interests may be beginning to blur online. Many of these findings are tentative and further research would be needed to confirm them. However, these findings provide an interesting perspective on the provision of information that the internet affords and will be discussed in the context of the relevant literature in the discussion chapter (Chapter 9).

Chapter 7 Enabling Interaction with Others

7.1 Introduction

The use of the internet has fundamentally changed the way that people can interact with each other. The results in Chapter 5, have shown that the ability to communicate with others is a key reason why the participants are using the internet. The first part of this chapter explores how the internet is mediating changes in control over those with whom the study participants can interact. The chapter progresses on to examine the economic implications of these changes by looking at the study participants increased ability to advertise their goods and services. In the next section the social implications of these changes are considered in terms of social capital, reducing social isolation and breaking social constraints and increasing the participants' ability to share knowledge. Finally, the psychological implications of this increased interaction are considered.

Within each of these sections, the particular gender dynamics are considered as well as which types of women are benefitting the most and the least from the changes in interaction with others. At the end of the chapter, the economic, social, political and psychological implications will be examined from an empowerment perspective and conclusions drawn.

7.2 Changes in Control Over Interaction With Others

The responses from the participants at the FGDs and the PGEs suggest that there has been a fundamental change in their ability to communicate with people outside their own physical community and to gain access to new social contacts as a result of the use of the internet. 12 out of 15 of the female participants from the FGDs and 18 out of 20 of the case study participants stated that they had larger social networks online rather than offline. They spoke of the changes in the cost, the ease and convenience of communicating using the internet as well as how this has allowed them to communicate with people that

they could not communicate with before. From the questionnaire, 97% of women surveyed either agreed or strongly agreed that they were able to communicate with people online, who they would not have been able to communicate with offline (see Table 7.1 below). Furthermore, 85% of women stated that they have a wider network of people who they associate with online compared to offline (see Table 7.2 below).

Table 7.1 “I have communicated with people online that I wouldn't be able to communicate with offline.” Responses analysed by gender.

	Female	Male	Grand Total
	(n=189)	(n=147)	(n=336)
Strongly Agree	58%	65%	60%
Agree	40%	32%	37%
Sub-Total Agree	98%	97%	97%
Neither agree or disagree	0%	1%	1%
Disagree	3%	1%	2%
Grand Total	100%	100%	100%

There is evidence that the internet is not only facilitating a wider networks of contacts, it also provides a space where people from different social, economic, and cultural backgrounds can interact; thus breaking traditional social constraints around interaction and bridging socio-economic divides. One of the quotes from a participant (PGESTB01) from the PGE at Site 3 explains how the use of the internet has broadened her interactions with others,

“I have seen that this internet has widened the scope of interaction. While we can interact within Uganda now it goes beyond... the world now is becoming smaller so the interactions we learn from other cultures, they learn from us and our lives improve, so I think the scope of interaction has been widened.”

Table 7.2 “I have a wider network of people that I associate with online compared to offline.” Responses analysed by gender.

	Female	Male	Grand Total
	(n=189)	(n=147)	(n=336, p = 0.082*)
Strongly Agree	42%	50%	46%
Agree	43%	29%	37%
Sub-total Agreement	85%	79%	83%
Neither agree or disagree	3%	3%	3%
Disagree	10%	14%	12%
Strongly disagree	3%	3%	2%
Sub-Total Disagreement	13%	17%	14%
Don't know	0%	1%	0%
Grand Total	100%	100%	100%

* - The chi squared test was performed to establish whether there is a relationship between having a wider network of people that you associate with online compared to offline with the gender of the respondent (comparing the "sub-total agree" responses with the "sub-total disagree" responses).

One of the respondents, JASNAKIS202, from Site 2 also explains about the socio-economic divides that are being bridged online,

“When on the internet, many people are willing to be with you and talk to you but this is different from offline where people talk to people in the same class; well off people talk to well off people etc.”

12/20 of the case study participants gave examples of how they are able to communicate with people who are “different” from the people that they associate with offline, “different” in terms of background, social status, education, ethnicity, nationality or age. Social media groups in particular facilitate exposure to networks of people outside one’s immediate social circle. For example, case study participant Nancy a cake maker from Site 1 explains,

“With offline I used to know only people around me but with online I have friends in India, friends in Canada, friends in UK.”

The two mini case studies (Boxes 7.1 and 7.2) provide examples of how the use of the internet has allowed two participants to interact with people outside their normal physical locality. One of the participants explains how partly through her internet use, she is now taking part in an international midwifery forum.

Box 7.1 Mini case study of a Participant showing how the use of the internet is broadening the scope of interaction in a way that is bridging socio-economic divides.

Flavia is 25 years old at Site 1. She is married and is the leader of a dance troupe.

She is part of several online discussion groups that appear to allow her to discuss issues with people that she wouldn't have been able to before her use of the internet. They allow her to connect with people from different ethnic and socio-economic backgrounds. She has now has social contacts in the Middle East, India, China, USA, UK, Somalia and South Africa and talks to them online on a weekly basis. One of these groups amongst other things discusses women's rights and how these rights have changed and are different in different countries. She is also a member of a Ugandan Whatsapp group through her church where she gets to discuss different issues with a wide variety of different people who she wouldn't have engaged with before including local politicians, lawyers and doctors.

The unexpected breadth of connections and contacts that many of the participants had made and/or maintained through their use of the internet spans across social classes, wealth and geographical locations. One of the KIs, Ambrose, stated that in Uganda on some social media sites (for example Mama Tendo³⁵) one could easily find a Luo primary school dropout engaged in a discussion with a Lugandan professor. From his perspective, the internet has therefore created a space where the gaps concerning education and ethnicity for example can be bridged. As will be discussed below this bridging of socio-economic divides is improving levels of self-confidence amongst the participants and is

³⁵ Mama Tendo at the time of the research was a popular Facebook page where people would share their problems, particularly marital problems, with others online. It was started by a journalist to discuss parenting issues but turned into a place to discuss relationships. As of July 2019 it is estimated to have 250,000 followers (The East African. 2019).

also creating a more level playing field for the exploration and dissemination of knowledge.

7.2.1 Gender Dynamics

As shown above, there is evidence that online communication is facilitating an increased freedom of association for the participants since they can build up wider networks online and in some cases meet in online spaces with people from different socio-economic, cultural backgrounds. There is also some evidence that this may be particularly beneficial to women who previously may have faced gender constraints over whom they associated, either as a result of their limited mobility or because of social norms that limited their interactions. As KI Diana, the CDO from Site 3, describes men sometimes want to control women's interactions with others,

“We've seen men who have refused wives from working because they don't want them to interact with the world, with other women, not necessarily the men. But they know if you really interact with other women, they might tell you, “I think this is wrong in your marriage.”So they really kind of imprison you at home. They promise to give you everything but they don't want you to interact with anyone.”

KI Bosco describes how with the use of the internet, new relationships can now be formed outside the control of “cultural gatekeepers” who are often husbands or fathers,

“The father at home no longer has control over his daughter who is in her bedroom talking to people all over the world.”

This loosening of these controls may be particularly beneficial to women. As KI Bosco explains again,

“There is a layer of control over women and girls, they are supposed to be in the “private” sphere, their interaction with the outside is controlled, they must get permission and the technology has helped them to go outside those boundaries. They don't have to get permission to speak to anyone, anywhere, and nobody will know (if they do).

Box 7.2 Mini case study of a Participant showing how use of the internet is broadening the scope of interaction in a way that is bridging socio-economic divides.

Brenda is a 40 year old midwife at Site 2. She left school at 16 years old and is married with 5 children. She learnt to use the internet at the local telecentre. She attended a midwifery training session at the Nakaseke hospital by an international NGO. She was picked out by the staff from the NGO for her care of the patients and eventually, after online communication with them, she was invited to be a guest speaker at one of the UN General assembly meetings in New York! She has been communicating ever since and recently was asked to be one of only two African members of the Global Midwifery Advocacy Strategy Group. She continues to work as an ordinary midwife at the hospital but she explains how the internet, through its communicative potential has changed her life,

“ I am alone in Uganda but I am advocating for midwives globally. But it was all because of internet and even our meeting we always have meetings on webinar and if it was not for use of internet, I wouldn't have connected to that global group..... We update each other and know what is going on so it's good to be on internet, it has empowered me, it has made me someone else. Truly,because I was a mere midwife working in a district hospital, no one knew me but I am now known globally.”

From the quantitative research there is some evidence that gaining access to wider networks online may be particularly beneficial to women, specifically those who have reduced freedom of movement. Although there is no overall association between gender and having a wider network online, there is a statistical association ($p = 0.043$) within Site 1 with 87% of women agreeing to this statement compared with only 75% of men (see Table 7.3 below). From observation and from the comments of KI Daniel, the community worker in Site 1, the men in Site 1 have wide offline networks as they can travel freely around Kampala and are often seen sitting around in groups discussing politics and sport. KI Janet, the CDO of Site 1, also explained that the women in Site 1 are less able to move around outside Site 1 compared to men. The lack of physical mobility of women compared to men may explain why more women than men state that they have wider networks online compared to offline.

Table 7.3 "I have a wider network of people that I associate with online compared to offline". Responses analysed by gender at Site 1.

	Female	Male	Grand Total
	(n=82)	(n=76)	(n = 158, p=0.042*)
Strongly Agree	41%	54%	47%
Agree	46%	21%	34%
Sub-total agree	87%	75%	81%
Neither agree or disagree	3%	4%	3%
Disagree	7%	17%	12%
Strongly disagree	3%	4%	4%
Subtotal disagree	10%	21%	16%
Grand Total	100%	100%	100%
* - The chi squared test was performed to establish whether there is a relationship between gender and whether they have a wider network online compared to offline. (comparing the responses of the "sub-total agree" and the "sub-total disagree").			

Education levels also may be influencing the response. The lower the education levels, the wider the gender gap, with more women stating that their network is wider online compared to offline (see Table 7.4 below). When comparing women and men at the lowest level of educational attainment, 90% of woman compared to 59% of men stated that they had a wider network of people that they associated with online compared to offline. The percentage of men agreeing that the internet is widening their networks increases as education levels increases. In contrast this remains high across all educational levels for women. From discussions such as with KI Susan, this may reflect greater constraints around freedom of offline association experienced by women of lower educational status compared to men.

Table 7.4 “I have a wider network of people that I associate with online compared to offline” Gender differences analysed by level of educational attainment.

	No school or Primary School			O'Level or training after O'Level			A'Level or training after A'Level			Tertiary		
	Female	Male	Gender Difference	Female	Male	Gender Difference	Female	Male	Gender Difference	Female	Male	Gender Difference
	(n=27)	(n=17)	(n=44)	(n=64)	(n=43)	(n=107)	(n=51)	(n =45)	(n=96)	(n=47)	(n=42)	(n=89)
Strongly Agree	36%	53%	-17%	39%	40%	0%	38%	44%	-6%	52%	62%	-10%
Agree	54%	6%	48%	42%	37%	5%	48%	44%	4%	29%	26%	3%
Subtotal Agree	90%	59%	31%	81%	77%	4%	86%	88%	-2%	81%	88%	-7%
Neither agree or disagree	0%	6%	-6%	3%	0%	3%	0%	6%	-6%	6%	0%	6%
Disagree	7%	35%	-28%	11%	16%	-5%	10%	6%	3%	13%	10%	3%
Strongly Disagree	4%	0%	4%	3%	7%	-4%	5%	0%	5%	0%	2%	-2%
Grand Total	100%	100%	0%	100%	100%	0%	100%	100%	0%	100%	100%	0%

On the other hand, there is evidence that the ability of married women to interact online may be limited by the social controls that prevent freedom of association both online and offline. Although there is no gender difference in the overall agreement of the statement *“I have communicated with people that I wouldn’t be able to communicate with offline”*, marital status does seem to be influencing the strength of the agreement. If the respondents are filtered to just include those who are married or living together, the gender differences around the strength of agreement increase (see Table 7.5 below). 48% of women living with partners compared to 65% of men living with partners strongly agreed with this statement and there is a statistical association ($p= 0.049$). During the FGDs and the PGEs there were some interesting discussions concerning the constraints that some married women face when trying to communicate online. These may explain the larger gender differences for married people in particular. At the Site 3 FGD for example, there was a discussion about how the women who were married or living with their boyfriends, not only had less time to spend communicating online because of the need for them to look after their husbands when they were at home but also felt constrained in the sense that they didn’t have the freedom to communicate online when their husbands were around. The quote by Participant FGDSTB01 below illustrates the sentiment of the women with partners at the Site 3 FGD who refrain from using their phones once their male partners are at home.

“African men they know ...they are right to do anything at any time, and women you have to.... you submit in everything...oh my goodness, a woman is not supposed to do this and that, you cannot even put on your phone at 10pmhe will start asking you who is that calling you, or if the phone snoozes or message alert tones, he will ask you what are those in your phone cannot you remove them? And for him he will go on that phone from 9pm up to midnight or beyond, you can’t say anything.”

Moreover, four of the case study participants who were living with their partners and one of the KIs, mentioned the constraints that they faced around using the internet to communicate (Box 7.3). This suggests that there are often constraints on the freedom to associate online particularly for women living with partners. There is also a sense that it is socially acceptable for men to have control over with whom women associate online,

but not the other way around. This was highlighted by the way that in the course of the research two examples were given of men being able to buy access to women’s data records from the mobile phone companies. In one example, the husband of one of the participant’s cousins went to the main mobile phone service provider in Uganda, MTN and paid money to access his wife’s records. In another, the research assistant spoke about working for the same service provider and witnessing on several occasions, men (not women) requesting their wife’s mobile phone records for a fee. The lack of privacy of interactions online and the lack of legal protections in this area are discussed in the proceeding chapter. Further research would be required to confirm the extent to which gender norms were at the heart of these breaches in privacy.

Table 7.5 I have communicated with people online that I wouldn't be able to communicate with offline. Responses of those who are either married or living with their partners, analysed by gender.

“I have communicated” with people online that I wouldn't be able to communicate with offline	Living together or married		
	Female	Male	Grand Total
	(n=70)	(n=58)	(n=128, p =0.049*)
Strongly Agree	48%	65%	56%
Agree	49%	32%	41%
Grand Total	97%	97%	97%
* - The chi squared test was performed to establish whether there is a relationship between the strength of agreement of the female and male responses to whether they have communicated online with people that they wouldn't be able to communicate with offline. See Table K8.14 In Appendix K for further details.			

As can be seen by the mini case studies in Box 7.3, the loosening of some of the controls over association that the internet affords is having a damaging effect on some of the participants’ relationships with their partners. The participants spoke about how internet use raises concerns about the possibilities for infidelity, and has therefore increased suspicion and mistrust between partners within relationships. These issues were raised as a negative aspect of the use of the internet at every PGE and they were discussed by 8 out of 20 of the case study participants and by 5 out of 13 key informants. This negative aspect of internet use has the potential to make relationships more

unstable which could have particularly detrimental effects on women who are more likely to be financially dependent upon their partners.

Box 7.3 Mini case studies of Participants and a Key Informant illustrating the constraints that women living with partners face when communicating online.

Participant Nancy, from Site 1 is a single woman who has 4 children. Her ex partner didn't like her being online as he was jealous about the friends that she had online and worried that she could be cheating on him.

Participant Faith, from Site 1 is a 39 year old married Muslim woman with 4 children. She explained that her husband quarrels and criticizes her for being online so that she has to go to her bedroom to use her phone. She likes to communicate using social media, watch YouTube online and is involved in a drama group but she is scared that her husband could kick her out because of this.

Participant Nana, age 22, from Site 3 is single and is a student beautician and a tailor. She split up with the partner that she was living with because he didn't like her being online and if she was online, he wanted to know who she was talking to and what she was doing online and wanted to look at her phone. However, it wasn't reciprocal; he could be on his phone and contact whoever he wanted online. This seemed "unfair" to her and this was the reason why they separated.

Participant Patience, is a 29 year old single women from Site 3 with one child. She stated that her boyfriend doesn't like her being online since he feels threatened that she may be communicating with other men.

KI Mary from Site 1, from the One Love Women's Group, thinks that being married prevents you from using the internet as much as unmarried women as you can't be seen being on your phone when your husband is around unless you are communicating with your relatives, otherwise your husband will get suspicious. She also says that husbands often check their wives' phones.

7.3 Opportunities for Economic Empowerment

7.3.1 Increase in Advertising of Goods and Services

This section of the chapter examines how the opportunity to interact cheaply and easily with a wider network of people using visual mediums such as video and photographs has facilitated an increase in the female participant's ability to advertise their goods and services. From the quantitative research, 50% of the female respondents have used the internet to advertise their products, business and services, with 39% advertising online on a regular basis (daily, weekly, monthly) (see Table 7.6). When asked whether they had ever used the internet to post something online advertising their business, 47% of women interviewed responded in the affirmative (see Table 7.7). Furthermore, 17% of women overall chose "advertising my products/services/business" as one of the top three reasons for using the internet (See Table 5. 1), with 59% of women at Site 3 in particular choosing advertising in their top three.

Table 7.6 How often do you use the internet to advertise your products, business, services? Analysed by gender.

Frequency of Use	Female	Male	Grand Total
	(n=189)	(n=147)	(n =336)
Daily	15%	18%	16%
Weekly	15%	16%	15%
Monthly	9%	12%	10%
Subtotal Regularly	39%	46%	42%
Once in a while	11%	18%	14%
Never	50%	37%	44%
Grand Total	100%	100%	100%

Table 7.7 Have you ever posted something online advertising your products or services? Responses analysed by gender.

	Female	Male	Grand Total
	(n=189)	(n=147)	(n = 336)
Yes	47%	52%	49%

Based on the discussions with women at the FGDs and PGEs, it appears that many of the participants are using WhatsApp or Facebook to showcase their goods or services to their networks and attract custom. Box 7.4 below provides some illustrative quotes from the FGDs and PGEs about the benefits of using the internet to advertise. In addition, 12/20 of the case study participants mentioned using the internet to promote their products or services. Four mini case studies set out below in Boxes 7.5 and 7.6 provide some examples of women using the internet to advertise their businesses. Most of these women are low income, micro-entrepreneurs who work from home, cannot afford their own shops and before the internet, could not afford to advertise on the other media platforms such as the radio or the TV. Previously, it was costly for them to travel to promote their goods at marketing events and some of them had no choice but to use middlemen to sell their goods and liaise with buyers. One of the advantages of using the internet is that it is an inexpensive way of advertising to a large number of people directly. These potential customers can be outside the seller's immediate vicinity, even outside Uganda and the goods or services can be promoted by the seller's own network of contacts, thus expanding the potential customer base even further. Furthermore, unlike word of mouth advertising, it is a visual form of advertising since potential customers can see the products that they might want to buy. They can also interact with the seller directly and ask questions about the products and the product can therefore be adapted to suit their particular needs. It is evident that the internet is providing some women with additional resources by saving them money on the cost of promoting their products and by increasing their sales and hence livelihood income compared to before they used the internet. One participant Flavia even stated that 90% of her business is now generated from online marketing (Box 7.5).

Box 7.4 Illustrative quotes from the FGDs and the PGEs about the benefits of using the internet to advertise.

Participant Faith, from Site 1 is a 38 year old, a part-time cook with only primary school education. She discusses how ordinary people like herself can now promote themselves using the internet,

“Using internet, it is very cheap to advertise but going to TVs or Radio is very expensive. Once you use Whatsapp, everyone gets to learn about it..... Now for us people of the lowest social-economic class, we can't go to TV, radio, when we get a chance to have internet, we upload videos and market ourselves.”

Participant FGDSTB01 from Site 3, who is a tailor, spoke about how it is her friends that promote her products online,

“Mostly my things I use Whatsapp, and Whatsapp does it for mewhen I want to send something, the products I make, I send through Whatsapp and I have many friends on Whatsapp and those are the ones that promote my products.”

Participant PGESTB02, from Site 3, who is 57 years old, and breeds rabbits and makes crafts for a living, explains how previously it was difficult and expensive for her to find a market for her products but now her network of friends promotes them using the internet.

“I do bead work including necklaces and other items. Before I would do my work and I have nowhere to sell it until we had a big meeting in our organization or there was an exhibition that I could afford to go to. But now I don't bother because I use my friends. If I make something new, I post it on WhatsApp (and) my friends see it. They are the ones who get me customers and they find me home (for my goods).”

Box 7.5 Mini case study of a participant promoting her dance business

Flavia, is a 25 year old married women at Site 1, who is self employed and runs a traditional dance troupe that performs at weddings and special occasions. She posts video of her dance group performances onto her Facebook page or sometimes onto YouTube and gets customers to comment and give their feedback. Her customers then share with their contacts. She used to get new business by word of mouth but business was much slower. She now gets 90% of her business from promoting it online.

Box 7.6 Mini case studies of participants promoting their livelihoods.

Tailoring Businesses

Sharon, is a 32 year old married woman with 3 children at Site 1. She works from home as a tailor and advertises her garments by posting photographs of her clothes onto her Facebook page. She has local clients and clients outside Kampala mostly who are friends or friends of friends. Most of her business is generated from her online posts with 8 out of 10 clients calling her after seeing what she's posted online

Scovia, is a 27 year old single woman with a young child at Site 3. She is a tailor and rents a space at the Bugolobi market in Kampala. She created a Facebook page and posts photos to advertise the clothes she makes. She also uses her Whatsapp status to advertise her latest sewing creations. At the moment, she gets most of her business from her online posts. She even has 5 customers based in the UK and estimates that she makes approximately US\$3.5 million (£700) net income annually from these transactions with overseas customers.

Cake making Business

Nancy, is a 29 year old single woman with 4 children. She is employed part-time at a hotel where she cooks and is also self employed, baking cakes for special occasions. She posts photos of her cakes onto her Facebook page as a way of getting new customers. Her friends tag other people into her posts so that she expands her customer base. She explained that the number of sales she was getting from her online promotion was increasing.

Box 7.7 Mini case study of a women's group in a village.

Jordana is one of the young leaders of Vamutulo*, a women's group based in a village just outside Site 2b. They have several income generating activities that they advertise through social media. They hire out tents and chairs and provide decorations for special occasions and they also have a poultry project where they sell chicks.

When asked about how much of their income comes from advertising online, she replies " ***Out of ten customers in a month, five come as a result of posting online.***"

* literally meaning "wake up from sleep" women's Group,

7.3.2 Gender Dynamics

Overall, it appears that men are using the internet to advertise more than women. Only 37% of men have never used the internet to advertise their products, businesses and services compared to 50% of women (see Table 7.6 above). However, in terms of more regular use of the internet for this purpose (daily, weekly or monthly) there is only a small gender difference, comparing 39% of women with 46% of men. When asked whether the respondents had ever posted something online to advertise their products or services 47% of women and 52% of men responded in the affirmative (see Table 7.7 above).

What is missing when comparing women and men's use of the internet for this purpose is an understanding of the percentage of women and men who would benefit from advertising online. However, although there is only a small gender difference in the use of the internet for advertising, there is some evidence that women value the use of the internet for advertising more than men. At every study site apart from Site 2a the percentage of women selecting advertising as one of their top 3 reasons was higher than the percentage of men. (see Table 5.1). Many of the women interviewed, who valued being able to advertise their goods and services online, were unable to take on waged employment as a result of their domestic responsibilities, particularly from having children to look after, and therefore earned a living through micro-entrepreneurship activities (for example, tailoring, baking, crafting and hairdressing). They also found it difficult to travel to meet customers and market their goods and therefore found the ability to advertise their goods and services online helpful.

7.3.3 What Type of Women and in Which Circumstances?

The questionnaire respondents from Site 1 and Site 3 are much more likely to use the internet to advertise their goods and services compared to the women in Site 2 (see Table 7.8 below). This divide partly reflects the employment status of the women at each of the study sites with the majority of women in Site 1 and Site 3 being self employed compared to only 24% in Site 2 (see Table 7.9 below). It also possibly reflects the scarcity of internet use amongst the networks of the women who live in or near to Site 2.

The women interviewed at the Vamutulo Women's Group (KI Rita and Jordana) explained that many women were not able to use the internet to advertise their goods in

and around Site 2 since most of their potential customers were not yet online. In a similar way, some of the participants at Site 1 (Participants Maureen and Cathy) commented on how many of their contacts were not yet online and therefore explained that the success of advertising using social media was limited. Participant Maureen, a hairdresser from Site 1 commented that even if potential customers are online, she can still only attract local customers and not those at a “higher level”. It could be that those people with wider social networks online, particularly that span across different socio-economic divides may be best placed to make the most of internet advertising.

Having specific training about how to advertise may also be important. The women at Site 3 appear to be using the internet for advertising more than the other female participants; 59% of them said that they were using the internet for this purpose on a regular basis (see Table 7.8 below) and 59% selected advertising in their top three reasons for using the internet (Table 5.1). Not only are they well connected through their use of the internet (see section 7.4.4.1 below), they have also benefited from training on how to use the internet particularly for marketing their goods from a local NGO, WOUGnet. The conversations with two of the KIs (Sarah and Mary), who were leaders of the local women’s groups, revealed that they thought that their members would benefit from using the internet to advertise, but they either were not aware of the possibility of doing this or did not have the skills to be able to do this. This suggests that basic training may be useful in stimulating the use of the internet in this way.

Table 7.8 How often do you use the internet to advertise your products, business, services? Female responses analysed by study site.

	Site 1	Site 2	Site 2a	Site 2b	Site 2c	Site 3	Grand Total
	(n=82)	(n=90)	(n=38)	(n=29)	(n=23)	(n=17)	(n=189)
Daily	22%	6%	3%	10%	4%	29%	15%
Weekly	20%	10%	8%	17%	4%	24%	15%
Monthly	9%	10%	13%	7%	9%	6%	9%
Subtotal Regularly	50%	26%	24%	34%	17%	59%	39%
Once in a while	13%	7%	3%	14%	4%	18%	11%
Never	37%	68%	74%	52%	78%	24%	50%
Grand Total	100%	100%	100%	100%	100%	100%	100%

Table 7.9 Have you ever posted something online advertising your products or services? Analysis of affirmative female responses by location compared to the percentage of the respondents who are self employed.

	Site 1	Site 2	Site 3	Grand Total
	(n=82)	(n=90)	(n=17)	(n=189)
Yes	57%	29%	78%	47%
% age of respondents who are self employed	50%	24%	76%	44%

7.4 Opportunities for Social Empowerment

It appears from the research that the increased ability to interact with others afforded by the internet is providing opportunities for social empowerment for the study participants. This section starts by exploring how the new additional contacts and connections that people have made online are seen as useful assets in terms of social capital. It then examines the evidence that suggests that the ease of communicating with a much wider network has enabled some women to gain social and emotional support online and reduce their social isolation. From a more negative perspective, it examines the damaging effects that increased interaction has had on offline relationships. Finally, the results in respect of the ability to share information will be revealed.

7.4.1 Increase in Social Capital

On several occasions, the participants of the FGDs, PGEs or the case studies discussed how their increased network of contacts, facilitated by the internet, provided them with additional social capital that could be drawn upon in times of need. The participants spoke about how these additional “assets” or contacts could provide them with help or protection and more specifically could provide information or opportunities to further enhance their resources or protect the resources that they already had. Boxes 7.8 and 7.9, set out some illustrative quotes on the increased social capital facilitated by contacts obtained online.

Box 7.8 Mini case studies of a Participant using the internet as a tool to make connections which can lead to improvement in her community.

Participant Sharon, a tailor from Site 1, is married with three children. She described how she heard from a friend about an organization called Right to Play that helped children learn to play football. She went onto Facebook to search for them and got the email address of someone who worked for the organization and made the connection. Eventually, they came to meet her and other people from the Treasure Life Centre and they are now planning to build a sport’s facility for the children in the middle of this very deprived area.

Box 7.9 Mini case studies of Participants concerning the use of the internet to facilitate a network of contacts who can act as a safety net.

Participant Yvonne, is a widow and a tailor who is the leader of the St Bruno sewing group at Site 3. She finds it difficult to travel freely as she looks after her blind son at home. She has over 200 contacts online, including 85 contacts overseas. Whenever she meets someone she gets their details and connects with them on WhatsApp or Facebook. She uses this network as a way of advertising her clothes, bags or jewelry but also as a means of social protection. She described how, since her husband died, she tries to make connections with different types of people who may be able to help her in the future, for example, lawyers, policemen, local councillors, people working at the local water company. When asked about how these increased connections have changed her life, she responds:

“Yeah I feel ... I have a....can I call it maybe protection?”

Participant FGDSTB02, a 63 year old married woman also from Site 3, similarly saw the networking capability of the internet as a way of “get(ting) friends that end up being helpful depending on what you want from them.”

Participant Patience, is a 30 year old single mother from Site 3. She learned offline that beetroots could be good for her son who has epilepsy. She searched using Google about the benefits of eating beetroot and then posted a question on Facebook asking about whether anybody knew how to plant and grow them. An American women, who was a friend of a friend, explained how she grew them in America. Since then, Constance has been successfully growing and eating them.

Participant Nancy lives in Site 1 and is single and has four children. She works part time as a cook in a local hotel and also is a cake maker. She described how she has gained new friends online in different parts of the world who can provide her with information or new opportunities:

“ (Before) I used to talk to only people who are around me but now I can talk to someone who is abroad and such friends can give you some information about what you want and connections.”

7.4.2 Reduction in Social Isolation

The importance of being able to communicate with friends and family using the internet was mentioned at every FGD and PGE and 75% of all of the female participants selected this in their top 3 reasons for using the internet. At 5/7 of the PGEs the emotional benefits of using the internet to communicate with others was raised. For the first time, women are able to communicate their problems to a large group of people at the same time, thus increasing the likelihood that they get a timely response. Many of the women's comments suggest that the ability to communicate with others in this way reduces their feeling of social isolation. One of the Participants, Brenda, describes her life without the internet as "being in a grave" because of her inability to communicate with friends,

"I don't know how life would look like but it is like taking someone in a grave..... It is like a grave because you can't communicate with your friends"

Box 7.10 provides further illustrative quotes about the emotional support that women receive online. For some women, the physical distance and maybe even the emotional distance between them and their online contacts allows them to discuss more private or even "taboo" issues which they would feel uncomfortable discussing with those physically close to them. In some cases there was a genuine fear that discussing these issues with people in their physical proximity could put them at risk. The two mini case studies in Box 7.11 provide two examples of case study participants who explain the benefits of being able share their problems with people online rather than offline.

Box 7.10 Illustrative quotes from Participants about getting emotional support through communicating online.

Participant Sharon from the Site 1 women’s PGE is a tailor. She is married with 3 children and works from home. She described how she uses the internet if she’s feeling low or has a problem in her life,

“At least when you are in misery, you can sayat least let me WhatsApp somebody and at the end of it she or he can send you somethingyou might have a problem and you feel like sharing it with someone..... that person is not around (who) would have helped you but people on internet once you tell it out, they can help you to solve the problem..... people respond very, very fast. When they respond, in (the) ideas they give you out, you pick up and you end up getting solutions slowly without even moving.... at the end of it you become happy “

When asked what she did before she had access to the internet, she responded that it was very expensive to call even one friend and that it would take too long to explain the problem:

“Remember you have to buy airtime of 500UShs, you call this one, you call this (another) one, even sometimes that airtime can end up on one person explaining “you know I have got a problem ...my husband beat me ” by the time you end up the story without even finishing it airtime is gone.”

Participant Zawedde is a community development officer from Site 2. She is single with a young child and is disabled (unable to walk unaided as a result of polio). When asked whether the wider networks of contacts that she had gained online had changed her life in any way, she explained how she no longer felt so desperate:

“ contacting these people it has changed somehow because sometimes you may...you’re not so...you’re not so desperate. Sometimes you have hope. Like you can communicate to someone and someone gives you hope.”

Participant Fortunate is a farmer and a councilor in Site 2 when asked about the benefits of having an online network of friends, states,

“Emotionally, for instance there are times when you are disturbed, when you are stressed, you can talk to a friend and friends can console you, (they) can write to you, (they) can pray for you, (they) can preach to you online I think it has helped me get some relief.”

One of the Participants (unknown) from the Site 3 PGE sewing Group describes how she feels when she doesn’t have access to the internet,

“You feel isolated and alone..... Mentally you are unstable because you have no people, you have a lot of things to talk about,you have no one to tell ”

Box 7.11 Mini case studies of Participants showing the benefits of getting emotional support online.

Eunice is 19 years old and was orphaned when she was 15. She works in a shop selling household items (mainly plastic-ware e.g. buckets) in Nakaseke town. She lives in a very small room with her older husband, 18 month old baby and her brother. It is much cheaper for her to communicate using the internet rather than using airtime. She's now got 150 online Facebook "friends" from different parts of Uganda. She explained how she uses the internet to get new contacts, friends and to get support and advice from these contacts when she's stressed about something. For example, she says,

"When my baby is sick I just Facebook with my sister (her friend) to ask and she will just comfort you like, she is going to be fine and you find that now you are having a piece of mind. Sometimes am there thinking about how am I going to take part in this world minus parents then... when I just share with my friend they comfort me and I feel ok."

When she was asked whether she got support from friends in Nakaseke, she explained that she only asks for advice from her friends online because she is worried that she doesn't know whether the people who are physically around her can really be trusted as friends; she's worried that they may laugh at her concerns or may judge her based on her problems that she shares. She would prefer to share her problems with online friends who are far away; there are less likely to be implications for her offline life and the advice is given freely without those people having anything to gain or lose from the advice that they give her.

Participant Eunice from Site 2

Deborah, age 30, is a single woman living in Kamwokya, who is well educated and runs a small business. She came out as a lesbian a few years ago and consequently has had a difficult relationship with her family in the context where homosexuality is illegal in Uganda. She decided to create a new social network online and has found solace from reaching out to other people who accept her for who she is. She gets support from them without the increased dangers associated with getting offline support.

"The internet has really helped me a lot to connect with people and people connect with me and it has really empowered me... there is no way you can get to internet and you fail to get someone or something to help you, people are always writing, people are always updating so if you need help there is no way you can fail to get help you need."

Participant Deborah from Site 1

7.4.3 Gender Dynamics

Based on the analysis of the FGDs and PGEs, most of the comments about the internet facilitating access to emotional support were made by women. KI Carole, a gender and development expert, agreed that women are like to increase their networks to gain greater social support but suggested that the reason for this was that women have greater emotions than men,

“For us women, we have high emotions, we try to share it with people and stress goes away. Women like having a big network for social support.”

On the other hand, participant Hope, who is a midwife at Site 2, describes how many women use the internet as a “coping strategy for stress” (her words) in a situation where women have little freedom to express their unhappiness because of their gendered constraints; it is not their higher level of emotions that is the issue, it is the lack of ability to share their problems with others,

“(Women) would rather spend their time on internet, on WhatsApping, when you are stressed instead of now shouting at children and beating them, you resort to your phone...so every time you think you are pissed instead of now crying, you resort to your phone. You are a man’s property.... you are one of his things and you don’t have freedom even when you quarrel with him. If he beats you, you can’t go back home where you came from, your father will say go back, we gave you away... yea it helps emotionally....it is an emotional mechanism of coping with stress”

These gendered constraints appear to be operating at different levels. At one level, women, as a result of domestic and social constraints may be less able to travel and therefore communicate face to face with friends to discuss their problems. At another level, as discussed above, there is the suggestion the internet has helped loosen the controls over social interaction that are exerted through social norms. Previously it would have been socially unacceptable for women, particularly married women to travel and associate with different groups of people to share their problems. The higher level of social isolation experienced by women is explained by KI Susan,

“Women used to be confined to their homes, they can only talk to people when they get out to go to fetch water. Now they can talk to their friends online. The internet can break the isolation, that is what it does.”

It is interesting that 4 out of 5 of the case study participants who spoke about social capital in the context of internet use were female headed households, 2 out of 5 were widows and another 2 out of 5 were single women with children. This may suggest that the use of the internet for increasing social capital could be particularly useful for more vulnerable types of women although further research would be required to confirm this.

7.4.4 What Type of Women and in Which Circumstances?

All of the case study participants enjoyed the social support that communication through the internet afforded to them. From the analysis of the demographics of the case study participants, it is possible to draw out some tentative ideas as to which type of women are more likely to benefit from the ability to make the most of the increased social capital that the internet affords and to use it to bridge socio-economic gaps. The women in Site 3, who are wealthier, better educated and are mostly unmarried and have been trained to use the internet, appeared to have gained wider networks online with contacts outside their usual physical social boundaries and to value these contacts as future sources of potential help or opportunity. Similarly, in Site 1, the better-educated women (Participants Deborah, Cathy, Flavia and Sharon) seemed to have used the internet to further their increasingly diverse networks of contacts online and use these networks to their advantage. On the other hand, the two least educated people, participants Faith and Maureen, although they could communicate with more people online than offline, were not communicating with people outside their own socio-economic groups within Site 1. In Site 2, all the women interviewed had higher levels of education and some of them had had training on how to use the internet. Four out of seven of them had used the internet to help build networks that bridged socio-economic and geographical divides. The scarcity of data makes drawing a conclusion from the data difficult but the four case study participants that did not appear to have done this to same extent as the others could be characterized as having less exposure and contact with others offline because of their social status and social circumstances. All four of them had young children, three of them

were single mothers and one mother was severely disabled. Further research in this area would be required to investigate the constraints that certain women face when using the internet to build networks that help them bridge socio-economic divides and therefore build up their social capital.

7.4.5 Increase in Sharing Knowledge with Others

There is evidence that the increased interaction with others, combined with the increased access to information (see chapter 6) and access to a space where they can express themselves (see chapter 9), is changing the ability of participants to share knowledge with one another. At one of the PGEs at Site 1 (PGEKAMMI) and one at Site 2 (PGENAKW) the participants spoke about how they can now share what they learn with other people. Before the internet this would have been difficult because of the prohibitive expense and time of communicating with your network of acquaintances and friends and family. The questionnaire asked about the frequency of sharing knowledge with others.

Table 7.10 How often do you use the internet to share knowledge with other people? Responses analysed by gender.

Frequency of Use	Female	Male	Grand Total
	(n=189)	(n=147)	(n=336)
Daily	30%	40%	34%
Weekly	33%	24%	29%
Monthly	8%	5%	7%
Sub-total Regularly	71%	69%	70%
Once in a while	20%	19%	19%
Don't know	1%	0%	0%
Never	9%	12%	10%
Grand Total	100%	100%	100%

71% of women interviewed stated that they are sharing “knowledge”³⁶ with other people on a regular basis (daily, weekly, monthly) (see Table 7.10 above). The ability to use the

³⁶Question 11d asked; “How often do you use the internet to share knowledge with other people?”. It is recognized that the question could be interpreted in many ways. The research assistants were asked to

internet to share knowledge is important to women, with 34% of women overall selecting this in one of their top three reasons for using the internet. Indeed, the ability to share knowledge with other people is the second most common reason for women using the internet (see Table 5.1). Although, there is very little quantitative evidence as to what type of ‘knowledge’ the respondents were sharing, there is evidence from the qualitative research to suggest that women are using the internet to share knowledge and information about their livelihoods and to offer help and support to other people, particularly fellow women. Box 7.12 shows some of the illustrative quotes from the in-depth interviews concerning the sharing of knowledge/ information.

Box 7.12 Illustrative quotes from Participants on obtaining information and then sharing it.

“for us women (we) almost face same issuesso if one person gets information that is on help, coz once you get something on internet your brain will tell you that it will help someone else, you end up sharing it and they also share with other people. Once you get it and see that its important you cannot use it by (yourself), you share with others what’s taking place and how you can go about a certain issue.”

Participant Cathy from Site 1

“I have been able to get (midwifery) updates globally, and it has empowered and many midwives in the country benchmark on me to perfect their work, and I am not selfish so whatever update I get I always share with other midwives so that they can update themselves on midwifery issues and how to save babies.”

Participant Brenda from Site 2

“whatever I learn (from) the internet I always share it because if it’s important to me, I always assume it could be relevant to someone else.....if you share this information, if you share a link and they get to follow that link, they get to learn more.... so I always try to make sure that whatever knowledge I get I always share it with the internet.”

Participant Deborah from Site 1

explain to respondents that this question was asking whether they were sharing information that they had knowledge of but they thought that others didn’t know and therefore wanted to share with them. Therefore, I have taken this question to include the sharing of knowledge and information.

7.4.6 Gender Dynamics

7.4.6.1 Educational attainment

Although there is a negligible difference overall between women and men sharing information on a regular (daily, weekly, monthly) basis it appears that the education and wealth of the participants may affect a gender gap in internet use for this purpose. Analysis of the questionnaire data reveals that although the frequency of men's use of the internet for sharing knowledge increases as educational attainment increases, the frequency of sharing knowledge stays approximately the same for women across the different educational attainment levels (see Table 7.11 below), although it does increase slightly when tertiary educational attainment levels are reached. Therefore, although there is a gender difference in favour of women at the lower educational attainment levels, this changes to a gender difference in favour of men or approximately equal with men at the higher levels of educational attainment. For example, when examining the sharing of information amongst those who either have no education or only primary school information, 70% of women compared to 59% of men use the internet for this purpose. However, for those surveyed who have tertiary level education, 79% of women compared to 76% of men have used the internet for this purpose. The reasons for these gender differences at lower levels of education are uncertain but it fits a similar pattern to the gender differences at lower levels of education in women gaining wider networks online (see section 7.2.1 above). It is proposed that this may be because of lower levels of freedom of movement offline amongst less educated women compared to their male counterparts. This could explain why poorly educated women are more likely to share information online compared to men, but further research is needed in this area.

7.4.6.2 Gender Norms

On many occasions throughout the qualitative research, the gender differences in the sharing of information were discussed. These discussions focused on two key themes. One theme is that women are more collaborative than men and therefore will naturally want to share information more than men, with the internet simply facilitating this desire to share. The other theme is that women like to "gossip" and that the internet amplifies women's ability to do this. Each of these themes will be examined in turn.

Table 7.11 How often do you use the internet to share knowledge with other people? Responses analysed by gender and educational attainment.

Frequency of Use the internet to share knowledge with other people	No school or primary school			O' Level or training after O' Level			A' Level or training after A' Level			Tertiary		
	Female (n=27)	Male (n=17)	Gender Difference	Female (n=64)	Male (n=43)	Gender Difference	Female (n=51)	Male (n=45)	Gender Difference	Female (n=47)	Male (n=42)	Gender Difference
N= 336												
Daily	29%	18%	11%	27%	37%	-10%	24%	42%	-18%	40%	50%	-10%
Weekly	37%	41%	-4%	35%	21%	14%	33%	22%	11%	28%	21%	7%
Monthly	4%	0%	4%	6%	5%	1%	10%	9%	1%	11%	5%	6%
Subtotal Regularly	70%	59%	11%	68%	63%	5%	67%	73%	-6%	79%	76%	3%
Once in a while	22%	12%	10%	19%	26%	-7%	27%	18%	9%	11%	17%	-6%
Never	8%	29%	-21%	13%	11%	2%	6%	9%	-3%	9%	7%	2%
Don't know	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	1%
Grand Total	100%	100%	0%	100%	100%	0%	100%	100%	0%	100%	100%	0%

7.4.6.3 Women are More Collaborative than Men

On the one hand, there were comments from the KIs that women are more sociable and prefer to work more collaboratively than men and therefore want to share information more than men. On the other hand, there were comments that men gather information as a way of gaining power and of having a competitive advantage over others. Consequently they are less willing to share the information. Box 7.13 below reveals some of these comments.

Box 7.13 Illustrative quotes by Key Informants about women being more collaborative than men.

KI Charles, the IT teacher from the secondary school stated that the female pupils used social media to share information more than the male pupils because,

“women are far more social compared to men....when it comes to sharing information, a girl will easily share with another girl compared to a man..... a man will keep it to themselves”.

Interestingly, he also linked this with the fact that women, unlike men, would prefer to use their social media networks to find information and are therefore not using search platforms as much as men.

KI Monica, a government gender project officer, explains,

“(Women) get information and they want their friends to know.....Maybe women are socialized to work more collaboratively? Women are good at organizing themselves and working together in a group but for men it is very hard.”

“Men can get info but they won’t share it. Whether it’s the way they were socialized or whether they were wired that way. Are they selfish? Maybe it’s an issue of controlling information? There is a phrase “If you want to not empower someone, hide the information from someone”.

When questioned about differences in sharing information in Nakaseke, KI Brian, comments about how the competitiveness of men might prevent them from sharing;

“Even best practices (men) wouldn’t want to share. For competition, they wouldn’t want someone else to do this, so they wouldn’t want to share.”

7.4.6.4 Women are “Gossiping” Online

On several occasions, as part of discussions about gender differences in the use of the internet, the idea was raised that women use social media more than men and that when women are “sharing information” online, they are actually “gossiping” or “wasting time” when they could be doing more productive or reproductive activities.

For example, at the men’s FGD at Site 1, there was a discussion about whether men or women are using the internet more and many of the men believed that women are using it more than men as they have less work or lighter work than men. There is the also perception that women are using social media more than men and in some cases there is the belief that are using it for “olugambo” or “gossiping”. Box 7.14 below shows some of the comments from one of the KIs and one of the participants.

These comments reflect gender norms that view the role of women as domestic and they also give a sense of the threat that the technology poses as it can “amplify” their anger and distract women from looking after men. The negative positioning of women’s contributions to knowledge online will be discussed further in chapter 9, but it is important to note the comments by key informant Ambrose who links the narrative that women are “gossiping” with men’s construction of themselves as the gatekeepers and sources of knowledge in society. He states that,

“It is a macho opinion that women can’t know much, that they are rumour mongering. ...Women have allowed themselves to be lumped into “gossipers”, so that they think themselves that they are gossiping because they have been told that and they characterize other women in the same way. We use the internet differently but then we bring in social characterisations which trivialise the way that women use internet as a space. Men have constructed themselves as the sources of knowledge which is why they dismiss women’s views.”

Box 7.14 Comments made by a key informant and a participant about women using the internet for trivial activities, such as gossiping.

KI Brian, manager of the Nakaseke Telecentre states that the internet allows women to “gossip” and indeed facilitates their desire to share their problems and their discontent,

“Before the phones came, women we know were “gossiping”, they were moving from home to home, they were sharing their problems about their relationships, children etc where as men wouldn’t do that. Men are more reserved in terms of their challenges. The technology amplifies this, the anger, the gossip.”

In the PGEKAMMI, there was a debate about whether men or women used the internet more. One male participant (PGEKAMMI01) expressed his opinion that men were using the internet for serious things, where as women were using social media for trivial things and that this was stopping them fulfilling their assigned domestic role,

“it is women, they are the ones who enjoy the most on WhatsApp. Like my caseI am receiving information, news like that, such things, advertising my things, that’s what I go for, WhatsApp..... For women, women can enjoy nonsense on WhatsApp, every nonsense on WhatsApp, things which are not important.... you find her laughing because she is enjoying WhatsApp (laughter).”

He went on to say that,

“When men get home after work, they are not served with tea or even prepared to bathe by their wives because they are busy on WhatsApp, she even doesn’t feel your worth coming back from work.”

He goes on to say, that even though women and men are using the internet in different ways, this does not necessarily mean that the way that women are using it is not important as the way that men are using it,

“If a man is using the internet to look at sports and politics, he is not rumour mongering, where as a women who uses it to find ways of bringing up the children, her relationships, her religious life, herself, e.g. fashions, she is told that she is just rumour-mongeringIt trivalises the way that women use the internet when they are trying to improve themselves, their families, their economic circumstances. “

In a similar way, key informant Michael, an ICT and development specialist working on ICT projects in Uganda, describes this characterization of women as ‘rumour mongering’ online as,

“a tool of controlling, it’s dominance, it’s patriarchy..... It depends on the definition of rumour!! It depends whether “rumour mongering” is finding out about the market, connecting with other women, learning about what is happening around them etc. Rumour should not be in a negative thing, it may be bringing them together for sharing ideas and learning and networking. It can be an opportunity.”

Interestingly, the narrative that women are using the internet for trivial purposes and for “gossiping” is a similarly echoed in the narrative that President Museveni used as an excuse for imposing a tax on social media in July 2018. According to a BBC News article (2018),

“(Museveni) wrote a letter to Finance Minister Matia Kasaija insisting that the revenue collected by the social media tax would help the country "cope with consequences of olugambo [gossiping]". “

In summary, it appears that using the internet for sharing information may well be more important to female rather than male participants. Unexpectedly, the research suggests that less educated female participants may be using the internet more for this purpose than their male counterparts possibly because of their limited mobility. Gender norms may be influencing the use of the internet for sharing information with gender identities suggesting that women may be more collaborative than men and therefore have a greater desire to share what they know. On the other hand, there are examples of a damaging narrative that has developed that categorises women’s sharing of information online as “gossip”, thus undermining the importance of this transfer of information.

7.5 Opportunities for Psychological Empowerment

As reported in the previous chapters, the respondents to the questionnaire stated that the internet had made them more self confident. It is interesting to note that in Figure 6.2 above, 18% of the female respondents stated that their increased self-confidence was related to the wider association that they had gained online. Out of this 18%, three female respondents spoke about the ability to associate with people outside their usual socio-economic circle. In a similar way, one of the case study participants Flavia (Box 7.1 above) spoke about her experiences of making new social contacts online that were geographically, ethnically, socially and educationally different from her offline contacts and how these interactions had affected her,

“It has motivated me; it has given me courage and confidence to express myself.”

Furthermore, some women (8 out of 97) stated that the internet is helping to become more self confident because it provides them with emotional support (see Figure 6.2). One of the respondents of the questionnaire explains how her self-confidence has increased because she can share her troubles with other people online,

“As a human being there are challenges. When you chat on WhatsApp about them, you do not feel the same burden that you had” (JASNAK07)

Another respondent (AMAKAM15) speaks about how she felt hopeless before the internet and implied that the internet had increased her self confidence by giving her a sense of agency that she could reach out to get problem solving support. Participant Brenda spoke about feeling as if she was “in a grave” without being able to use the internet to communicate with her friends.

In the qualitative research, there were comments that suggested that the participants’ awareness of the world around them had increased as a result of

these increased interactions with people outside their usual social sphere offline. The case studies in Box 7.1 and Box 7.2 (above), provide examples of how these wider interactions with social contacts are changing the participants' perspectives. The quote from participant PGESTB01 also highlights this when she describes the impact of her broadened interactions online,

“the world now is becoming smaller so the interactions we learn from other cultures.”

Furthermore, it appears that the ability to share information/knowledge has had a positive psychological impact on some women. Analysis of the reasons why the internet is perceived as increasing people's self confidence, revealed that 4/97 women attributed their increased self confidence to their ability to obtain information and share it with others. It is interesting that only 5 out of 75 (7%) of the male respondents who replied that the internet had made them more self confident assigned this confidence to their interaction with others online compared to 18% of the female respondents (see Figure 6.2). This tentative result seem to be suggesting that the ability to interact with others and gain wider networks online may be more important to the female participants although further research would be required to confirm this.

7.6 Emerging Findings

This final section examines how these changes in the lives of people, described early in this chapter, are providing opportunities for empowerment using the power analysis framework as set out in Chapter 2.

7.6.1 Challenging Power Over Interaction With Others

The research has shown that the use of the internet has brought about fundamental changes in terms of the participants' ability to interact with other people. The participants can now communicate with people that they could not communicate with before and can associate with a wider group of people, often from different parts of the world or from different socio-economic backgrounds,

within the new online space that the internet affords. There is evidence that these new freedoms of association may be particularly beneficial for the female participants because of the offline gender constraints over association that they face. The domestic constraints and social controls over women's ability to freely associate have limited women's ability to network and interact, compared to men. It appears that the use of the internet has helped them to challenge this power over their association and has allowed them to interact more freely. However, there are still gender norms restricting their interaction online as will be discussed below.

7.6.2 What are the Opportunities for the Use of the Internet to Empower Women?

7.6.2.1 Economic Empowerment

There is evidence that the ease and low cost of online communication combined with the increase in the participants contacts online has led to some of the participants having the *power to* advertise their livelihoods online. 50% of female respondents agreed that they were advertising their goods and services online with 39% of them doing so on a regular basis according to the data from the questionnaire. 12/20 case study participants stated that they were using the internet to advertise, often for the first time and without the need to travel to do so or use intermediaries. According to some of the participants, a significant part of their income now comes from online sales, thus providing them with a significant economic benefit.

7.6.2.2 Social Empowerment

The increase in social interaction online appears to be providing some of the participants with *power to* increase their social capital, as shown in the mini case studies examples in Boxes 7.8 and 7.9 above, This social capital acts as a resource which the participants can draw upon when required. It therefore enhances their *power with* others. Some of the participations have made connections online that they see as "protection" or as a source of help in times of need. Others are using

their wider networks to get information or to obtain opportunities in ways that can help them or their communities.

The increased communications and the new connections that the participants can make online also increases their *power with* others in the sense of reducing their isolation and enabling them to participate more in society. The internet provides a space outside their physically limited social space where they can share the burden of their problems with others, gain validation of those problems through shared recognition and receive suggested solutions to resolve them. This new communal space appears to be of great importance to the participants. One of the Participants Brenda, who lives in a village outside the rural town, Site 2, describes her life without the internet as -“it’s like being in a grave” because of her inability to communicate with her friends. The possibility of reducing this social isolation and fostering a sense of inclusion is particularly beneficial in a situation where women are likely to be more isolated than men. There is also a sense in which the use of the internet may be more beneficial to women not only because of their relative isolation, but because it provides a channel to air their frustrations about their own gendered constraints. This is captured by the quote from Participant Gloria, one of the midwives from Site 2, who says that she uses the internet as a means of relieving stress,

“You are a man’s property.... you are one of his things and you don’t have freedom even when you quarrel with him. If he beats you, you can’t go back home where you came from, your father will say go back, we gave you away... yea it (the internet) helps emotionally....it is an emotional mechanism of coping with stress”.

The use of the internet also provides a means for the participants to share their own knowledge and information, building on their *power with* others. 71% of the female respondents to the questionnaire are using the internet to share knowledge with others on a regular basis. The ability to share knowledge with others is also of great importance to the participants and is the joint 2nd most common reason for the female respondents using the internet. The quotes from

the participants suggest that they want to use their online connections to help other people by sharing what they know. From a social constructivist perspective, the internet is facilitating some sort of social learning, that is, learning through social participation by allowing the participants to articulate what they know and share their experiences.

It could be argued that the ability of the participants to share information and knowledge is challenging *power over* the production of knowledge. Before the introduction of the internet, many of the female participants would only have been able to share knowledge with their immediate local contacts. As also found in section 6.2, there is evidence to suggest that previously men were seen as the knowledgeable ones, the ones who “know”. The internet has challenged this perception. The changes in the generation of knowledge will be discussed in more detail in Chapter 9.

7.6.2.3 Psychological Empowerment

The use of the internet for interacting with others appears to be empowering the participants in terms of *power within* by giving them self confidence and agency. There were several quotes from the participants that their use of the internet had given them increased hope as now they could share their problems more widely with others and seek solutions from them. The analysis of the responses, as to why the participants had become more self-confident suggest that the emotional support that they receive from interactions online is a cause of their increased self confidence. As discussed previously some women have less mobility than men and so are more likely to be more socially isolated which possibly explains why the use of the internet for emotional support appeared to be so important to many of the participants.

The ability to interact with a much wider network of people who may be outside the confines of ones usual socio-economic social circle can provide, not only confidence but a different perspective on the world around them. The mini case study of participant Flavia (Box 7.1) shows how a dancer from Site 1 is now discussing women’s issues with women all over the world and this “has given

(her) courage and confidence to express (herself)". These types of interactions can help women to reframe their understanding of the world around them and this awareness raising can be a step towards empowerment.

7.6.3 What are the Gender Dynamics in Respect of the Opportunities for Empowerment?

Although there were no significant gender differences in using the internet to advertise, the female respondents appear to value the use of the internet for this purpose more than their male counterparts (see section 7.3.1). This may be because many of the women have domestic responsibilities and therefore often work from home as micro-entrepreneurs, such as tailors, bakers, hairdressers, craft-makers etc. They particularly value the ability to advertise online from home rather than the need to travel to advertise and/or use middlemen to promote their goods or services.

The ability to increase their social capital online could be particularly beneficial to women, once again as a consequence of their limited freedom of movement because of their domestic and social constraints; the female participants have fewer opportunities than men to be able to travel and therefore to network face to face. Their use of the internet enables them to widen their networks and increase their social capital without the need to travel. At Site 1 there is a statistical association between gender and having wider networks online ($p = 0.043$) with 87% of the female participants compared 75% of the male participants saying that they had wider networks online. It was interesting that the gender gap appears to be widest when the female and male participants have lower levels of education. The data suggests that this could be because these women have greater constraints on freedom of association offline. It makes sense that if you have limited freedom of movement offline you may try to compensate and build up your social capital online. There is also some evidence from the qualitative research that it may be the more vulnerable participants who are exploiting their online networks as a source of social capital. Four out of five of the case study participants, who spoke about using their networks from a social capital resource perspective, were from female-headed households.

Although there were no overall gender differences in the frequency of sharing knowledge online, the biggest gender difference is amongst participants with the lowest levels of education and the highest levels of poverty. As discussed above, this could be a reflection of the lack of freedom of movement and association amongst poorer and less educated women because of gender inequalities which renders the online freedom to share information more valuable to them. Clearly more research is needed in this area.

It is significant that just as women for the first time have been able to share what they know with many other people, a narrative has developed amongst some of the male participants and even KIs that devalues the sharing of knowledge or information by women online. There is the perception and narrative that women are using social media more frequently than men and that this sharing of information is no more than “gossip”. According to the manager of the telecentre, for example, women were “gossiping” beforehand but now, “the technology amplifies this, the anger, the gossip.” There is a clear narrative that is operating at different levels to trivialize and undermine women’s conversations, which are often sharing vital information about livelihoods or health issues for example. This narrative could be viewed as a patriarchal attempt to curb the new found freedoms of association of women and their ability to generate and share knowledge online. This is confirmed by two of the KIs. KI Ambrose explains that,

““It is a macho opinion that women can’t know much, that they are rumour mongering. Men have constructed themselves as the sources of knowledge which is why they dismiss women’s views.”

Furthermore, KI Michael also sees this narrative as,

“ “a tool of controlling, it’s dominance, it’s patriarchy..... It depends on the definition of rumour!!Rumour should not be in a negative thing, it may be bringing them together for sharing ideas and learning and networking. It can be an opportunity.”

As noted in section 7.4.6.4, it is also interesting that the narrative of “gossiping” or “olugambo” was also used by President Museveni as the excuse to introduce the social media tax in Uganda in July 2018 and hints at how the sharing of knowledge/information online is seen as a real threat to the broader power structures within Uganda.

7.6.4 What Type of Women and in Which Circumstances?

The findings in this chapter have highlighted the way in which the contextual circumstances of the participants affect their internet use. It appears that the extent of internet use within a community influences the opportunities for empowerment. For example, the potential of advertising online was only being fully realized at Site 1 and Site 3 because of the large number of the other people in these areas who are online. Conversely, the limited numbers of local people online at the rural (Site 2) limit the number of potential customers to whom the participants can advertise online.

The educational attainment of the participants appears to be influencing the opportunities for empowerment in respect of their social networks. Those participants with lower levels of education appear to be benefitting more from the ability to gain wider networks online possibly because they tend to have less decision-making power over their ability to travel. On the other hand, from the qualitative research it also appears that women who are slightly better educated, wealthier and more exposed to different groups of people offline may be better placed to make contacts that are bridging socio-economic divides online. In effect, the ability to network offline at each of the sites appears to influence the use of the internet. This may put them at a greater advantage in terms of exploiting their social capital that they have gained online to the full. Furthermore, the results reveal that the participants with tertiary education were sharing their knowledge more frequently than those participants who were less wealthy or who had lower levels of education.

The research also highlighted that many women may not know about the possibility of advertising online and may also not have the skills to do so. It appears that the Site 3 participants who had had training on how to advertise online were enabled to really use the internet to their social and economic advantage.

7.6.5 Summary

The research highlighted in this chapter has shown how the use of the internet has increased interaction with others and has provided many opportunities for empowerment, not just in terms of facilitating access to resources such as social capital, but in terms of challenging the *power over* the female participants to freely associate and to widely share their knowledge and information that they have obtained. Chapter 9 will pick up on some of these themes and will discuss them in more depth alongside the relevant literature.

Chapter 8 Enabling Self Expression

8.1 Introduction

The cultivation of voice³⁷ and the ability to express oneself is an important part of the process of empowerment (Buskens and Webb, 2014, Cummings and O’Neil, 2015). This results’ chapter of considers how the internet is acting as a platform to increase the participants’ ability to express themselves. It commences with an analysis of the changes in the control over self expression that the internet has brought about. It examines the possible reasons for the increase in freedom of expression online compared to offline.

The chapter progresses by examining the opportunities for social and political empowerment that the increased ability to express oneself has brought about. It reveals what type of content the participants are creating online, whether they are joining discussion groups online and if so, what they are discussing. It then considers the extent to which they are expressing their opinions about issues affecting their community and their country. Throughout the chapter the gender dynamics surrounding these types of self expression are examined as well as what type of women in which circumstances are taking advantage of the opportunities that the internet affords.

8.2 Changes in Control Over Self expression

The findings from the research suggest that the use of the internet challenges the power over freedom of expression that is exerted through socio-cultural gender norms offline. The female participants perceive that they can express themselves more freely online compared to offline. Overall, 82% of the women surveyed stated that they could express themselves freely online (see Table 8.1 below),

³⁷ Voice is defined as making ones views and interest known to others whether at the household, community or national level, either individually or collectively (O’Neil et al, 2007)

compared to only 51% who stated that they could express themselves freely offline (see Table 8.2 below). The detailed breakdown of the difference in freedom of expression online compared to offline in study sites 1 and 2 can be found in Tables 8.3 (below). The difference in site 3 was not calculated as there were only 3 men and 17 women.

8.2.1 Reasons for Greater Freedom of Expression Online

The reasons for the difference between freedom of expression online compared to offline are complex and are revealed by the qualitative research as well as some of the responses to the questionnaire. It appears that the internet provides a safe space for women to express themselves without fear, it allows them to express their views with anonymity should they so chose and creates a space where women believe that their views are more likely to be listened to. This allows the female participants to overcome some of controls that are exerted upon them offline and to be able to express themselves freely online. The evidence behind these reasons will be analysed below.

Table 8.1 “I can express myself freely online”. Responses analysed by gender.

I can express myself freely online	Female	Male	Grand Total
	(n=189)	(n=147)	(n= 336)
Strongly Agree	30%	41%	34%
Agree	52%	44%	49%
Sub-total Agree	82%	86%	83%
Neither agree or disagree	6%	3%	5%
Disagree	10%	10%	10%
Strongly disagree	2%	1%	1%
Sub-total Disagree	12%	11%	11%
Grand Total	100%	100%	100%

Table 8.2 “I can express myself freely offline.” Responses analysed by gender.

I can express myself freely offline	Female	Male	Grand Total
	(n=189)	(n=147)	(n=336, p = 0.077*)
Strongly Agree	13%	18%	15%
Agree	38%	44%	40%
Sub-total Agree	51%	62%	56%
Neither agree or disagree	12%	7%	10%
Disagree	35%	27%	32%
Strongly disagree	3%	3%	3%
Sub-total Disagree	38%	30%	34%
Don't know	0%	1%	0%
Grand Total	100%	100%	100%

* - The chi squared test was performed to establish whether there is a relationship between gender and the response to “ I can express myself freely offline”. It was calculated by comparing the “sub-total agree” responses with the “sub-total disagree” responses.

Table 8.3 This table compares the gender differences in response to " I can express myself freely offline" across the different study sites.

	Site 1			Site 2 Overall			Site 2a			Site 2b			Site 2c		
	Female	Male	Gender Diff*	Female	Male	Gender Diff*	Female	Male	Gender Diff*	Female	Male	Gender Diff*	Female	Male	Gender Diff*
	(n=82)	(n=76)		(n=90)	(n=68)		(n=38)	(n=20)		(n=29)	(n=26)		(n=23)	(n=22)	
Strongly Agree	9%	18%	-10%	17%	19%	-2%	8%	10%	-2%	34%	35%	0%	9%	9%	0%
Agree	39%	39%	0%	36%	47%	-12%	37%	60%	-23%	34%	38%	-4%	35%	45%	-11%
Sub-Total Agree	48%	58%	-10%	52%	66%	-14%	45%	70%	-25%	69%	73%	-4%	43%	55%	-11%
Neither agree or disagree	9%	8%	1%	13%	7%	6%	18%	5%	13%	14%	12%	2%	4%	5%	0%
Disagree	39%	30%	9%	33%	25%	8%	37%	25%	12%	17%	12%	6%	48%	41%	7%
Strongly disagree	5%	3%	2%	1%	1%	0%	0%	0%	0%	0%	4%	-4%	4%	0%	4%
Sub-total Disagree	44%	33%	11%	34%	26%	8%	37%	25%	12%	17%	15%	2%	52%	41%	11%
Don't know	0%	1%	-1%	0%	1%	-1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Grand Total	100%	100%	0%	100%	101%	-1%	100%	100%	0%	100%	100%	0%	100%	100%	0%
* - Diff refers to the gender difference in percentage terms between the female and the male participant's responses															

8.2.1.1 Safe Space to Express Oneself

The qualitative research suggests that some of the female participants may not have the confidence to express themselves freely offline and that the internet provides them with a less confrontational, private space where they can compose their thoughts and give voice to their opinions. Box 8.1 below sets out the comments made by some of the participants about their preference for expressing themselves online.

Box 8.1 Illustrative quotes from Participants explaining why they prefer to express themselves online.

“Sometimes you don’t have that confidence to say some words face to face but online the words can be said.”

Participant FGDNAKMI02

:

“online when you make mistakes no one will comment on that but when you are offline you have to be specific, you can avoid those mistakes but when you are online you fear nothing.”

Participant FGDNAKMI03

“online you express yourself freely unlike ... (offline)... you fear that people are around but if its online you can sit in private you organise yourself, you type and even edit where necessary unlike (offline) when you have said something you cannot even withdraw it”

Participant FGDSTB03

“Sometimes we fear to talk face to face but when I’m writing I can write anything I feel I’m satisfied because you take your time you write what you want you change, then you just post. But when you are together sometimes... there are some things you don’t say.”

**Participant Yvonne from Site 3,
when speaking about expressing herself
about politics**

8.2.1.2 Anonymity

Another possible reason for women stating that they can express themselves more freely online is that they do not feel that they are being judged so much online compared to offline. This idea can be seen within the comments made by study participant Fortunate above...

“no one is looking at you, no one is seeing you, so you can do what you want”

but it also came out in the case study with Flavia from Site 1. She explained that she feels less comfortable expressing herself face to face with the types of people that she communicates with online, who are of a higher socio-economic status than her, because offline,

“They might be judging me instead of listening to me, someone is judging.”

The protection that the internet affords in terms of expressing oneself without being judged for being a certain type of person was revealed in several of the other interviews. Participant Rashida, a student at the PTC in Site 2c explained that she could say things online that as a “role model” she couldn’t say within her own community. Similarly Participant Eunice from Site 2b also spoke about preferring to express herself online because she’s engaging with people outside her local community who won’t be able to laugh at her.

A KI, Janet, the Community Development Officer from Site 1 discussed how women can express themselves more freely online because they can hide their identities and therefore express themselves without fear of retaliation. This was confirmed by two of the case study participants. One of them, Yvonne from Site 3 spoke about relying on anonymity for posting her views on more controversial topics and another, Deborah, from Site 1 also spoke about the creating a pseudo identity so that she could “come out” online and discuss her sexuality without the threats to her own identity.

Another possible explanation for the preference for expressing oneself online rather than offline, is whether you feel listened to. 71% of women agreed (strongly or otherwise) that “ I feel that people are more willing to listen to my point of view online rather than offline”, with 20% of female respondents strongly agreeing with this statement (see Table 8.4 below). This finding was seen across all three study sites (Table 8.5 below).

Table 8.4 “I feel that people are more willing to listen to my point of view online rather than offline.” Responses analysed by gender.

	Female	Male	Grand Total
	(n=189)	(n=147)	(n= 336, p =0.310 *)
Strongly Agree	20%	27%	22%
Agree	51%	36%	45%
Sub-total agree	71%	63%	67%
Neither agree or disagree	11%	14%	13%
Disagree	17%	21%	19%
Strongly disagree	1%	1%	1%
Sub-total disagree	18%	22%	20%
Don't know	0%	1%	0%
Grand Total	100%	100%	100%
* - The chi squared test was performed to establish whether there is a relationship between gender and the response to “ I feel that people are more willing to listen to my point of view online rather than offline”. It was calculated by comparing the “sub-total agree” with the “sub-total disagree” and the “neither agree or disagree” responses.			

8.2.2 Gender Dynamics

8.2.2.1 Gender Differences

Whilst there is a minimal gender difference in the percentages of women and men stating that they can express themselves freely online (Table 8.1 above), there are gender differences in offline freedom of expression overall (Table 8.2 above), which is seen across all the different study sites (Table 8.3. above), with women having less perceived freedom of expression offline. Furthermore, if the

participants from Site 3, (who had high rates of offline self-expression for reasons discussed below), are excluded, there is a statistical association between gender and freedom of expression offline ($p = 0.042$) at the two main study sites (Site 1 and Site 2). There is an overall 32% increase between agreement to online and offline freedom of expression for women compared to a 24% increase for the men. This large gender difference persists across all the study sites (see Figure 8.1 below). It appears that although the internet has brought about increases in the perceived freedom of expression to both genders, the biggest change has occurred for the female respondents.

8.2.2.2 Safe Space to Express Oneself

The comments from the participants and the key informants strongly suggest that there are constraints which prevent women in particular from expressing themselves offline and that these constraints are reduced online because of the “safe space” which the internet facilitates. Several of the participants explained that they are frightened of speaking out offline but not online. For example, Participant Rashida from Site 2c states,

“.....personally I cannot express myself face to face (as) freely as I express on internet I think it happens to most of the girls and you may find that boys do not fear, they can say anything offline.”

It is not entirely clear what they are all afraid of but it appears that some of them are frightened of physical attack if they speak out face to face. Participant Cathy from Site1 described how she fears speaking out face to face even with her husband and so she uses the phone to discuss issues with him so that there’s no chance of her being beaten up. Participant Sharon from Site 1 suggests that,

“if you are on internet ...you can also express your views and even if there is something going on in the country you can write, you can post your views. And even if they like it or not that’s okay, they can’t attack you back.”

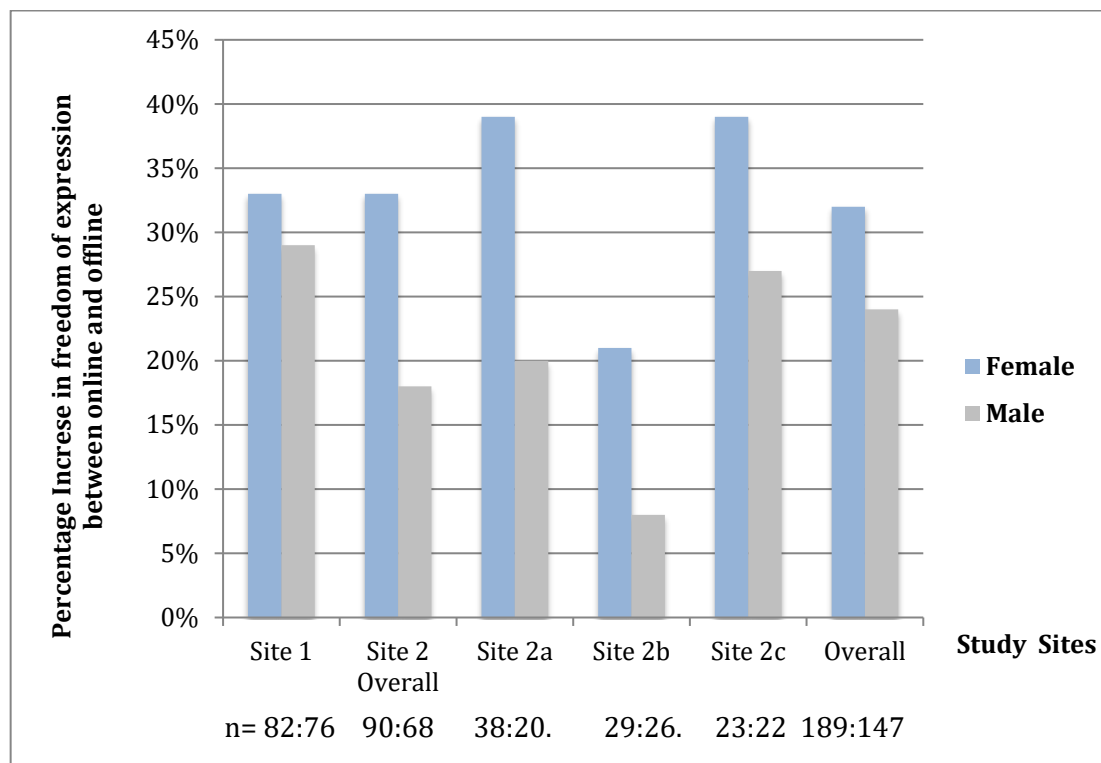
Table 8.5 "I feel that people are more willing to listen to my point of view online rather than offline" Responses analysed by gender at each of the study sites.

	Site 1			Site 2a			Site 2b			Site 2c		
	Female	Male	Gender Diff*	Female	Male	Gender Diff*	Female	Male	Gender Diff*	Female	Male	Gender Diff*
	(n=82)	(n=76)		(n=38)	(n=20)		(n=29)	(n=26)		(n=23)	(n=22)	
Strongly Agree	23%	28%	-5%	13%	30%	-17%	14%	38%	-25%	26%	9%	17%
Agree	55%	33%	22%	55%	35%	20%	52%	27%	25%	57%	55%	2%
Sub-total agree	78%	61%	17%	68%	65%	3%	66%	65%	0%	83%	64%	19%
Neither agree or disagree	7%	16%	-8%	18%	15%	3%	17%	12%	6%	0%	9%	-9%
Disagree	13%	21%	-8%	13%	15%	-2%	17%	23%	-6%	17%	27%	-10%
Strongly disagree	1%	1%	0%	0%	5%	-5%	0%	0%	0%	0%	0%	0%
Sub-total Disagree	15%	22%	-8%	13%	20%	-7%	17%	23%	-6%	17%	27%	-10%
Don't know	0%	1%	-1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Grand Total	100%	100%	0%	100%	100%	0%	100%	100%	0%	100%	100%	0%
* - "Diff" refers to the difference found by comparing the percentage of male and female responses												

She is saying that she won't be "attacked" for making her opinions known online unlike offline although it's not clear whether she means criticized or actually physically attacked. KI Michael gives the explanation that women fear conflict if they speak openly in public and would rather therefore speak within the safe, private space of the internet. He says,

"Women don't like to say things openly, it might be misinterpreted by your neighbour, you can be subject to a witch hunt and to victimization. Women are fearful of conflict. They would prefer to communicate in a more private space where they feel safe. The women would feel safer online. For the men, they will say things openly in the community, they have more courage."

Figure 8.1 Chart to Show The Percentage Increase In Freedom of Expression Online Compared To Offline Across The Different Study Sites by Gender.



8.2.2.3 Self Confidence & Gender Norms

There is also a sense that the female participants lack the confidence to communicate offline because of gender norms that assign men as having the authoritative voice within society. One of the study participants from Site 2, Fortunate, describes how women lack the confidence to speak out offline compared to men,

“(women) because that confidence of saying it publically they lack it, yet men can speak out whatever he feels here and women just shy away... they feel they cannot speak out.”

KI Monica also points out that women in general, including herself, find it difficult to express themselves offline because of their low self esteem,

“There is a lack of confidence offline, there is a fear and there is an element of socialization. Men are more authoritative offline”.

Eight out of the eleven key informants spoke about gender norms preventing women from freely expressing themselves offline. There were comments by the key informants about men being seen as the traditional communicators and as having an authoritative voice compared to women’s voice. The key informants’ explained that it is socially unacceptable for women to speak out when men are present in a formal setting even in the case of well educated women and that women lack confidence in their own communication skills. Furthermore, women who do speak out are considered to have been masculinised because of the assignment of voice as a masculine trait. Although, they don’t say it explicitly, there is the suggestion that online, these gender norms are weaker and so women feel that they can speak out. Some of the illustrative comments from the key informants on these gender norms are set out in Box 8.2 and 8.3 below.

Box 8.2 Illustrative comments by Key Informants about the gender norms that prevent women from speaking freely offline and make it easier to speak freely online.

KI Susan, a gender and ICT expert describes the gender norms that prevent women from speaking offline and therefore make it easier to speak online...

“If the man stands up and talks at a function, he represents both of you, you keep quiet and he talks on your behalf (even if you don’t agree).... Go back to the roots. In a home it’s the man who speaks, in a group it’s the man who speaks, even in parliament. Women are rubber stampers. Culturally, a woman is supposed to keep quiet. We’re not supposed to talk when a man is talking. It’s starts from where we grew up. In the home, the father speaks with the boys. The girls are in the kitchen with the mother. They are not informed; they are isolated. The girls are not supposed to join in. They tell you that you must get married and you must be submissive. We must submit to men. Men intimidate you. Even in parliament, the women don’t get the chance to speak. Women just ask for salt and soap. At clan meetings, men speak.”

She goes on to explain that...(as quoted above)

“Women don’t have the confidence to speak offline. Even at the workshops, ...more women tweet online but don’t speak out offline, even amongst activists.

KI Monica, a gender expert, explains that women find it easier to express themselves online rather than offline because of the accepted gender norms,

“Traditionally, women’s communication is limited. When the man is talking the women should keep quiet and listen. Men have more opportunities to talk, when a man stands up to speak in a community he is more listened to and when women try to talk nobody believes in them. Women’s confidence is very low. Even educated women feel shy to talk. Communication skills by women are very limited because they haven’t had any exposure, they haven’t had chance to speak before. It’s socialization...assigned duties and roles.” .

Box 8.3 Illustrative comment by Key Informant about the gender norm that prevent women from speaking when men are present.

KI Deborah, the CDO from Site 3, suggests that it is socially unacceptable for women to speak out if men are present. If they do speak out, they will be regarded” as a man”, even by other women. However, online, the barrier to women speaking out isn’t there.

“(as a woman)....how do you stand in front of men and you talk?People will say, “That woman is like a man. Can you imagine!” And even the women themselves would really point fingers at her. “Did you see her? She wants to be seen, what does she want?” If the husband is around then it’s an embarrassment to the husband....that the woman is really standing up and talking and making that contribution. So if it’s on my phone I can say whatever I want to say, but if I’m in a village meeting or a conference or whatever because of that cultural socialisation and all that, as a woman if there are men, still I feel I’m not the one to say it even if I know it.”

8.2.2.4 Anonymity

Implicit behind many of the comments from the participants is the notion that the internet provides a protective layer of complete or part anonymity that allows the participants to step out of the spotlight and express themselves freely. Participant Fortunate, a politician from Site 2, captures this when she says,

“women do not want to express themselves publically, they fear to talk but with just typing and posting (it) is easy no one is looking at you, no one is seeing you so you can do what you want that’s why there is a big difference. They can say whatever they want online but if you tell them to raise up their hands and say what they want everyone is shy.”

KI Dr Bosco, a gender and ICT expert, also pointed out that women in particular don’t want to express themselves face to face for social and cultural reasons but prefer to use more indirect methods of communication such as making anonymous posts online, using social media sites. According to him, this helps them circumvent gender norms and allows them to freely express themselves.

8.2.3 What Type of Women and in Which Circumstances?

8.2.3.1 Freedom of Expression Offline

Gender equality was measured using a proxy of the response to “Who is the Main Decision Maker about how the money you earn will be used?”. From the analysis of the data, in Table 8.6 (below), it appears that the higher the level of gender equality that a woman is experiencing, the more likely she is to be able to express herself freely offline³⁸. While 56% of female respondents who said that they were the main decision-maker agreed that they could express themselves freely offline, only 33% of those participants who said that their spouse/partner was the main decision-maker agreed that they could express themselves freely.

Table 8.6 “I can express myself freely offline.” Female Responses Analysed by the Responses to the Gender Equality question: “Who is the Main Decision Maker about how the money you earn will be used?”

Response to Gender Equality Question					
Response to whether one can express oneself offline.	Myself (n=124)	Both equally (n=41)	My spouse /partner (n=9)	Others* (n=15)	Grand Total (n=189)
Strongly Agree	15%	20%	11%	7%	13%
Agree	41%	33%	22%	32%	38%
Sub-total Agree	56%	53%	33%	39%	51%
Neither agree or disagree	15%	7%	11%	5%	12%
Disagree	29%	33%	44%	51%	35%
Strongly disagree	1%	7%	11%	5%	3%
Sub-total Disagree	30%	40%	56%	56%	38%
Grand Total	100%	100%	100%	100%	100%
* Includes parents, those not earning and those identified as "other"					

³⁸ However, it should be noted that the number of women whose partners made the decisions about how their money should be earned were not large enough to enable the chi-squared test to be undertaken and so further research would be required to confirm the relationship between gender equality and freedom of expression offline and online.

8.2.3.2 Freedom of Expression Online

It is interesting that using the same proxy question for gender equality to analyse the agreement to the statement about whether they can express themselves freely online, there is little difference between the responses (Table 8.8 below). 81% of all women agreed that they could express themselves freely online, compared by 80% who were the main decision makers about their earnings and 78% whose spouses made the decisions. This suggests that levels of gender equality are unlikely to be influencing freedom of expression online ; thus supporting the idea that gender norms are less of a constraint on freedom of expression online. However, caution must be taken with this finding given the small sample size. Further research is required before any conclusions can be drawn.

	Site 1			Site 2			Site 3			Grand Total		
	Offline	Online	Diff*	Offline	Online	Diff*	Offline	Online	Diff*	Offline	Online	Diff*
	(n=82)	(n=82)		(n=90)	(n=90)		(n=17)	(n=17)		(n=189)	(n=189)	
Strongly Agree	9%	27%	18%	17%	34%	18%	18%	12%	-6%	13%	30%	17%
Agree	39%	54%	15%	36%	51%	16%	41%	53%	12%	38%	52%	15%
Sub-total Agree	48%	81%	33%	52%	86%	33%	59%	65%	6%	51%	82%	32%
Neither agree or disagree	9%	5%	-4%	13%	7%	-7%	18%	18%	0%	12%	7%	-5%
Disagree	39%	13%	-26%	33%	6%	-28%	24%	12%	-12%	35%	10%	-25%
Strongly disagree	5%	1%	-4%	1%	2%	1%	0%	6%	6%	3%	2%	-1%
Sub-total Disagree	44%	15%	-29%	34%	8%	-27%	24%	18%	-6%	38%	12%	-26%
Grand Total	100%	100%	0%	100%	100%	0%	100%	100%	0%	100%	100%	0%
* - "Diff" refers to the difference found by comparing the percentage female responses offline to those online												

Table 8.7 This table compares the female responses to "I can express myself freely offline" with "I can express myself freely online" across each of the study sites.

Table 8.8 "I can express myself freely online." Female Responses Analysed by the Responses to the Gender Equality question: "Who is the Main Decision Maker about how the money you earn will be used?"

Response to whether one can express oneself online	Response to Gender Equality Question				
	Myself	Both equally	My spouse /partner	Others*	Grand Total
	(n=124)	(n=15)	(n=9)	(n=41)	(n=189)
Strongly Agree	27%	27%	22%	37%	29%
Agree	53%	60%	56%	46%	52%
Sub-total Agree	80%	87%	78%	83%	81%
Neither agree or disagree	8%	0%	0%	7%	7%
Disagree	10%	7%	22%	7%	10%
Strongly disagree	2%	7%		2%	2%
Sub-total Disagree	11%	13%	22%	10%	12%
Grand Total	100%	100%	100%	100%	100%
* Includes parents, those not earning and those identified as "other"					

Figure 8.1 and Table 8.7 (above) reveal that there is a 33% difference between online and offline freedom of expression in the female respondents from both Site1 and Site 2, which is similar to the 32% difference overall for women. However, there is only a 6% increase in freedom of expression online for the women at Site 3.

It is interesting to examine this outlier further. One of the reasons for this smaller difference at Site 3 is because the percentage of women stating that they can express themselves freely online (65%) is much lower than at the other study sites. The data suggests that there could be several reasons why the women at Site 3 feel that they are less able to express themselves online. First of all, the percentage of female participants who believed in "tracking of their use of the

internet by government or individuals” was slightly higher than at the other study sites (see Table 8.9 below). The reason for the increased concern over tracking could be a result of the higher educational levels of the participants at Site 3 (see Table 4.5), since there is a relationship between educational attainment and experience of tracking online (see Table 8.28 below). Secondly, Site 3 participants experienced slightly higher levels of sexual harassment (see Table 8.10 below). Thirdly, only 35% of women at Site 3 feel that they are listened to online, compared with over 60% of the participants at the other sites (see Table 8.11 below). On further analysis there is an association between age and feeling that you are more likely to be listened to online (see Table (8.12 below); the younger you are, the more inclined you are to feel that you are more likely to be listened to online. There is a higher proportion of older women in Site 3 (Table 4. 5).

Table 8.9 Have you experienced someone (e.g. government or individuals) tracking your use of the internet? Female responses analysed by study site.

	Site 1	Site 2	Site 3	Grand Total
	(n=82)	(n=90)	(n=17)	(n=189)
Yes	30%	27%	35%	29%

Table 8.10 Have you experienced sexual harassment when you have been using the internet? Female responses analysed by study site.

	Site 1	Site 2	Site 3	Grand Total
	(n=82)	(n=90)	(n=17)	(n=189)
Yes	53%	47%	59%	51%

Table 8.11" I feel that people are more willing to listen to my point of view online than offline." Female responses analysed by study site.

	Site 1	Site 2	Site 3	Grand Total
	(n=82)	(n=90)	(n=17)	(n=189)
Strongly Agree	23%	17%	18%	22%
Agree	55%	54%	18%	45%
Sub-total agree	78%	71%	35%	67%
Neither agree or disagree	7%	13%	18%	13%
Disagree	13%	16%	47%	19%
Strongly disagree	1%			1%
Subtotal disagree	15%	16%	47%	20%
Don't know				0%
Grand Total	100%	100%	100%	100%

Table 8.12 "I feel that people are more willing to listen to my point of view online than offline." Female responses analysed by age.

Age	18 to 30	Over 31	Grand Total
	(n=130)	(n=59)	(n=189,p=0.023)
Strongly Agree	20%	19%	20%
Agree	55%	45%	51%
Sub-total agree	75%	64%	71%
Neither agree or disagree	11%	12%	11%
Disagree	13%	24%	17%
Strongly disagree	1%	0%	1%
Subtotal disagree	14%	24%	18%
Grand Total	100%	101%	100%

* - The chi squared test was performed to establish whether there is a relationship between age and whether they feel that people are more willing to listen to their point of view more online than offline (comparing the responses of the "sub-total agree" and the "sub-total disagree" between those who are aged 18 -30 and those who are over 31 years old). See Table K8.12 in Appendix K for further details.

8.2.3.3 Gender Differences

Figure 8.1 (above) showing the gender differences in online and offline freedom of expression across the different study sites, reveals that the gender differences are more variable across Site 2 sub –sites. The wider gender differences in Site 2 are partly driven by the lower levels of freedom of expression offline stated by women in Site 2a and 2c (see Table 8.3 above).

At Site 2c only 43% of women stated that they could express themselves freely offline compared to 55% of men. This is interesting as there is very little difference in the levels of education, communication skills and most of the demographic variables of the female and male students of the schools. However, the IT teacher from the PTC, KII Wilber explained that ,although they are equally trained to speak at the front of the classroom, the girls were less willing to speak out in public compared to the men as a result of their lack of self confidence in certain social settings. He gave the example of how the female pupils at the PTC are willing and able to speak out freely when amongst their peers, *but* when in a more formal setting, with senior teachers present, for example, the female students are less willing to speak out compared with the male students. This suggests that social norms may be affecting female pupil’s ability to express themselves offline.

Similarly, at Site 2a, a health care setting, only 45% of women compared to 70% of men stated that could express themselves freely offline. This 25% difference is puzzling as the demographic profile yet again, is similar between the women and men who work at the hospital apart from the slightly lower educational levels and higher levels of domestic duties. One of the conclusions could be that the gender norms are more prevalent in institutional settings (that is, in the schools and at the hospital) and maybe this contributes to these gender differences and unwillingness to express oneself offline. Further research would be required to confirm this.

8.3 Opportunities for Social Empowerment

This section discusses the social implications of the changes in the way that the participants can express themselves online. It starts by examining how they can create and post their own content on social media and share this with their networks. It then looks at how they can now join online discussion groups and form online interest groups with people who they would not be able to discuss issues with face to face.

8.3.1 Creating Content Online

At all of the FGDs, participants spoke about posting photos, videos and making comments online concerning their friends and family, their livelihoods and community issues as examples of creating content online. According to the questionnaire, 92% of women are creating content online that they share on social media (see Table 8.13 below). Almost three quarters of the women surveyed (71%) are using social media to post about important events in their lives, 53% are sharing knowledge about their livelihood or profession, 46% are advertising their goods and services and 38% are expressing views about an issue affecting their community or country (see Table 8.14 below). This is the first time that the participants would have been able to create and then share this type of content, particularly visual content to multiple people within their networks at the same time. There is evidence that this is having a positive psychological effect on some of the participants section (see section 8.3.3 below.)

**Table 8.13 Do you ever create content online that you share on social media?
Responses analysed by gender.**

	Female	Male	Grand Total
	(n=189)	(n=147)	(n=336)
Yes	92%	95%	93%

**Table 8.14 Have you posted anything which is about the following?
Affirmative answers analysed by gender.**

Respondents	Percentage of respondents agreeing that had posted this type of information			
	Advertising my products or services	Sharing knowledge about my livelihood or profession	Expressing views about an issue affecting your community or country	Sharing an important event in my life
Female – yes (n =189)	46%	53%	38%	71%
Male – yes (n=147)	52%	61%	54%	71%
p value	n/a	n/a	p=0.007*	n/a

* The chi squared test was undertaken to establish whether there was a relationship between gender and whether they were using the internet to post their views about an issue affecting their community or country. The number of respondents stating that they posted this was compared for each gender. See Table K8.14 In Appendix K for further details.

8.3.2 Participation in Online Discussion Groups

At each of the FGDs, there were discussions about the participants taking part in online social and livelihood groups that they were unable to participate in offline. Most of the groups were family and friends groups but there were also many other types of groups that they had joined using social media. These groups included a local leadership forum, an international midwives' forum, a women's empowerment group, several sports group, a farmers' group, a sewing group, a disability group, a Christian group, and a HIV/Aids youth group. The members of these groups were not necessarily located in the same place as the participants and some of the members were located overseas.

In order to follow up on these revelations from the FGDs, the questionnaire asked whether in the last year the respondents had joined and taken part in a discussion group online on a social media platform, for example, on WhatsApp or Facebook, that they were not part of offline³⁹. Sixty percent of the women questioned replied in the affirmative (see Table 8.15 below). They were then asked what the group discussed and their answers are set out below in Table 8.16. Over a third of women (34%) stated that these groups were discussing matters about family and friends, 30% were discussing livelihoods and 25% issues about healthcare amongst other things. It is unclear to what extent they were contributing to the discussions, rather than just being part of the group. The analysis of the case studies revealed that 11/20⁴⁰ of the participants had joined online discussion groups through social media and that, in addition to the groups that were facilitating communication between family and friends, some of these groups were specialist interest groups discussing a range of issues including livelihoods, politics, community, sports, and health issues. There is evidence that in some cases the members of these groups came from different geographical locations, even overseas and that in most cases it would have been difficult for them to meet face to face on a regular basis. There is evidence that some of the participants are contributing to the discussions within these groups.

Table 8.15 Have you joined and taken part in a discussion group online? Affirmative responses analysed by gender.

	Female	Male	Grand Total
	(n=189)	(n=147)	(n = 336, p= 0.001*)
Yes	60%	77%	67%

* The chi squared test was undertaken to establish whether there was a relationship between gender and joining and taking part in a discussion group online.. See Table K8.15 In Appendix K for further details.

³⁹ It was explained to them that this was a group where the members didn't meet physically and only met online.

⁴⁰ Participants Maria, Brenda, Gloria, Fortunate, Rashida, Flavia, Cathy, Nancy, Scovia, Yvonne, Patience

8.3.3 Gender Dynamics

Whilst both genders create online content to the same extent (see Table 8.13 above), there are differences in the creation of political content online and these will be discussed in the section below. Women are 17% less likely to join an online discussion group with an association between gender and joining a group online ($p = 0.001$) (see Table 8.15 above). Furthermore, there are gender differences in what type of groups are joined online (see Table 8.16 below). Out of those participants joining discussion groups, 43% of those female participants had joined healthcare groups, compared to only 24% of those male participants ($p = 0.002$) and only 25% of the female participants had joined groups discussing politics online compared to 43% of the male participants who had joined a group online ($p = 0.003$).

The gender differences in creating certain types of content online, joining discussion groups and expressing certain views online, at first appear to contradict the fact that equal percentages of women and men believe that they can express themselves freely online. However, further analysis of the data suggests that there may be certain dynamics and constraints that affect women more than men and therefore prevent women from expressing themselves in terms of certain activities online. The fact that women are expressing themselves less than men in certain areas online could simply be a reflection of pre-existing offline “gendered interests”. For example, women may be unwilling to express their views on politics online, because politics may not be seen as an “appropriate” issue for women to participate in, due to gender norms and gender stereotyping. In chapter 6, the influence of these gendered interests in influencing the types of information that women and men seek online was discussed, where it was found that men were searching online for more political information and women searching more for other information such as health information.

Table 8.16 What does the online group discuss?

Percentage of affirmative responses by gender for each of the types of discussion groups listed below (NB this percentage represents the number of participants that had joined these groups, out of those participants who stated that they had joined a discussion group online)							
	Health care	Politics	Community issues that interest me	Sport	Friends and family matters	Livelihoods	Other issues
Female – yes (n=189)	43%	25%	32%	12%	58%	50%	13%
Male – yes (n=147)	24%	43%	38%	48%	48%	48%	21%
Gender Difference	19%	-18%	-6%	-26%	10%	2%	-5%
p value	0.001*	0.003*	n/a	n/a	n/a	n/a	n/a
*The chi squared test was undertaken to establish whether there was a relationship between gender and whether the online groups that they were part of were discussing certain issues. It compared the number of female and male respondents who agreed that they were discussing these issues. Further analysis can be found in Tables K8.16a and K8.16b in Appendix K.							

8.3.3.1 Gender Divide in Skillset for Self Expression

Another constraint to self-expression online, is perceiving that you do not have good enough IT skills to be able to do so. This could explain why they feel that they have the freedom to express themselves online, but cannot do so effectively. The findings in Table 8.17 (below) reveals that there is a statistical association between the perception of having good enough IT skills and joining a discussion group online ($p = 0.005$). Section 5.6.3.1 reported an overall statistical association between gender and the perception of IT skills (Table 5.17). This would suggest that the gender difference in the perception of IT skills is one of the reasons why there are gender differences in online self-expression in certain areas. Whether this perception is aligned with the reality of skills is uncertain.

Table 8.17 Have you joined and taken part in a discussion group online? Female responses analysed by “ My IT Skills not good enough”.

	My IT skills are good enough	My IT skills are not good enough	Grand Total
	(n=95)	(n=94)	(n = 188, p = 0.005*)
Yes	70%	50%	60%

*- The chi squared test was performed to establish whether there is a relationship between one joining and taking part in a discussion group online and whether you perceived that your IT skills were good enough to use the internet in the way that you want. See Table K8.17 in Appendix K for further details.

Similarly, there is a relationship between the perception of English language skills and joining a discussion group online ($p = 0.013$) (see Table 8.18 below). From the discussions that took place at all the FGDs and PGEs, it is understood that whilst most people communicate verbally and informally using their local language, English is often used for written and for more formal communication purposes. Once more, it needs to be remembered that there is a strong association between gender and perception of English language skills and so this analysis

suggests that the gender difference in joining online discussion groups may be partly influenced by women’s perceived lack of language skills.

Table 8.18 Have you joined and taken part in a discussion group online? Female affirmative responses analysed by “ My English is not good enough”

	My English is good enough	My English is not good enough	Grand Total
	(n=141)	(n=47)	(n=188, p=0.013*)
Yes	65%	45%	60%
*- The chi squared test was performed to establish whether there is a relationship between one joining and taking part in a discussion group online and whether you perceived that your English was good enough to use the internet in the way that you want. . See Table K8.18 in Appendix K for further details.			

8.3.3.2 Sexual Harassment

As shown in Table 8.19(below), 51% of the female participants stated that they had experienced sexual harassment online. Unexpectedly, none of the female participants raised the issue of sexual harassment during the FGDs and PGEs. Three of the case study participants (Maureen, Nancy and Eunice) spoke about being sexually harassed online and explained that this was in the form of unwanted pornography that they had received from male admirers. Surprisingly, they did not seem to be as disturbed as would have been imagined by this type of harassment. Furthermore, sexual harassment was not stated as a reason by any of the participants as a constraint for them not expressing themselves freely online. A possible explanation for this could be the high levels of sexual harassment that women face everyday in Ugandan society offline (Muhanguzi, 2011). However, this was not the focus of this research and further research would be required to confirm this supposition. The gender difference in the experience of sexual harassment was also not as large as expected compared to other research (WOUGnet, 2015, Pew 2015). This is possibly a result of the particular circumstances that existed at one of the study sites (Site 2) where the overall gender difference in experiencing sexual harassment was only 1% (see Table 8.10 above). According to the KIs, it appears that there is a shortage of men

at the sub-study sites within Site 2, partly because of the large number of men killed as a result of the civil war in this area and partly because of the gender division of labour, which means that there are more female healthcare workers at the hospital and there are more women wanting to become primary school teachers at the PTC. This demographic difference has resulted in the men in the town being subjected to sexual harassment online as well as the women. One male participant raised this as a problem in the town at the FGD to the surprise of the researchers.

Table 8.19 Have you experienced sexual harassment online?. Responses analysed by gender.

	Female	Male	Grand Total
	(n= 189)	(n=147)	(n = 336, p = 0.052*)
Yes	51%	40%	46%
* - The chi squared test was performed to establish whether there is a relationship between gender and whether one has experienced sexual harassment when using the internet.			

8.3.4 What Type of Women and in Which Circumstances?

8.3.4.1 Marital Status

The data analysis also suggests that there may be a possible relationship with marital status and self- expression online in these areas although no statistical associations have been found. A higher percentage of single women compared to partnered women, appear to be joining discussion groups (see Table 8.20 below). This may be a consequence of single women having more free time to engage in these online activities on a regular basis or could be a reflection of intra-household gender dynamics and gender norms that are preventing women from expressing themselves in certain ways. Further research would be required to confirm the relationship.

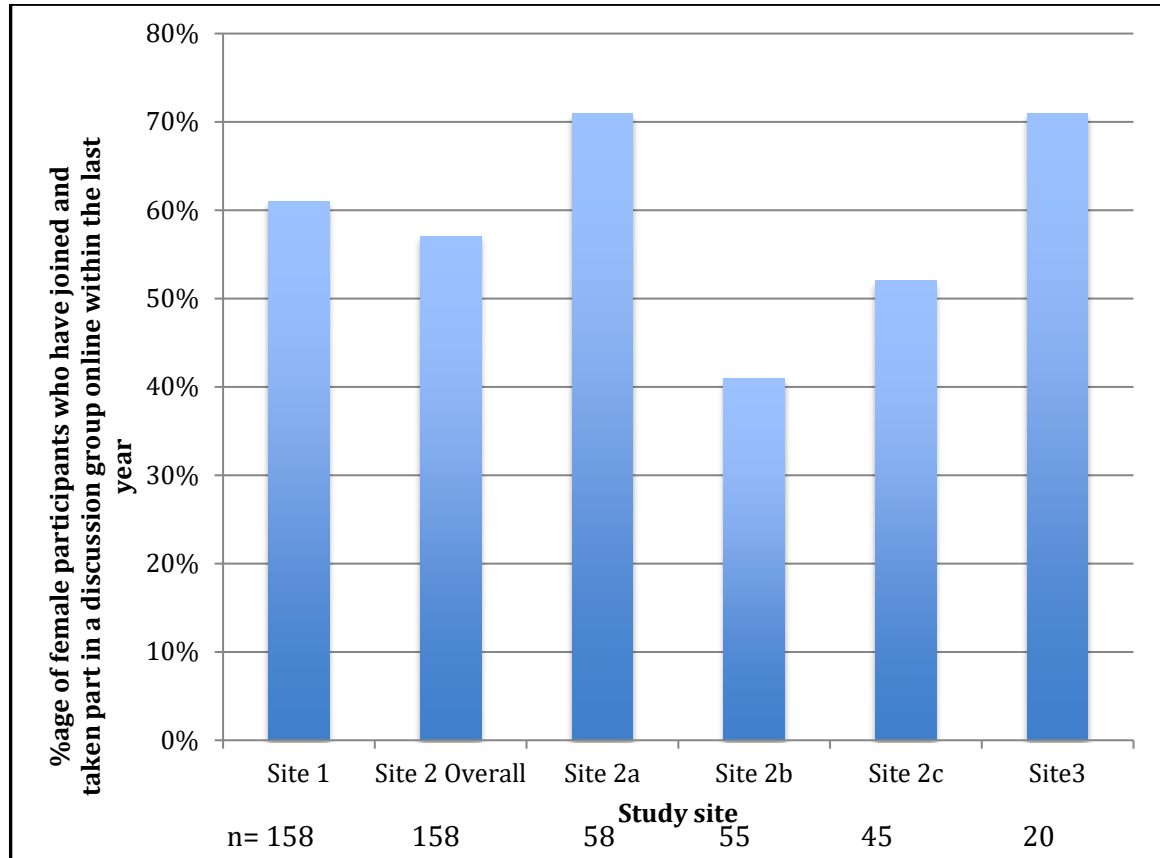
**Table 8.20 Have you joined and taken part in a discussion group online?
Female Affirmative Responses Analysed by Marital Status.**

	Single (n=107)	Living together/married (n=72)	Grand Total (n=179, p =0.100*)
Yes	66%	54%	40%
* - The chi squared test was performed to establish whether there is a relationship between age and whether they have taken part in a discussion group online (comparing the responses of the "yes" and "no").			

8.3.4.2 Study Sites

If the data is analysed by location, other interesting factors come to light. A lower percentage, 41% of female respondents from Site 2b appear to be joining discussion groups online compared to an overall total percentage of 60%. Figure 8.2 (below) shows that in contrast, at Site 2a and at the Site 3, 71% of women had joined and taken part in a discussion group within the last year. Based on the relationship with marital status suggested above, female respondents from Site 2b are less likely to be single than at the other locations, so this could partly explain why they are less likely to join online groups (see Table 4.7). Another factor could be that there are less people in local area who are online which might limit the number of discussion groups that people can join.

Figure 8.2 Graph to Show the Percentage of Female Participants at each Study Site who have Joined and Taken Part in an Online Discussion Group within the Last Year.



8.4 Opportunities for Political Empowerment

The questionnaire asked about how frequently the participants expressed their views about their country and their community online. 43 % of women stated that they used the internet on a regular basis (daily, weekly, monthly) to express views about their country (see Table 8.21) and 37% stated that they used the internet to express their views about their community (see Table 8.22 below). There were comments in the mini case studies from seven of the case study participants that confirm that some women are expressing their views on these issues (see Boxes 8.4 and 8.5 below). Some of the comments suggest that if they did not have access to the internet, they would not have been able to express their views on these topics. Furthermore, these case studies provide some interesting revelations. One participant reveals that whilst previously she was a passive consumer of the news through television, she now watches the news online and expresses her views about the news items on international news websites. In this way, her voice is reaching a worldwide audience from her home within Uganda. Another of the participants explains that when women see other women expressing themselves online about issues like politics, they gain confidence to speak out themselves. This suggests that the increased visibility of women's viewpoints may lead to increased participation in these areas of discussion where women have previously remained silent. What is difficult to ascertain is the offline participation of women in these important areas, If this was known, online and offline participation could be compared and any changes confirmed from further research.

On the other hand, although over a third of women are using the internet to express their views about their community or country, this type of political expression does not appear to be a key reason for women using the internet; only 7% of women included “ express my views about an important issue facing my community” in their three main reasons for using the internet and only 5% included “express my views about an important issue facing my country” as a reason (see Table 5.1).

Table 8.21 How often do you use the internet to express your views about an important issue affecting your country? Responses analysed by gender.

	Female	Male	Grand Total
	(n=189)	(n=147)	(n = 336, p = 0.005*)
Daily	16%	31%	23%
Weekly	21%	17%	19%
Monthly	6%	3%	5%
Sub-total Regularly	43%	51%	47%
Once in a while	24%	24%	24%
Never	33%	24%	29%
Grand Total	100%	100%	100%
*- The chi squared test was performed to establish whether there is a relationship between gender and how often they use the internet to express their views about an important affecting their country (comparing all the responses by gender). See Table K8.21 in Appendix K for further details.			

Table 8.22 How often do you use the internet to express your views about an important issue affecting your community? Responses analysed by gender.

	Female	Male	Grand Total
	(n=189)	(n=147)	(n = 335, p = 0.006*)
Daily	14%	26%	19%
Weekly	15%	20%	17%
Monthly	8%	6%	7%
Sub-Total Regularly	37%	52%	43%
Once in a while	27%	26%	26%
Never	37%	22%	30%
Grand Total	100%	100%	100%
*- The chi squared test was performed to establish whether there is a relationship between gender and how often they use the internet to express their views about an important affecting their country (comparing all the responses by gender). See Table K8.22 in Appendix K for further details.			

Box 8.4 Mini case studies of Participants about expressing views on political issues.

Participant Flavia, is a 25 year married women who is self employed at Site 1. She is now expressing her political views freely online but explained that before the internet she wouldn't have been able to express herself in this way in a public forum. Previously these types of face to face discussions were the domain of men but now both men and women can discuss them together.

“(previously face to face)..you cannot express yourselfbut (on) the internet men and ladies are all on the same platform you discuss what you want.” .

Participant Sharon, is a 32 year old married woman who works from home as a tailor at Site 1. She states that she makes her views known on the internet and will even go onto international news websites such as Al Jazeera to express her opinion. She explains that before the internet she wouldn't have been able to express herself as she could only watch TV and there was no forum for her to discuss or comment.

Participant Nancy, is a 29 year old single woman with 4 children at Site 1. She is employed part-time at a hotel and is also self employed as a baker. She uses the internet to search for political information and on occasion will express her own views. However, she also says that more women are becoming involved in politics and that women gain confidence by seeing other women expressing their views.

Participant Fortunate, is a 35 year old divorced woman with 3 children at Site 2. She is a farmer and also a councilor at Site 2. She frequently uses the internet to express her views about her community or country, particularly on the online local leadership forums and discussion groups. She feels totally free to say what she wants and feel that people listen to her online. She explains that women lack the confidence to speak out particularly on political issues face to face.

Box 8.5 Mini case study of a Participant about expressing views on politicians.

Nana is a 25 year old student at a beauty college who makes her own clothes to sell. She expresses her opinions online and is particularly critical of the corruption and wealth of certain politicians in Uganda. She says that she's not afraid to criticize what is happening. She explains that before the internet she didn't have a means of expressing herself in this way and that she also wouldn't have been aware of what was happening politically. She comments on how everyone can now report on events and this is a way of holding politicians to account,

“ We are holding them (politicians) accountable because now we are...our eyes have been opened with the internet. We see everything. People are opening up different news reporting things. I can be right here but I'm like a news reporter and I'm seeing what someone does, I take a very small picture and I'm like “ he's enjoying our money and everything”. Within no time it's posted everywhere and people are commenting “

8.4.1 Gender Dynamics

Although women are using the internet to express themselves about political issues, there are significant gender differences. Women are 16% less likely to be creating content which expresses their views about their country or community (see Table 8.14 above), which is a significant gender difference with $p = 0.007$. In terms of joining discussion groups, only 25% of women who had joined a discussion groups had joined a political discussion group, compared to 43% of men (see Table 8.16 above). At the FGDs, only the male participants mentioned being part of any groups with a direct political agenda.

There are also significant gender differences in terms of frequency of expression of personal views about an important issue affecting ones community or country. There is a 15% gender difference in favour of men in expressing a view about ones community (see Table 8.22 above) and an 8% gender difference, also in favour of men in expressing ones views about ones country ($p=0.005$) (see Table 8.21 above). Over double the amount of men (13%) compared to women (5%) chose “Expressing my views about an important issue facing my country” in the three most common reason for using the internet (see Table 5.1).

The reasons for these gender differences are varied. Gendered interests are likely to play a part. Politics is traditionally a male domain. Participant Fortunate, a local councilor, explains in her interview that women traditionally do not become involved in politics offline because it is something that men are responsible for:

“(women) lack confidence, they (men) think it is inhuman for a woman to stand up and speak, it is a disgrace to society....women feel they are marginalised but in most cases they feel they do not have to speak out, they are not responsible, it’s the men. I think the tradition bit comes out. Men are the heads of the family, of the community. Even we had it in the recent local council elections, women could not stand against men, they think being a chairperson is meant for a man. That’s why they (women) do not always come out to say what is affecting them, they fear. They have that fear.....there is a word I want to bring out....”Sikyabuntu” ..Yes its inhuman, when you try to come out they call you a “Nalukalala” (an impossible, unruly woman)”.

KI Wilber, the IT teacher from the PTC, acknowledges that most of the political comments that he sees online are written by men. However, he thinks that both women and men have a similar interest in politics, it’s just that men are more willing to express their views about it,

“I think both, men and women, are interested in politics andmen are more willing to express their views than ladies. I think gentlemen are more free, are more open to share their views about an issue in the community than ladies and sometimes ladies want to pass through men to express their views so for instance sharing of the comments, sharing of views you would see or find a lady telling her a male person friend and it will be the male to speak out the views so also the views that men also give out can be the views from the females.”

It appears from the quotes above that gender norms may be constraining women from speaking out on political issues.

Another reason why women may not be willing to speak out is that the female participants may have a greater fear of the consequences of doing so. Three of the case study participants (Participants Cathy, Scovia and Viola) mentioned that they liked to read the political comments online but didn't like to make any comments themselves. When asked for an explanation as to why they didn't make comments, Cathy explained that she was frightened of being abused and attacked online and Scovia said that she didn't feel confident enough to make comments about political issues. Participant Fortunate from Site 2 explains why she thinks that women don't express their political opinions as much as men,

“Women fear for their lives, we are ever cowardising,if they come for me.... they might tag my house, they might tag my family. We are cowards naturally.”

There is a sense that women may be more afraid to speak out on more sensitive issues because of their responsibility for the family. One of the participants Patience also explains how her financial dependence on others prevents her speaking out about the “taboo” issue of her HIV status Box 8.6. It could be that women cannot afford to speak their minds online about controversial issues because of their lack of economic independence.

Box 8.6 Mini case study of a Participant discussing the constraints of her freedom to speak out online.

Constance is single and has an 8 year old son. She is employed in St Bruno as a tailor and is HIV positive. She likes to use the internet to post about her positive status so that she can help other people who have the condition. However, her family is critical of her posting online about these issues because of the stigma around the condition. She says that she has to compromise as she is still financially dependent upon them to help out with her son and that if she wasn't dependent then she could speak more freely online.

As discussed in Chapter 7 there is also evidence that the voices of women are trivialized online as well as offline. There is a narrative that women are “gossiping” online rather than engaging in serious social, economic or political activities like the men. This perception may be reinforcing the gender norms around the nature and content of “accepted” self-expression online by suggesting that women are unable to make meaningful contributions in discussions about non-trivial matters. This could be a contributory factor in why women are less willing to express their views online on more controversial topics, although further research into this would be required.

8.4.1.1 Skillset

In keeping with previous findings about finding out about politics, in section 6.5.5, there appears to be a statistical relationship between the self-perception of IT skills and expressing ones views about an important issue affecting ones country ($p = 0.035$) (Table 8.23 below). This makes sense because of the technical skills required to use social media, for example, twitter, and to post comments. Thus the large gap in the perception of IT skills between women and men, puts women at a disadvantage for expressing their political opinion and demonstrating political empowerment. English language skills are not influencing political self expression, possibly because, from observation, most of the political comments about Uganda or about local political issues are made in local languages. This would be an area for further research.

Table 8.23 How often do you use the internet to express your views about an important issue affecting your country?

	My IT skills are good enough	My IT skills are NOT good enough	Grand Total
Frequency	(n=95)	(n=94)	(n = 189, p = 0.035*)
Daily	22%	10%	16%
Weekly	21%	21%	21%
Monthly	7%	5%	6%
Sub-total regularly	51%	36%	43%
Once in a while	25%	22%	24%
Never	24%	41%	33%
Grand Total	100%	100%	100%
<p>* - The chi squared test was performed to establish whether there is a relationship between the frequency of using the internet to express one's views about an important issue affecting one's country and whether you perceived that your IT skills were good enough to use the internet in the way that you want. It was calculated by comparing the frequency responses "sub-total regularly", "once in a while" and "never" .</p>			

8.4.2 What Type of Women and in Which Circumstances?

The age of the participants may also have a bearing on whether the participants are using the internet to express their political opinions. A higher percentage of women under 30 compared with women over 30 appear to be posting content expressing their views about an issue affecting their community or country (Table 8.24) and expressing their views about their community (Table 8.25 below), although there is no statistical association.

Table 8.24 Have you posted anything expressing your views about an issue affecting your community or country? Female affirmative responses analysed by age.

	18 to 30 years old	Over 31 years old	Grand Total
	(n=123)	(n=47)	(n = 170, p=0.313*)
Yes	45%	36%	38%
*- The chi squared test was performed to establish whether there is a relationship between age and whether you have posted anything expressing your views about an issue affecting your community or country			

Table 8.25 How often do you use the internet to express your views about an important issue affecting your community? Female responses analysed by age.

	18 to 30 years old	Over 31 years old	Grand Total
	(n=130)	(n=59)	(n =189, p = 0.082*)
Frequency			
Daily	15%	12%	14%
Weekly	18%	7%	15%
Monthly	8%	7%	8%
Sub-total: Regularly	42%	25%	37%
Once in a while	23%	34%	26%
Never	35%	41%	37%
Grand Total	100%	100%	100%
*- The chi squared test was performed to establish whether there is a relationship between age and the frequency of using the internet to express one's views about an important issue affecting one's community. It was calculated by comparing the frequency responses "sub-total regularly", "once in a while" and "never".			

The individual social and political context of each location is also likely to be influencing what the female respondents are expressing about online. It is not surprising that a higher percentage of women interviewed in Site 1 (see Table 8.26) use the internet to express political views given that this area is highly politicized at the time and was a hub for the opposition against the Ugandan President Museveni’s lifetime presidency decree.

Table 8.26 How often do you use the internet to express your views about an important issue affecting your country? Female responses analysed by study site.

	Site 1	Site 2 Overall	Site 2a	Site 2b	Site 2c	Site 3	Grand Total
	(n=82)	(n=90)	(n=38)	(n=29)	(n=23)	(n=17)	(n=189)
Daily	18%	14%	13%	21%	9%	12%	16%
Weekly	29%	16%	24%	7%	13%	12%	21%
Monthly	4%	10%	8%	7%	17%	0%	6%
Sub-total Regularly	51%	40%	45%	34%	39%	24%	43%
Once in a while	17%	27%	26%	17%	39%	41%	24%
Never	32%	33%	29%	48%	22%	35%	33%
Grand Total	100%	100%	100%	100%	100%	100%	100%

8.5 Opportunities for Psychological Empowerment

There is evidence to suggest that the ability to express oneself online is having a positive psychological impact on some of the female participants (see Box 8.7 below). When the women who had gained self-confidence from the internet, were asked why, 13% answered that it related to their increased ability to express themselves (see Figure 6.2).

Box 8.7 Illustrative quotes from Participants about why the internet has increased their self confidence that relate to self expression.

<p>“I learnt how to express myself in a political way” JOVNAKIS01</p> <p>“ I can share my views more confidently” AMASTB05</p> <p>“I am able to talk to many people and express my views” SUSNAKPTC02</p> <p>“I can talk to more people, give views to topics and express myself” AMAPTC04</p>
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There were also comments from 5 FGD participants⁴¹ around the psychological impact of being able to express themselves online. These women all state that when people acknowledge what they have written or posted, they feel good about themselves in a self-affirming way. One of the case study participants, Flavia from Site 1 also explained how the confidence that she has gained from expressing herself online has helped her to gain confidence to express herself offline,

“(using the internet to discuss issues online)...it has motivated me; it has given me courage and confidence to express myself....actually in these

⁴¹ FGDNAKMI02, FGDNAKMI03, FGDNAKMI04, FGDKAMW02 and FGDSTB02

WhatsApp groups there are many ladies who are much older than me and when we set a meeting with them at least I can stand before them and I speak to them. “

One case study participant, Fortunate from Site 2, made the point that the more women see other women posting, the more they gain the self-confidence to express themselves online,

“when they see and read other women’s articles or other women’s posts I think they start gaining confidence that they can also do it.”

This suggests that the greater the visibility of women’s voice online, the more that other women are encouraged to speak out. These comments also suggest that the internet is increasing the women’s agency, in the sense of increasing their capacity to act. Furthermore, almost three quarters of the female participants stated that they felt that they were being listened to more online. This is also likely to be increasing their self esteem.

8.6 Disempowering Consequences of Changes in Control Over Self-Expression

Although the internet has in some ways reduced the controls that prevent people from being able to express themselves, the use of the internet has also facilitated new ways that people’s self-expression can be constrained. The section examines the participants’ fears that their online accounts may be hacked into and that their conversations with others may be tracked.

8.6.1 The Fear of Hacking and Tracking

The lack of privacy online is a reason why some women may not feel able to freely express their views on more sensitive issues online. Two of the case study participants mentioned their concerns about their accounts being hacked into by other people. Three of the participants talked about their reluctance to speak out about political or controversial topics because they feared that the information

could get in the wrong hands and could be used against them. Box 8.8 provides some illustrative quotes from these participants.

From the quantitative research, almost a third of women (29%) stated that they had had experience of someone tracking their use of the internet (Table 8.27 below). From the discussion with two KIs (Michael and Dr Bosco) who have experience in this area, it would appear that there are very few instances where the Ugandan government would track social media accounts of ordinary citizens, as they are mainly targeting politicians and civil society activists. However, the fear is still there amongst ordinary Ugandans. According to the KIs the threat is more likely to come from individuals who know the person and can obtain access to their accounts by obtaining their passwords. At the time of the research there were no data protection laws in Uganda so there was no consequence to individuals or the government illegally obtaining personal information from online activities (Gillwald et al ,2019). In the highly politicized climate in Uganda at the time of the research, according to Dr Bosco, there is a lot of self-censorship and censorship within families, with people frightened of speaking out on certain political topics in case they lose their jobs, or bring harm to the people close to them.

Table 8.27 Have you had experience of someone tracking your use of the internet? Responses analysed by gender.

	Female	Male	Grand Total
	(n=189)	(n=147)	(n = 336)
Yes	29%	35%	32%

It is also interesting to note that the more highly educated participants were more likely to have experience of someone tracking their use of the internet. 40% of those who had tertiary education said that they had experience of this, compared

with only 22% of those who had either no schooling or just primary school education (see Table 8.28 below). There is a statistical association ($p = 0.038$). This could be because of a lack of awareness of the possibility of tracking from those who are less educated or the fact that those who are more educated are more likely to be a target or are expressing their views on more controversial issues.

Table 8.28 Have you experienced someone tracking your use of the internet? Female Responses analysed by educational attainment.

Response	Educational Attainment				
	No school or primary school	O'Level or training after O'Level	A'Level or training after A'Level	Tertiary	Grand Total
	(n=27)	(n = 64)	(n=51)	(n=47)	(n=189, p=0.038*)
Yes	22%	22%	24%	40%	29%

* - The chi squared test was performed to establish whether there is a relationship between having experience of someone tracking ones use of the internet and educational attainment. It compared the responses of those who had educational attainment of A' level and above and those who had educational attainment below A' Level.

Box 8.8 Illustrative quotes from Participants about privacy issues related to concerns about expressing oneself online.

Worries about people hacking into her account,

“Then even we get friends...people who can hack into our internet, our Facebook, WhatsApp and then they see all your entire life.”

Participant Nana from Site 3

Concerns about the restrictions over sharing information online,

“The internet is very tricky like it has a lot of moles.... you would even be surprised whatever information you shared wherever its already out there and you wouldn't even know who, how, when did they get this information from...(it feels like).... there is no independence, there is no confidentiality, no privacy(you) have to decide what you share, what you say, when you say it, how you say it, who you say it (to). “

Participant Deborah

Fear of people hacking into her account,

“At times I get some fear to comment because politicians get to our accounts especially those that you are criticizing.”

Participant Nancy, a single mother of 4 from Site 1

Worry about sharing her political views online,

“Yes like during elections. Some people were putting their views but I was reserved because people were asking me”what is there, tell us “ and I would say ...”we are okay” because I did not know what would come out of such sharings.”

Participant Brenda, a married midwife from Site 2

8.7 Emerging Findings

The final section of this chapter examines how the changes in self-expression are providing opportunities for empowerment.

8.7.1 Challenging Power Over Self-Expression

The evidence presented above suggests that the use of the internet has challenged the *power over* the female participants that prevented them from expressing themselves freely. They can express themselves more freely online rather than offline. Over three quarters of the women studied perceive that they have freedom of expression online (Table 8.1), compared to only half that believe that they have freedom offline (see Table 8.2).

It is evident from the research that gender norms are constraining women from speaking out offline and that the internet could be facilitating the circumvention of the gender norms that exist offline by creating a new space online where gender identity is either less prominent or less important. Many of them lack the confidence to express themselves offline but the internet facilitates written communication which allows them to have more time to compose and edit what they want to say. It also creates a safe space in which they can express themselves with less fear of intimidation or even physical violence. It could be argued that patriarchal control over women's ability to speak their minds has therefore been loosened through the participants' use of the internet.

8.7.2 What are the Opportunities for the Use of the Internet to Empower Women?

8.7.2.1 Social Empowerment

According to section 8.3.1, the study participants have gained the *power to* create their own content online and share it with others for the first time. The significance of creating and sharing information for women was discussed in Chapter 7; it has profound implications in respect of the democratization of knowledge. On the other hand, although women are creating content online as

much as men, there is evidence that they are creating the sort of content that may be less likely to lead to social change (see political empowerment 8.4.2.2).

The female participants have also gained the ability to join new discussions groups that they were not part of offline; sixty percent of the female participants stated that they had joined an online discussion group in the last year (see Table 8.15). These groups are discussing a wide variety of subjects and include friends and family groups, livelihood-based groups, sports groups, health groups and political and community-based groups. There are examples where their voices are being heard even outside Uganda. Due to social and domestic constraints, women in general have less freedom of movement compared to men (Madanda et al, 2009) and therefore less ability to form networks and alliances with others outside their limited physical environs. These groups offer the potential for women to gain *power with* as they cultivate their own voice and develop a solidarity with others that offers the possibility of developing a combined and more powerful voice. There was also evidence to suggest that the increased visibility of women's voice online may be encouraging other women to speak out, particularly on topics that are more controversial and where women's voices are not usually expected.

On the other hand, it is evident that the female participants are not joining discussion groups as much as men and particularly are not joining groups which are discussing community matters or politics (see below). The perception of poor IT (see Table 8.17) and English language skills (see Table 8.18) are influential in determining why women are not joining discussion groups online compared to their male counterparts. Furthermore, online harassment may be preventing some women from joining groups and discussing issues online.

8.7.2.2 Political Empowerment

The research shows that 43% and 37% of the female participants are using the internet to express their views about their country (see Table 8.21) and community respectively (see Table 8.2). Traditionally these are areas where the male voice of authority has been dominant. It appears that the use of the internet is indirectly challenging the sole authority of the male voice in matters of

importance because the strength of the gendered constraints is weakened online. Many of the female participants also appear to be able to express their views on political and civic issues online but are not doing so offline.

However, whilst the ability to express oneself in certain ways appears to be greater online than offline, there are still constraints which prevent women from making the most of these opportunities online. Gendered interests could be influencing the topics that women feel appropriate to discuss; while gender norms may be restricting women from speaking out on political issues even if they have the interest. Concerns about the lack of privacy of data online and the fear of tracking are likely to be disincentives for women expressing their views on more controversial issues online.

8.7.2.3 Psychological Empowerment

Although many of the female participants lacked the self-confidence to speak out offline, there is evidence that they had greater confidence in speaking out online (see Table 8.7). Moreover, it appears that for some women the ability to be able to express themselves online has led to an increase in their self-confidence (see Figure 6.2). In a context where women's voices have previously been denied, it is not surprising that the ability to speak out will have significant consequences in terms of one's agency and one's sense of self, particularly when it is combined with increased access to information, so that one can speak out with more confidence. The ability to express oneself and have feedback from others is an important part of the process of empowerment. Almost three quarters of women questioned believed that they were more likely to be listened to online rather than offline (see Table 8.4). This is important for women who previously have only been allowed to speak about important issues through men. Once again, the fact that your voice is being heard and listened to for the first time is also likely to increase your self-esteem and provide you with more self-awareness as you get the chance to see how others respond to what you have posted online.

8.7.2.4 Disempowering Consequences

Although the use of the internet has encouraged greater freedom of expression, at the same time there are concerns that power dynamics are shifting online in other ways that could be disempowering the participants. There is the potential for increased online surveillance, with some of the participants already fearful that their online accounts can be hacked into and their conversations “tracked”. The additional freedom of expression that appeared to have been gained may be constrained by these new fears over privacy and security that could prevent people from giving their views on sensitive or controversial issues. This will be discussed further in Chapter 9.

8.7.3 Gender Dynamics in respect of these Opportunities for Empowerment

From the analysis in the initial section of this chapter, it appears that women are benefitting more than men from the use of the internet in terms of freedom of expression since the increase in freedom of expression between offline and online is greater for women than for men. As explained above, the research suggests that gender norms are constraining offline expression: it is not as socially acceptable for women to speak out in public forums and express themselves especially if men are present; men are deemed to have a more authoritative voice and any woman who does express themselves publicly is deemed to have masculine traits, thus confirming the construction of gender identities around the authoritative voice. There is also evidence to suggest that intra- household gender equality may be affecting women’s ability to express themselves offline; women who have less decision-making power over their resources are less likely to be able to express themselves freely offline. On the other hand, the research suggests that these gender norms concerning self-expression may not be as strong online. Women are expressing themselves more freely and the data reveals that intra- household gender inequality may not be affecting freedom of expression online as much as offline.

In terms of the nature and content of self-expression, there are significant gender differences in the percentages of women and men joining discussion groups online

and expressing views on issues affecting one's community and country, the percentage of women being lower than men. At first this seems to contradict the idea that the same percentages of women and men can express themselves freely online. However, the analysis of the data suggests that there may be certain dynamics and constraints that affect women more than men and therefore prevent women from expressing themselves in terms of certain activities online. As revealed in Chapter 6, it could be that gender norms are preventing women from taking an interest in politics or it could be that women are afraid to speak out on more controversial topics because of women's role as the protector of their families and the increased financial insecurity that many women face compared to men. The research also suggests that online sexual harassment in certain circumstances may also affect women more than men and prevent them from wanting to participate online.

Furthermore, there is evidence that more women than men think that they do not have the right IT skills or their English is not "good enough" to use the internet effectively. These perceptions are probably linked to their reluctance to join discussion groups and express their views about their country and community. Women are therefore at a disadvantage in terms of their ability to express themselves online. It is also noteworthy that in parallel to women's voices becoming more frequently heard online, a narrative has developed that attempts to trivialize women's voice and claim that they are using the internet for gossip and not for more serious matters (see Chapter 7).

8.7.4 What Type of Women and in Which Circumstances?

The research suggests that several demographic characteristics are affecting women's ability to express themselves online. Age appears to be important in certain circumstances. It appears that younger women (age 30 or under) are more likely to be posting content expressing their views about an issue affecting their community or country, and regularly express their views about an important issue affecting their community and country, although there are no statistical associations. They are also more likely to believe that they are listened to more online rather offline compared to older women and there is a statistical

association (see Table 8.12). . Marital status may be constraining whether the female participants join discussion groups online but this necessitates further research. The only time when education is important is concerning whether the participants had experienced of being tracked online. IT and English language skills, which are underpinned by levels of educational attainment are influencing self-expression for certain purposes as explained above.

There are socio-political reasons that may be influencing the effect that the use of the internet is having on women's freedom of expression. In the rural town, the women had less freedom of expression offline, particularly at Site 2a and 2c (the hospital and the schools), both in comparison to the other study sites and to the male participants; although they had similar levels of freedom of expression online (see Table 8.3 and Figure 8.1). From some of the comments at the PTC, the reduced freedom of expression offline may have been the result of increased gender norms that emanated from the institutional nature of these study sites. This would need to be investigated as part of further research but may suggest that the use of the internet may be particularly beneficial in situations where institutionalised gender norms are at work. Less women in the rural town were joining discussion groups online probably because of the low levels of internet use within the town itself and the surrounding villages; the ability to discuss online and express oneself to others is only possible when other people who you know are online. Contrastingly, the high levels of expression about political issues at Site 1 were probably the result of the highly politicized climate in the area at the time of the research.

Surprisingly the women at Site 3 seem to benefit the least from the ability to express themselves online, as they had already had high levels of freedom of expression offline (Table 8.7). Once again, this suggests that the use of the internet may have the greatest impact on the lives of the participants where they continue to experience greater controls over their freedom of expression offline.

8.7.5 Summary

The research has highlighted how the use of the internet for self-expression has provided women with increased *power to* express themselves freely, increased *power with* to enable them to participate in online discussions and given them increased *power within* because of the increased confidence that their voice brings. The internet also appears to challenge the *power over* wielded against women's self-expression, particularly in traditionally male dominated spheres of influence through gender norms and intra-household gender inequality by creating a new safer space where these norms are weaker. However, it appears that the ability of the study participants to express themselves online may be constrained by other gender dynamics such as gender norms or disparities in perceptions of IT or language skills between women and men. Some of the disempowering consequences of internet use, such as increased surveillance may also reduce the potential for these empowering features of the internet in terms of self-expression to be realized.

Chapter 9 Discussion

9.1 Introduction

This chapter highlights some of the key findings from the results chapters and discusses them in the context of the academic literature. It pulls together common themes found across the different chapters and reaches wider conclusions where appropriate. The research objectives and questions provide the structure to determine whether and how the internet is empowering the female participants at the study sites. It should be noted that part of the second research objective that addresses the changes in power dynamics that may be occurring at a structural level (Question 2d) will be answered at the end of the chapter once all the changes in individual empowerment have been discussed.

9.2 Objective 1: To Gain an Understanding of Internet Access and Use

9.2.1 Motivation

The research found that the main motivation for use of the internet by the participants was to communicate with family and friends. This concurs with the findings of other studies undertaken in the developing world (Isenberg 2019; Chair, 2017) where communicating with others is the primary driver for internet use. As shown in Chapter 5, women are using the internet less frequently than men and some of the participants and key informants described a lacked awareness of the benefits of using the internet within the study sites. There have been similar findings in other research. Kifle (2013) in his/her research in Ethiopia found that women were much less aware of what the internet could do for them compared to men and Wyche and Olsson's (2018) research in rural Kenya discovered that many women were unaware of the internet's potential benefits. Similarly, the large research study by Intel (2013) found that women were less aware of the internet and less interested in using it than men. They attributed this to women having less freedom of movement and less participation

in public spheres that in turn limits their exposure to internet use and hence their understanding of how it could be beneficial.

The lack of awareness of the benefits of internet use reduces the motivation of women to use the internet in ways that could be empowering for them. As shown in Chapter 5, this creates a negative feedback loop in which, even though women are using the internet, they are not using it in ways that can be empowering and are therefore less likely to be motivated to use it. Closely linked to motivation is the fact that many women don't know how to use the internet. This prevents them from using the internet. "Not knowing how" to use the internet was the barrier most cited by participants in the World Wide Web Foundation's (2015) study in the Majority World. The importance of thinking that one has the right skills to be able to use the internet will be discussed in detail below.

9.2.2 Material Access

9.2.2.1 Acquisition of Smartphones

A large proportion of participants were found to be using the internet on an internet-enabled phone. Indeed, the research of Alozie & Akpan-Obong (2016) on the use of the internet in six SSA countries found that ownership of smartphones was very strongly linked to use and frequency of use of the internet. This research, as revealed in Chapter 5, found that there were significant gender dynamics at play in terms of acquisition of internet-enabled phones. Affordability of internet-enabled phones for the female participants is an issue in part because women often have lower incomes than men and will prioritise family expenses over buying a phone for themselves. This may result in women having to buy feature phones that are internet-enabled but have less internet functionality than smartphones and cannot employ search engines, for example. It may also result in women being dependent on men to buy the phones for them.

The problem of the affordability of internet-enabled phones for women has been identified in other research (e.g. GSMA, 2018; Isenberg 2019; Madanda, 2011). In addition, this research found that there are gendered power dynamics that are influencing the acquisition of smartphones. Even if some women have enough

income to buy a phone, it appears that in some cases there is the cultural norm that the male of the household will buy the phone for his partner. It is likely that this reflects the gender norm that men are the traditional decision-makers of the purchase of household assets whilst at the same time conferring an element of male control over the asset. This element of maintaining some control over use of the asset is important, particularly when the smartphone is seen as providing women with additional freedoms. The research of Dlodlo (2009), Isenberg (2019) and Gigler (2015) in the Majority World had similar findings about men's control over decision-making over ICT purchases and in East Africa, Kifle's (2013) and Madanda's (2011) research identified the cultural practice of men "gifting" phones to women. Although at first sight the purchase of smartphones by men for women appears to be about men's control over the use of the phone and women's lack of agency, there are subtle ways in which this can be seen as a way that women are exercising their bargaining power and gaining access to the internet with their husband's permission. They are doing this so as to gain access to a powerful asset whilst at the same time not upsetting the current status quo in terms of patriarchal relations. Research by Masika and Bailur (2015) found similar examples of situated agency over women's use of mobile phones in Kampala in 2015. They found that,

"Mobile phones with this socio-cultural milieu come to represent a site of conflict of gendered interests where agency is negotiated in ways that make sense to the individuals involved."

Another interesting aspect of smartphone acquisition identified during the research is how the desirability of a smartphone combined with its expense is driving some women to engage in transactional sex in exchange for smartphones. The haunting image of the sign by the school gate which states "say no to gifts for sex" is a poignant reminder that transactional sex is a real issue in Uganda. It has far-reaching consequences in terms of teenage pregnancies and transmission of HIV, for example. The research of Choudhry et al (2015) in Uganda found that 4% of women reported having received gifts (including mobile phones), favours or money in exchange for sex in a study of 4,627 randomly selected women between

the age of 15 and 24. A similar phenomenon was found in research in South Africa (Leclerc-Madlala, 2003) with women acquiring the “commodities of modernity” including phones through transactional sex. Their finding was that women’s lack control over financial resources drives these transactions. It would appear that the “gifting” of phones by men and transactional sex for smartphones may sit on the same continuum and is a reflection of underlying gender power dynamics. However, there has been a paucity of research around the nuances of smartphone acquisition from a gender perspective. Further research is needed in this area.

9.2.2.2 Affordability of Data and Infrastructural Constraints

This research also found that the affordability of data was an issue in terms of getting access to the internet. There were also infrastructural constraints that the participants faced in terms of poor network coverage and the cost and availability of electricity for charging internet-enabled phones. There are numerous publications addressing the affordability of data and the infrastructural issues facing countries in the Majority World, for example, Alliance for Affordable Internet (2018), GSMA (2018), Gillwald et al, (2017). What is particularly interesting from a gender perspective is that the high cost of data combined with the primary desire to use the internet for communication, may result in women choosing cheaper social media data “bundles” which may limit the ability of the user to search effectively for information.

9.2.3 Skills

9.2.3.1 IT Skills

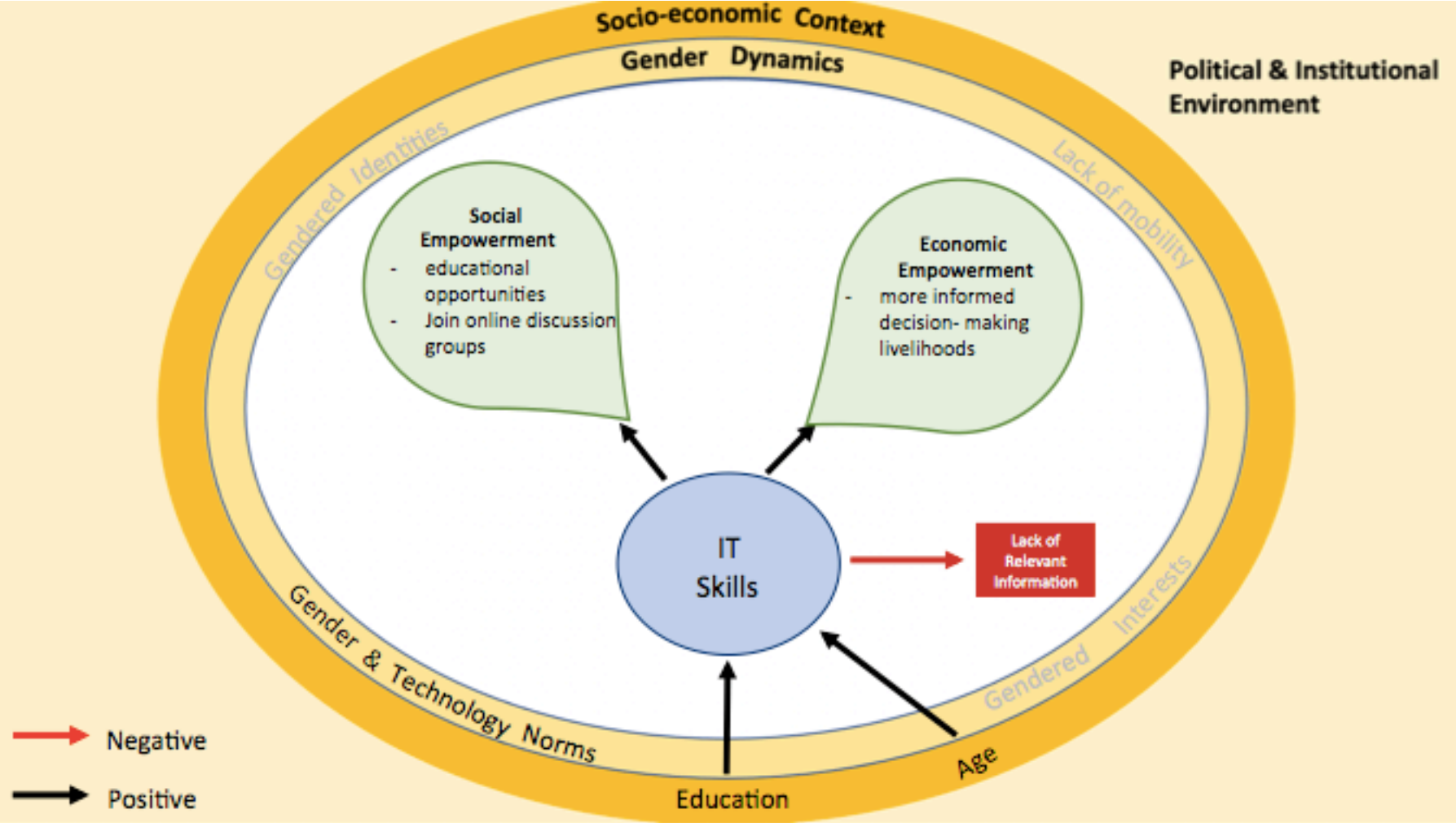
This research has shown that the participants’ perception of their IT skills appears to be one of the most significant factors influencing access and use of the internet, particularly for the female participants. There is a statistical association between gender and whether you think that your IT skills are good enough to use the internet in the way that you would like, with 50% of the female participants saying that they didn’t have the right IT skills compared to only 35% of men. As shown in the results chapters these skills are not only affecting internet use in general (Chapter 5), they are also affecting the ability of participants to be able to use the

internet effectively to search for information, to access educational opportunities and to express themselves with others (Chapters 6,7 and 9). Figure 9.1 below reveals the statistical associations between the female participants' perception of their IT skills and the effective use of the internet for opportunities for empowerment.

It can be seen from Figure 9.1 that the level of the participant's IT skills, perceived or otherwise, are likely to be influencing the ability to search for and process information and to make the most of educational opportunities. For example, there is an association between whether the participants think that they have the right IT skills and whether the use of the internet has helped them make better decisions about their livelihoods. It makes sense that if you have higher levels of IT skills, you would be more able to search for the information that you require online and be able to comprehend this information and use this to make better livelihood decisions. Conversely, the research found that if you do not think that you have good enough IT skills, you are more likely to believe that the information online is not relevant enough to be of value to you. This connection suggests that you may not have the skills to be able to search for the appropriate types of information that you require.

Figure 9.1 also suggests that having the right IT skills may be affecting the participants' ability to join discussion groups online. Once again, this is unsurprising given the skills required to create your own content and use social media effectively. Overall, it can be seen that having the appropriate IT skills (perceived or otherwise) is one of the keys to be able to open the door to effective internet use and to be able to benefit from the potential empowering opportunities that the internet affords.

Figure 9.1 Diagram to Show the Statistical Associations between the Perception of IT skills and Opportunities for Empowerment.



Van Dijk and Van Deursen (2014) argue that the complex skills that are required to use the internet cannot just be learnt through use and experience of the internet but are closely connected to educational attainment and need to be taught. As already mentioned in section 2.4, their research finds that, in addition to medium-related internet skills required, which include operational and navigational skills, complex content-related skills are necessary that do not improve with longevity of use of the internet. These content-related skills include informational, communication, content-creation and strategic thinking skills and are related to educational attainment. The research in this thesis found that there is a relationship between education and whether you have had training about using the internet and, unsurprisingly, there is a statistical relationship between educational attainment and perception levels of IT skills. Furthermore, whilst the training around the internet appears to be focused around these medium-related skills, the content-related skills are rarely taught. In a similar way, it was found that the limited IT training that the participants had undertaken at the schools study sites was more focused on technical skills and medium-related skills rather than the wider content-related skills that are required.

Other research from the Minority World (Hargittai and Shafer, 2006) suggests that that women's self-assessed skills are often significantly lower than the men's self-assessed skills even if there is no actual difference in skills. Furthermore, their research found that this perception adversely affects women's ability to use the internet. This creates a possible vicious circle where women's lack of confidence in engaging with technology leads to negative perceptions of their internet skills which in turn leads them to not engage in certain uses of the technology. Unfortunately, the gap between perceived and actual IT skills falls outside the scope of this study.

9.2.3.1.1 Gender Norms and Engagement with Technology

Chapter 5 highlights the gender norms that could be reducing women's engagement with the internet and hence influencing the IT skill levels of the female participants. The research showed that the male participants were more likely to teach themselves how to use the internet than the female participants and there were differences in male and female attitudes to engaging with technology, with suggestions that women are more fearful of using the technology than men. The possible causes of these differences in attitude are numerous. The fact that men are usually the purchasers of technology (as discussed above) may allow men to take greater risks around technology as well as giving men the gender identity of being more trusted in terms of ICTs. The research by Gigler (2015) in Bolivia found that the Aymara women that he was studying were hindered by fears of breaking computers and of making mistakes when engaging with ICTs. Similarly, Muturi's (2011) research in Jamaica revealed that gender -role socialization had enhanced women's fears about using ICTs. Intel's research (2013) in India, Mexico, Egypt and Uganda also found that women were less comfortable engaging with technology as a consequence of gender norms that reduce women's physical mobility and reduce their employment outside the home and therefore limit their exposure to new technologies.

Gigler's (2015) research revealed that giving women the space and time to explore and interact with ICTs really helped women's engagement with it. Similarly, in this research, there are indications that lack of time and space for the participants to engage with the technology are gendered issues. The research found that there is a statistical association between gender and having the time available to use the internet as one would like, probably as a result of women's domestic burden. Other research in the majority world and specifically in Africa has also found that women are disadvantaged in terms of their lack of time to use the internet because of their domestic responsibilities which they often have in addition to their need to generate income (Kifle 2013; Gillwald 2017; Dlodlo 2009; Wyche and Olsson, 2018). In terms of having the safe physical space to engage with ICTs, this research found detrimental gender dynamics operating at one of the school computer labs with the male pupils intimidating the female pupils and so

hindering their engagement with the internet. A similar situation was found at the Makerere University campus in Kampala in Nsibirano and Kabonesa's (2014) research whereby it was uncovered that the female students felt intimidated using the internet in the more public university computer spaces. There is similar evidence about gender issues concerning institutional access to computers and IT training from other research in Africa and the Middle East (see Buskens and Webb 2014).

Based on the findings from this research and from other research, a picture has emerged of women being disadvantaged in multiple ways in terms of not having the right IT skills to be able to engage effectively with the internet. First of all, they are disadvantaged by having lower levels of education. This may prevent them from using the internet in certain beneficial ways such as searching for information online. Secondly, gender norms prevent them from engaging with the technology in the same way as men and therefore may be reducing their motivation to use the internet (see above) or trying out new uses of the internet. They are also hindered by a lack of time because of their domestic responsibilities and by not having appropriate spaces and institutional settings where they can learn new skills without intimidation.

What is missing from the literature is research on the skillsets required for access and use of the internet on internet-enabled phones and through social media rather than computers and more formal platforms such as email and search functions, within a gendered Majority World setting. There are some tentative suggestions from this research that these gendered interactions are changing. There is evidence that the gender difference in perceived IT skills reduces as the age of the participant decreases and that attitudes towards engagement with the internet are changing amongst younger women. There were suggestions that the very functionality of the smartphone changes perceptions of gender identity around the technology. The content creation, the communication and sharing of information that mobile internet affords may be considered more of a female domain rather than the more male domain of computers, for example. This also fits in with the fact that the primary motivation for internet use is for

communications purposes which is a traditional female domain. It could be argued that the use of mobile internet is challenging the typical gendered attitudes to the use of technology because of the fact that the smartphone like the mobile phone is seen more as personal social networking and communications tool rather than as a piece of complex technology per se. Furthermore, it could be purported that the use of social media has lowered the barriers for participation in social spaces and has hence increased the appeal of the internet to women.

These ideas touch on some of the work of other researchers. For example, the research of Nsibirano and Kabonesa's (2014) on internet use on computers by students in Uganda suggests that gender identity around the use of technology is situated and can easily be reconstructed. They found that the gender stereotypes of women as communicators and men as knowledge seekers were to a certain extent being replicated online but in other ways they were changing as a result of the female students needing to undertake research using the internet and the male students required to use the internet for communication. This suggests that the gender identities around technology will change depending on the context of use.

Ali (2011) argues that social media has changed the fundamental power dynamics around social participation and the engagement with technology. Other research has found that women are much more prepared to engage with technology when the technology is placed into the larger socio-economic context (Huyer, 2006) or is applied (Dlodlo, 2009), suggesting that platforms such as social media, may be changing women's attitudes to technology. Although more research is required in this area, this suggests that the use of smartphones and social media may well be changing gendered attitudes to technology as the primary motivation for the use of this powerful technology is social and applied.

9.2.3.2 English Language Skills

The research has also identified English language skills as a constraint on the female participants use of the internet. It is also a gender issue since there is a

statistical association between gender and perception of English language skills with 25% of female participants believing their English is not good enough to use the internet in the way that they want compared to only 14% of men. English language skills not only appear to be affecting the female participants' general use, there is evidence that they are influencing the way that the participants can use the technology in gaining opportunities for empowerment. It can be seen that perceived English language skills are likely to be influencing participants' ability to use the internet for searching for certain types of information, for learning new skills, accessing educational opportunities and joining new discussions, thus impacting the opportunities for economical, social and political empowerment. This finding is not surprising as health information, world news and educational information is often in English online. This is partly because of English being the dominant language online and partly because it is the official language of Uganda. There is little information online in local languages apart from information found through social media and most official information is in English. The participants who have poor levels of English are therefore disadvantaged in respect of internet use, particularly in terms of complicated subject matter such as health. As would be expected, those with perceived lower levels of English language skills, were also more likely to state that they could not find relevant information online compared to those who had good English. What is particularly concerning is the link between poor English language skills and the recognition of false information. This suggests that the female participants, who have lower levels of English language skills may be more at risk of believing misinformation and therefore are more likely to be manipulated or exploited by others.

In a similar way to the discussion concerning IT skills above, the research found that educational attainment influences English language skills amongst the participants with participants with higher levels of education less likely to say that their English is not good enough to use the internet in the way that they would like. The research also highlights that some of the female participants may be under-estimating their English language skills compared to the male participants. For a long time ICT4D research has highlighted the problem with the dominance of English online and the lack of information that is available in local languages (Gurumuthy, 2004; Antonio and Tuffley, 2014; Isenberg, 2019).

9.3 Objective 2: To Understand Whether and How Women's Use of the Internet is Providing Opportunities for Empowerment

This research has shown that the participants' use of the internet is providing them with opportunities for individual empowerment in four main dimensions: economic, social, political and psychological. A summary of the opportunities for individual empowerment set out in each dimension is shown in Table 9.1 below. This section of the chapter will discuss the key findings from each of these dimensions, with a particular focus on the gender dynamics surrounding these opportunities. It will draw in the relevant literature wherever possible. At the end of this chapter the wider structural implications of these opportunities to empower will be considered from the perspective of the visible, hidden and invisible forms of power, as set out in the conceptual framework.

9.3.1 Opportunities for Individual Empowerment

9.3.1.1 Economic Empowerment

This research discovered that many of the female participants were using the internet to improve their livelihoods. Through their use of the internet, they were gaining the *power to* search for livelihood information, learn new livelihood skills, make better decisions about their livelihoods and through their *power with* other people through their social networks, to advertise their goods and services. The extent to which the women were using it for these livelihood purposes was surprising and from the case studies it appears that the internet is an important source of ideas, information and revenue for many of the women. There is a statistical association between gender and the frequency of using the internet to search for livelihood information, with the female participants more likely to be doing this on a regular basis compared to the male participants (Table 6.3).

Table 9.1 Summary of the opportunities for each dimension of individual empowerment facilitated through use of the internet.

Dimension of Empowerment	Type of Empowerment	Opportunities for Individual Empowerment (including the Chapters where they are examined)
Economic	<i>Power To Power With</i>	<ul style="list-style-type: none"> • Increased access to livelihood information (Chapter 6) • Increased ability to learn new livelihood-related skills (Chapter 6) • Increased ability to make better livelihood decisions (Chapter 6) • Increased employment opportunities (Chapter 6) • Increased ability to advertise goods and services (Chapter 7)
Social	<i>Power To Power With Challenging Power Over</i>	<ul style="list-style-type: none"> • Increased access to health and nutrition information (Chapter 6) • Ability to make better decisions about health and nutrition (Chapter 6) • Increased ability to access educational opportunities (Chapter 6) • Enhanced social capital (Chapter 7) • Bridging socio-economic divides (Chapter 7) • Increased social participation <ul style="list-style-type: none"> ○ Potential to join new groups (Chapter 8) ○ Potential to express oneself more and create own content (Chapter 8) ○ Social isolation reduced (Chapter 7) ○ Problem solving with others enhanced (Chapter 7) • Increased sharing of knowledge with others (Chapter 7)
Political	<i>Power To Power Within Challenging Power Over</i>	<ul style="list-style-type: none"> • Increased access to information about politics, world news, rights and entitlements (Chapter 6) • Increased participation in politics through online discussions and expressing ones views about ones community and country (Chapter 8)
Psychological	<i>Power Within Power With</i>	<ul style="list-style-type: none"> • Increased self confidence (Chapters 6, 7 and 8) • Increased awareness of the world around (Chapter 6, 7) • Increased sense of “inclusion” (Chapter 7) • Increased agency and self-efficacy (Chapters 6, 7, 8) • Belief that one is being listened to (Chapter 8)

The advantage of using the internet is that it acts as an effective research tool for their livelihoods. At the rural Site 2, the female participants were using the internet for obtaining market and agricultural information. Other research conducted in that area (Mpiima, 2014) similarly found that women trained at the telecentre were using ICTs for this purpose and that this had resulted in a change in household decision-making and gendered divisions of labour as their access to information increased.

It is apparent from the research that many of the participants who were micro-entrepreneurs were using the internet for livelihood purposes (see Appendix J). They often have dependents and so would have found it difficult to obtain wage employment as they had to be able to care for their dependents as well as work. They had set up their micro-entrepreneurial businesses like baking, tailoring or hairdressing in order to gain an income source whilst still fulfilling their domestic responsibilities. As a result of their lack of freedom of mobility, they were using the internet as a way to gain new ideas and skills in relation to their micro-businesses and used online social networking as a way of advertising their goods and services and attracting customers. Overall, 39% of the respondents were using the internet to advertise their goods and services (section 7.3.1) on a regular basis and out of the case study participants who were self employed, 7/9 of them were using the internet for advertising (see Appendix J). One case study participant stated that 90% of her income was now generated from online sales (Box 7.5). A study on Indonesian women's use of the internet had similar findings (Melissa et al, 2015). Many of the women, because they were single, were relying on these small businesses as their main family income source. The others who were married were using their income as a means of having some financial independence from their husbands.

A closer contextual analysis of the data provides a deeper understanding of the type of women who are benefitting most from the use of the internet for these livelihood purposes. It appears that those women who have better IT skills and English language skills are more likely to be using the internet some of these livelihood purposes (section 6.3.1.1). Golzard's study (2019) of the economic

empowerment of women through the internet in Iran found that poor English language skills also constrained Iranian women's use of the internet for researching about livelihoods. The importance of these skills makes sense given the fact that the livelihood information may well be in English and that accessing different types of information and being able to process this information and act upon it may require higher level IT skills. Furthermore, three of the case study participants, who had been trained on how to use social media, were particularly adept at using the internet for searching for new skills and for advertising their goods, suggesting that training may be required to enable the women to become economically empowered through internet use.

Section 7.3 shows that the ability to use social media to acquire larger social networks and develop networks that bridge across different socio-economic boundaries appear to be key factors influencing the participants' success in advertising their micro-businesses online. The participants from the peri-urban and urban areas are using the internet more for advertising their goods and services mainly because of their large social networks online which are indicative of the number of people using the internet in the areas where they live. The smaller number of people using social media in the rural study site prevented the women there from using the internet as much in terms of advertising their products. Furthermore, a tentative finding from the research is that those participants with higher levels of education and/or wider networks offline were more able to develop social networks online that bridged across different socio-economic divides and were therefore best able to use their networks for livelihood purposes such as advertising. This suggests that the use of the internet is more likely to economically empower those participants who are already more socially advantaged, thus increasing inequalities.

The research about the use of the internet for developing bonding and/or bridging social capital has mainly taken place in the Minority World and is highly contested. Some of the research has concluded that offline social capital and digital skills may affect the type and extent of social capital building online (Hsieh & Hargittai, 2013) and that self esteem may also play a part (Rui et al, 2015). It is difficult to draw

any conclusions from the Minority World research that may be relevant to this research because some of the comparative analysis has shown that, although SNSs can add to both bonding and bridging capital, the extent to which type of capital is enhanced is dependent on a variety of factors including the specific cultural context (Choi et al).

9.3.1.2 Social Empowerment

The research has found many ways in which the participants' use of the internet is facilitating opportunities for social empowerment. This section focuses specifically on the use of the internet by the participants to access health information and to share information.

The research found that the internet is providing the participants with the *power to* access health information and to make more informed decisions about their own or their families healthcare. Given the difficulties in accessing good quality health information offline and the lack of trust expressed by some of the participants in local healthcare professionals, it is not surprising that the participants should be using the internet in this way. 59% stated that they used the internet to access information on a regular basis and 80% stated that their use of the internet had helped them make better decisions about their or their families' healthcare. This compares to 41% of internet users surveyed in SSA in a study in 2017 that stated that they had used the internet to get information about health and medicine within the last year (Silver & Johnson, 2018). Another 2017 study on university students in Ghana (Osie et al, 2017) found that 68% of the students accessed the internet for health reasons.

This study has shown that there are gender dynamics around access to healthcare information, with many women using the internet to access sexual and reproductive health and women's health information which can be difficult to access offline. Patriarchal control over family planning is common in Uganda and the rest of East Africa (Mosha et al, 2013) and therefore the internet provides the participants with a relatively safe and anonymous way to access this information, if they so wish, without having to seek their partners permission. The use of the internet for this purpose is extremely important in a country where there are high

rates of HIV transmission and teenage pregnancies (Stoebenau et al, 2019; Ochen et al, 2019). There has been little research on the use of the internet for accessing health information in Africa from a gender perspective but Kembabazi (2016) does highlight the huge potential for the internet to improve women's health in Uganda. However, she also highlights the low levels of education and poor English language skills that may constrain women more than men from accessing and using health information effectively online. This is consistent with the findings of this research which identified a possible relationship between educational attainment and the frequency of using the internet to access health information) and between the perception of English language skills and the frequency of accessing health information online. The harrowing case study concerning Participant Patience and her son gave an example of the dangers of using the internet to search for a diagnosis online when one's first language is not English (Box 6.6).

The case study also highlights the problem with non-medical people gaining direct access to medical information without a health professional acting as an intermediary. The direct access approach requires the recipient to be able to effectively assess whether health information is accurate and appropriate for their needs. Concerns were raised by the participants about whether health information found online was trustworthy and although overall more of the participants (48%) trusted health information online more than offline, the research highlighted that many of the participants could not articulate why they trusted it more online. Whilst some of the participants were using the internet to cross reference information and to check the validity of the source, others were not. This once again raises the issue of verifying and evaluating information online. The problem is not just an issue for the Majority world. Research in the Minority World has also found that even well-educated people find it difficult to objectively assess the quality and relevance of health information sites online (Barnes et al, 2003). Furthermore, because of the lack of evaluative skills, there is the potential for the deliberate spread of health disinformation online. Oyeyemi et al, (2014) discovered that 60% of tweets found online during an Ebola outbreak in West Africa were found to contain medical misinformation particularly about

potential cures. The current global Covid19 pandemic has also illustrated the dangers of health misinformation and disinformation online (OECD, 2020). Overall, the research has highlighted the opportunities for improving the female participants health through accessing online information but has also raised the dangers of searching for, interpreting and acting upon this information without the appropriate training and language skills.

One of the unexpected findings from the research was the importance of being able to use the internet for sharing information online. The ability to share information with other people is the joint 2nd top reason overall for women using the internet with over a third (34%) of them choosing this reason (Table 5. 1). Moreover, 71% of the female participants are sharing information online on a regular basis (section 7.4.5). Although there are no overall gender differences in the frequency of use of the internet for sharing information, there is a statistical association ($p = 0.024$) between gender and sharing information at Site 2a in favour of the female participants. Both the quantitative results and the qualitative findings suggest that the female participants are not simply passive recipients of information online, they are actively passing on this information on to other people and believe that it is important that they do this.

As shown in section 6.2 there is evidence that the use of the internet is challenging the controls over access to information which in turn may be challenging the idea that men are the sources of knowledge. Women online can now search and access the information that they want for themselves and therefore are no longer reliant on men for what they know. Furthermore, they can now pass on that information to large numbers of other people or even can create their own content, generating their own information and disseminating it on to others. In effect, the ability to share information results from a combination of an increased ability to access information, to network with a wider range of people and to express oneself. This is empowering them by enabling them to challenge *power over* them and have the *power to* share their own knowledge if they so choose. It may well be that the reason why this is so important to women is that they have not previously had access to knowledge, let alone had the ability to share what they know in this way

with other people. Their use of the internet to share information is therefore the culmination of these significant changes to their lives and in particular marks a change in their relationship with knowledge.

In addition to these profound changes, there is the suggestion from the research that the desire to share information in this way draws upon gendered identities whereby women are socially constructed as being more sociable, more communal and less competitive than men. Their use of social media therefore allows them to amplify these traits and to use the technology to share what they know with their online networks as a way of supporting and helping other people. It is interesting that recent research in the United States concerning gender differences in sharing information online appears to support the idea of gendered identities underpinning these differences. Lin and Wang's 2020 study of college students in the US found that gender is affecting the decision to share information on Social Networking Sites (SNS) and that it is partly related to women's greater emphasis on the importance of social ties. They use social role theory to theorize that women are more communal and that their greater focus on people-oriented activities compared to men is a driver for sharing information on SNSs. Similarly, the research of Chai et al (2011) found that there are gender differences in sharing knowledge online and that reciprocity and social ties are key factors around women's decision to share. The concept of reciprocity is interesting from a knowledge sharing perspective as it raises the idea that women may be using social media to share information as a way to improve their mutual relationships with others, with the hope that they'll receive important information in return. In effect, this is another way of building up their social capital online, drawing upon their *power with* others. Of course, drawing conclusions about this research in Uganda based on research undertaken amongst university students in the US would not be appropriate given the contextual differences. However, the Minority World research does suggest that offline social norms around gender are being incorporated into use of the internet online and that this could have implications for knowledge sharing. Further research is required to better understand these gender differences within the Ugandan context and the broader implications for women's participation in the knowledge society.

9.3.1.3 Political Empowerment

There are several ways in which the participants' use of the internet may be facilitating their political empowerment. There is evidence from this research that the participants are using the internet to provide them with the *power to* access political information, news and information about their rights and entitlements. The research shows that 42% of the female participants are accessing political information (section 6.5.1), 63% world news (section 6.5.2) and 25% information about their rights and entitlements (section 6.5.3) on a regular basis. The research suggests that some of this information may not have been accessible before they had access to the internet. As will be discussed below in section 9.3.1.4 below, there is evidence that this information is increasing their awareness of the world around them and is therefore changing their *power within* and giving them more self confidence, for example. Furthermore, there is evidence that the participants are accessing information about subjects, such as Gender Based Violence, which could be used to challenge *power over* them. Unfortunately, the research did not follow up to establish whether and how this information had been used in a transformative way but the fact the participants were gaining an understanding of their rights, for example, certainly provides a step forward in the process towards empowerment.

The participants are also using the internet to express their own political views and to discuss them with others; 43% and 37% of the female participants are using the internet to express their views about their country and community respectively, for example (section 8.4) Thirty percent of the case study participants talked about discussing political and civic issues online. In this way the internet is giving the participants the *power to* express their views about controversial issues. Once again, there is no evidence that this has led to a transformative outcome at an individual level, but it shows that their use of the internet has the potential to challenge the *power over* them exerted by those in power. From a broader perspective, women's ability to gain political knowledge and engage in politics online has the potential to challenge the gender imbalances

in political participation and to allow women's voices to be heard at a societal level.

The extent of the use of the internet for these political purposes was unexpected. One of the criticisms of the idea that ICTs can empower, is that research in this field to date has provided little evidence that women are using ICTs for political purposes (Cummings and O'Neil, 2015). The literature quite rightly reminds us that the technology itself cannot provide the motivation for engagement with politics, it can only support the enactment of it (Warschauer, 2003). So why were so many women wanting to use the internet for this purpose? One of the reasons could be contextual. At the time of research, there was a very heated debate about the vote to lift the age limit for the presidency that resulted in some opposition MPs being attacked and violent protests erupting in Kampala (Moore, 2017). The exact reasons for the interest was not investigated but this research suggests that when there are underlying motivations for searching for this sort of information, the internet is providing the participants with the *power to* access it.

There is evidence from this research that some of the participants are finding political information more accessible online compared to offline, since they can gain information through new media formats such as blogs and social media, rather than through more formal mainstream media such as TV and radio. Furthermore, although there are gendered interests at play in terms of political knowledge seeking behaviour (see below), there is the suggestion that these gender differences in interest in news and politics may be blurring online. There is the suggestion that use of the internet may expose the user to political information without them necessarily actively seeking it. There is a lack of research on these topics in the Majority World but research in the Minority World does appear to support some of these ideas. Bode's research in the United States (Bode, 2016) found that,

“(social media) users are exposed to political information incidentally while doing other things and are able to gain political knowledge as a result ...”

The Media Insight Project's research in 2014 found in their nationally representative survey that, although men had a stronger interest in news compared to women, there were gender differences in the consumption of news, with women being more likely to discover news through social media compared to men. This suggests that the female participants use of the internet may well be increasing women's engagement with political/news information online compared to offline.

In terms of women gaining a political voice, there is also evidence that the internet is enabling some of the participants to express their political opinions for the very first time. There is very little research on political and civic online participation in Uganda but the research undertaken by the World Wide Web Foundation published in 2015, which includes Kampala as one of its study sites, concluded that 54% of the women surveyed in Kampala who used the internet had shared their views on an important or controversial issue online in the last six months. Interestingly, this represented the highest level of engagement with political and civic issues across their worldwide study sites and adds weight to the importance of this type of online activity in Kampala around the time of the research. It is difficult to find research that compares online and offline political participation in Uganda, let alone research that analyses this according to gender. However, the scarce research that is available suggests that the number of women participating in political and civic activities online is much greater than offline. Using the work by Barnes and Burchard undertaken in 2012 which establishes a link between the percentage of female parliamentarians in different countries in SSA and the extent to which women in that country are "talking about politics"; in a country like Uganda where a high percentage (34%) of parliamentarians were women at the time of the research, one would still only expect less than 10% of women in society to be discussing political issues. As set out above, this research that found that 43% of the female participants were discussing political issues online, thus suggesting that the use of the internet may be significantly increasing women's voice in these areas. Of course, further specific research would be required to

compare online and offline civic and political participation in particular areas where the study is taking place.

It is interesting that some of the research in the *Minority World* also concludes that there are gender differences in online and offline political engagement. In the United States the research has shown that there are significant gender differences in nearly all types of political participation offline, with women less likely to participate compared to men (Trevor, 1999, Conway, 2001). However, there is some research that has found that these differences reduce when comparisons are made between women and men engaging in politics using social media (Gil de Zuniga et al, 2014, Bode, 2017). Bode proposes that,

“ it is possible that social media is a fundamentally different type of media experience, changing our understanding of how people gain, use and propagate political information.”

It is unclear why the use of social media might be changing the gender dynamics of political engagement. As Bode suggests it could be that use of the internet not only lowers the cost of information, it also lowers the cost of participation and therefore allows women to gain more political exposure and to make their opinions heard. As will be discussed in more detail below, it appears that some of gender norms that constrain women from voicing their opinions offline are being circumvented online as the internet provides a relatively safer space where women can express their views. This may also explain why the gender differences are reducing online.

Although it appears that the internet may be supporting the increase in political engagement by women, the gender differences are stark between the frequency of female and male participants accessing this information and expressing their political views. As shown in the results chapters, women are far less likely to access political and news information online compared to men and far less likely to be expressing their views about their country or community online. There are significant gender differences in all these areas. The question is why these

differences exist. The research established that part of the reason for these gender differences relates to wider “gendered interests” whereby politics and news are part of the male domain. This point of view is confirmed by other literature on this topic that concludes that women in Uganda are socialised to believe that politics, for example, is a male domain (Ntawubona, 2013, Kyohairwe, 2009). These gender norms may therefore prevent some women from participating in political discussions; the research suggests that offline gender norms may still be shaping what the female participants are willing to discuss online. It is interesting that these differences in gendered interests are not just found online in Uganda, they have been found in countries in the Minority World and in Africa, both online and offline and suggest that socialised sex roles and differences in socioeconomic resources underlie these gendered interests (Bennett and Bennett, 1989, Coffe and Bolzendahl, 2010).

By examining the socio-economic factors that were influencing the use of the internet, the study found that English language skills and educational attainment were possibly linked to accessing rights and entitlements online. There is also a possible relationship between the participants perception of their IT skills and the frequency of using the internet to search for political information (section 6.5.5) and using the internet to express views about their country (section 8.4.1.1). As discussed already, the perception of IT and English language skills is a gender issue, with more female than male participants believing that they do not have the right IT or English language skills. This may partly explain the stark gender differences in online political engagement.

One of the socio-economic factors that may be influencing the frequency of searching for political information or expressing ones political views is age. There is some evidence to suggest that female participants under 30 years old are more likely to be accessing political information online on a regular basis and regularly expressing their views about an important issue affecting their community and country. It is suspected that this is a reflection of the weakening of the gender norms that prevent women’s freedom of expression online and because of the changes that social media is bringing about in terms of political participation as

discussed above. Further research in this area is needed to explore the evidence in more detail and follow up on these ideas.

From this research another reason for the gender differences in political engagement online could be that some women may be less willing to speak out in terms of controversial issues because of the personal risks that this could entail. In the research, women's fear of being abused or attacked, their lack of financial independence or their desire to protect their families were all given as reasons why some of the female participants did not want to speak out in the realm of politics; there was a sense in which the female participants believed that they had more to lose if they spoke out and were therefore more reluctant to do so. This accords with the discussion around the gender difference in risk-taking behavior outlined in Chapter 5. It should also be noted that during the highly charged political climate at the time of the field research, the two high profile cases concerning the repression of the freedom of expression online both involved women. Stella Nyanzi, a prominent Ugandan academic and activist was arrested and charged with cyber-harrassment for insulting the president and his wife on Facebook as a response to them reneging on their election promise to provide free sanitary pads to school girls. In addition, Gertrude Uwitware, a Ugandan TV anchor was kidnapped and beaten up for her blog that defended Nyanzi's comments (Freedom House, 2017). These cases were well known at the study sites at the time of the research and possibly served as a warning to women of the dangers of expressing oneself too freely online. The genuine fear of expressing oneself freely online was heightened, not only by these high profile cases above, but by the backdrop of weak legal protections that are afforded to those willing to express themselves online. One of the major concerns about internet usage and freedom of speech online that came up time and time again during the research was the lack of online protection and the fear that someone could access their accounts and use the content against them. This will be discussed further below.

Chapters 7 and 8 discussed the fact that women are not expressing themselves online in areas that may challenge existing knowledge or political viewpoints feeds into the underlying gender norms that trivialize women's voice. The

construction of the voice of authority as the “male” voice according to many scholars has been deeply embedded into patriarchal societies for millennia (Beard, 2017) and has been equally evidenced in recent times in Uganda (Godfrey, 2010). This study identified that there was a common perception amongst some of the male participants and some of the male and female key informants that women were using social media more than men and were using it for trivial purposes, for “gossiping”, for example, whilst the men were using it to discuss more serious matters. This narrative undermines women’s voice online and suggests that the power dynamics surrounding the male authority of voice continue to be replicated online. It is interesting that President Museveni stated that he was going to introduce the 2019 social media tax on the basis of curbing the “gossiping” that was taking place online, once again undermining the voices of dissent online and maybe in particular targeting the growing voice of women online.

9.3.1.4 Psychological Empowerment

It appears that the participants’ use of the internet has brought about opportunities for psychological empowerment. Almost all of the participants (92%) stated that their use of the internet had increased their self-confidence and the research discovered that improved access to information was one of the main reasons for their increased self-confidence. For many of the female participants their ability to obtain information before was limited because of their mobility constraints for domestic, social or pecuniary reasons. As discussed already, the internet has facilitated easy access to almost limitless information for those who can afford it and have the right skills and has therefore changed the boundaries of what people know. This has increased the participants’ self esteem and hence their *power within*.

As already discussed above, their sense of control over the information that they have access to has also changed; they are no longer reliant on other people to gain knowledge, they can find out their own information and can learn for themselves. This has increased their agency and self-efficacy. As Castells and Cardoso (2005) explains, one of the benefits of the internet is that it “ shifts learning to “learning

to learn”.” Similar conclusions about the empowering psychological consequences of have been reached by other research in the Majority World. For example, the FAT (Feminist Approach to Technology) project in New Delhi that aims to create skills and provide a safe space for underprivileged girls to experiment with the internet, found that it increased the girls confidence and agency as they could find out things for themselves online and no longer needed to ask other people for help (World Wide Web Foundation, 2015).

The use of the internet not only provides access to information, it allows the participants to gain a greater awareness of themselves and the world around them. As one of the participants stated (unidentified participant from the Site 3 PGE),

“(Before the internet).... we were ignorant of what is going on around the world and ***we didn't know that we didn't know***”

There is evidence that, either through accessing world news online or through interacting with a wider group of diverse contacts online, the participants' awareness of what is happening around them has changed. Several of the participants commented on how they had become more aware of how other people lived and about their problems and issues. Other research (Cummings and O'Neil, 2015) has found that use of digital ICTs can expose the users to alternative ideas and even alternative representations of women.

The research shows that the use of the internet is not just allowing the participants to access new information or network with new contacts, there is also evidence that it creates a space where the participants are more comfortable to express themselves, to talk about their own problems and share them with others. The research revealed that this was very important psychologically to the female participants probably because of their relative social isolation compared to men. One of the case study participants, Brenda, described being without the internet as being in a “grave” and another said that they were “hopeless” (AMAKAM15). It could be argued that this new space for sharing information and feelings could

provide opportunities for empowerment in terms of *power within* and *power with*. It allows women to gain a voice and through their own voice and the voice of other women, to gain a greater awareness of their own circumstances, and greater knowledge of themselves.

These ideas are consistent with the findings of other research. Oweis's (2014) research at a university in Jordan found that the internet provided a space of reflection where the participants could express themselves freely and explore their social and cultural norms and gain a better understanding of their realities and themselves. The research conducted by Al Saqqaf (2014) with women in Yemen found that the internet facilitated the expression of the women's own perspectives, and allowed them to listen to other women's voices that extended, challenged or validated their own views. The discussions that ensued generated an increase in their self-knowledge and self-esteem and allowed them to co-construct new meanings around their own initial reflections. Other ICT research has similarly explored how the internet can help support reflexivity through self expression (Wijnen and Wildschut, 2015; Antonio and Tuffley, 2014).

The importance of a space where women can freely exchange ideas and knowledge has long been recognized as a means for psychological empowerment (Stromquist, 2015). It is reminiscent of the traditional ideas of feminist consciousness-raising which involved women sharing their experiences face to face through personal testimony so that they could better understand each other and themselves and generalize their experiences to gain a better understanding of the patriarchal norms that were oppressing them (Sowards & Renegar, 2004). The act of telling your own stories and expressing your own points of view, requires you to reflect on your own life and to see yourselves how others see you. It could be argued that the use of the internet is acting as a similar platform for this type of consciousness-raising but has the advantage that it does not require the women to be in the same physical location and therefore overcomes the lack of mobility constraint that many women face.

The psychological impact of the participants' ability to express themselves online

was difficult to capture from the research although from the analysis of the questionnaire responses, 13% of the participants believed that this was why their use of the internet had increased their self confidence. Previously, many of the participants would have had little opportunity to have a voice particularly in the public sphere and some of them spoke about their positive feelings that this had brought about. Furthermore, almost three quarters of the female participants believed that they were more likely to be listened to online rather than offline. The ability to express their interests and views, to participate in these new safer spaces and be listened to, no doubt increases their sense of self worth and is likely to increase their agency.

9.3.2 Disempowering Consequences

Although the internet is providing opportunities for empowerment, there are several areas where the participants use of the internet could have disempowering consequences. As set out in chapter 6, there is a concern about the increasing amount of misinformation and disinformation online. Although, misinformation is not a gender issue per se, the research found that there may be gender differences around the ability to judge the validity of information. Only 51% of the female participants stated that they had experienced false information online compared to 67% of male participants and there is a statistical association between gender and experiencing false information online ($p = 0.004$) (see section 6.7). It is unclear from the research why exactly there is this significant gender difference but it appears that educational attainment, frequency of use and English language skills may all be influencing the participants' ability to recognize false information. The female participants have a much lower perception of their English language skills compared to men, so this could partly explain the gender difference; it makes sense that the female participants with poor English may be less able to judge the validity of information particularly when a lot of the information found online is in English. Recent research by the World Wide Web Foundation (2020) in the Majority World revealed that women are verifying information less than men online and that lower language skills and education were possible explanations. On the other hand, it may be that the female

participants are using the internet less regularly to search for the types of information, for example, news that is more likely to be 'fake'. Further research is required to better understand these important gender differences.

The research also found that the internet was perceived to be facilitating surveillance over the interaction and self-expression of the participants. According to the results of the questionnaire, 29% of the female participants have experienced someone trying to track their use of the internet (section 8.6.1). As already explained, at the time of the research, there were no data protection laws in Uganda and so Ugandans had no legal recourse if individuals or the government obtained personal information online. Furthermore, there are laws in place in Uganda, such as the Computer Misuse Act 2011 that, ironically, in the name of protection against online harassment, contravene the fundamental right to freedom of expression enshrined in international law. Laws such as the Computer Misuse Act 2011 have been used to justify the arrest of individuals who have used social media to express their discontent with the current regime in Uganda (Rukondo, 2018). The threat of surveillance, the lack of privacy and weak protections in favour of free speech serve to restrict the participants desire to use the internet for self-expression and freedom of association. This also has wider structural consequences as will be discussed below.

9.4 Objective 3: To Explain How Gender Dynamics are Affecting Women's Access to and Use of the Internet and the Opportunities for Empowerment that the Internet Affords

This research has shown that gender dynamics are influencing almost every stage of the appropriation of the internet, from the initial motivation to use the internet, all the way through to its use as a means of empowerment. These gender dynamics have already been the focus of the results chapters and much of this discussion chapter. Therefore, this section will focus on some of the key themes that are emanating from the research in terms of the gender dynamics surrounding the use of the internet.

The use of internet helps the female participants to overcome two key gender constraints that they face in terms of being able to empower themselves. One of those constraints is centred around their lower levels of freedom of movement. This research and other research (for example, Madanda, 2011, Oxfam 2018, Prozesky and Beaudy 2019) has shown that many women, because of domestic responsibilities, are required to remain close to their homes so that they can care for their dependents and/or look after their husbands. Similar ICT research in the Majority World that focuses on women (for example, Gigler, 2015; Rathinam, 2015; World Wide Web Foundation 2015) has identified informational and associational asymmetries between men and women and has identified men's greater freedom of movement, and their lack of domestic responsibilities as underlying reasons for these differences. This lack of freedom of mobility means that it is more difficult for women to be able to access the information that they require or to be able to verify the information that they receive from those around them. They cannot easily access the skills that they need to develop their businesses or find the opportunities to educate themselves or their families. They are less able to interact with others and build their social networks compared to men and have fewer opportunities to express themselves. They are more reliant on intermediaries (such as their husbands, fathers, community leaders) to bring them information, skills, educational opportunities and possibilities for interaction and self-expression. This is particularly the case for those participants in the rural and peri-urban study sites.

It could be argued that once the female participants gain access to the internet their lack of physical mobility becomes less of a constraint. Their use of the internet allows them to seek information, new skills and educational and employment opportunities, for example, from within their own home. It allows the women to search for information for themselves without the need for intermediaries who could distort the information or reduce the opportunities available. They can find out the information and the skills that they need, not the information, skills that someone else thinks that they need. They are not limited to information sources or networking contacts within their immediate vicinity; they can seek information and contacts irrespective of their distance from the

source or location and can often do so without any additional costs (apart from the cost of data). A good example of how the use of the internet reduces this constraint for women is the way that female micro-entrepreneurs were found to be using the internet to gain livelihood information, learn new livelihood skills, develop their networks online, use social media to advertise online and communicate with potential buyers. They can do this online from their own home, without the expense and time to travel to gain this information or skills or the expense of advertising or communicating or using middlemen.

Women also face gender norms and patriarchal controls that prevent them from being able to empower themselves in certain ways. As the research has shown, previously, men have been identified as being the “gatekeepers” of information. This is partly because they were more likely to be able to move outside of the home and hear about new information but also because men often had control over the technology or sources that acted as a means of access to information such as the radio, TV or newspaper. Men were also the traditional gatekeepers of social interaction in some cases and therefore to a certain extent controlled who women could communicate with. As KI Dr Bosco explains,

“There is a layer of control over women and girls, they are supposed to be in the “private” sphere, their interaction with the outside is controlled, they must get permission....”

Furthermore, some women were less likely to get access to opportunities within the community because men were more likely to be in positions of power and therefore give the opportunities to people that they know, who were often men. The research has also revealed that perceived gender constraints over women’s ability to express themselves freely and be listened to. As KI Monica explains,

“Traditionally, women’s communication is limited. When the man is talking the women should keep quiet and listen. Men have more opportunities to talk, when a man stands up to speak in a community he is more listened to and when women try to talk nobody believes in them.”

The use of the internet by the female participants is found to challenge some of these patriarchal controls and in some cases circumvent these existing gender norms.

Those female participants, who have their own smartphone or internet-enabled phone, can now control their access to the “enablers” of the access to information, interaction with others and self-expression in a time and place that it is convenient to them. Moreover, it is not a communal or household technology, it is a personal technology which women have greater control over. As participant PGESTB02 from the Site 3 PGE explains,

“(Before) the household head controlled the radio, that is, the husband/father... (now my smartphone) ..is my personal property, currently he doesn’t have any control the difference is that now everybody owns information...”

The female participants are no longer required to rely on men for information or opportunities or always seek “permission” in terms of who they interact with or social acceptance for where they can have a voice. These controls are challenged with the balance of power shifting away from the traditional male gatekeepers towards the owners of the smartphone. As this research has shown, the use of the internet allows for more horizontal networking between individuals, whereby they can more associate freely with others, make new contacts and connections which can bridge socio-economic divides. They can also participate in new interest groups and express themselves more freely. Furthermore, the negative consequences of searching for and accessing sensitive information or associating with certain people are reduced because of the anonymity that the mobile internet can provide.

It can be argued that the internet creates a new communal space where it appears that gender norms are not being replicated to the same extent as offline.

Evidence for this can be found in Chapter 8. Only half of the female participants surveyed believed that they could express themselves freely offline whilst on the other hand, almost three quarters of them believed that they could express themselves freely online. The use of the internet therefore appears to be providing some women with an opportunity to voice their opinions and express themselves freely sometimes for the first time. Whilst approximately the same percentage of women (82%) and men (86%) agreed that they had freedom of expression online, there is a statistical association between gender and freedom of expression offline with only 51% of the female participants compared to 62% of the male participants believing that they had freedom of expression offline (section 8.2.3).

The research reveals that gender norms are one of the major constraints preventing the female participants from speaking out offline. Women lack the confidence to express themselves freely offline because of the cultural traditions that ascribe men to the role of the spokesperson in the public arena. The research also found that intra-household gender inequality may also be reducing the participants ability to express themselves freely offline but that these constraints are reduced online (section 8.2) . According to the research the internet is creating a safe space where the female participants can express themselves without the fear of intimidation, public humiliation and in some cases the physical threat of violence. They are protected from being judged or criticized in some cases by using anonymity or being physically distant from those people that they are expressing themselves to. They also have the time and space to construct what they want to say which can help them to overcome their lack of confidence in expressing themselves. It appears that this 'safe' space therefore allows them to circumvent some of the societal norms that prevent the female participants from expressing themselves offline.

The findings from this research echo the findings in some of the other research on women and ICTs in patriarchal societies in Africa and the Middle East. For example, Oweis, (2014), Foda and Webb (2014) and Ibrahim (2014) all found that the internet created a private, safe space where the women involved in ICT projects in Jordan, Egypt and Sudan could freely express themselves outside the

grip of offline social norms which prevent women from having a voice. Feminist scholars suggested a while ago that, because the potentially discriminating attributes such as gender, age, race and, class are not visible online, the internet allows everyone to participate equally (Harcourt,1997, Spender,1995). There is some suggestion in research from other fields that gender norms offline may not always be replicated online. March et al's (2013) and Eisenchlas' (2013) research found that people feel less concerned about how they appear to others online because of anonymity and therefore do not always display gender stereotypical behaviours. Miller et al (2016) found that whether certain offline gender stereotypical behaviours were either strengthened or weakened online was context specific. They found that whether the online spaces were public or private and whether the participants were posting anonymously or under their real life identities determined whether offline gender norms were applicable.

There have been suggestions that because interactions are less visible online it is more difficult to categorise people, and there is therefore more focus on the content of the communication and not on the sender per se. As Abraham (2014, p201) purports,

“Since typical gender prejudices are therefore not immediately evoked (online) as they would be in physical space encounters, gender relations are freed up to some extent.”

He goes on to suggest that the rules of engagement for social networking groups are often explicit and act to protect the group members against prejudicial behaviour unlike the subconscious cultural and gendered rules of association that operate offline. This may explain why women may feel more comfortable expressing themselves online.

There has also been research undertaken about the potential of the internet to allow users to reconstruct their identities in the new space that the internet provides. As discussed above, Nsibirano and Kabonesa's (2014) research in Kampala found that the way the students engaged in online activities sometimes

enabled them to renegotiate and redefine their identities in ways that challenged social expectations and gendered stereotypes. Identity construction is normally partly dependent on physical characteristics such as race, sex and age (Moghadam, 1994) and on time and place (Cornwall and Lindisfarne, 1994) but online the notions of time and space are changed (Castells, 2011) and so maybe this allows for changes in identity construction to take place. The fact that the main device used by the participants to access the internet is a personal device with a primary purpose for communication may also be affecting gender norms. This has already been touched on in the discussion above.

Although there is evidence that some gender norms and controls are being fractured and reconfigured online, there are other ways in which gender norms are being replicated online and are constraining women from using the internet in empowering ways. Married women appear to be constrained from using the internet in certain ways. They are less likely to be able to freely communicate with other people and are less likely to join discussion groups online. The research suggests that male partners/husbands are controlling their female partners /wives use of their smartphones particularly in terms of who they are interacting with online.

Gendered interests appear to be shaping the type of information that women are searching for online, with the female participants less likely to be searching for political information, world news or their rights and entitlements. As has already been discussed above, these gendered interests ultimately result from sex-role socializations. If women do not have the motivation to use the internet in ways that are deemed to be empowering because of these underlying norms, the internet in itself, cannot change their behaviour.

There are other gender dynamics that appear to be replicated online. Overall, the female participants are more sexually harassed online than the male participants; there is no suggestion that they are harassed even more online but nonetheless harassment is still occurring and may be dissuading women from going online and using the internet. Furthermore, the attempt to trivialize women's voice online is

similar to the undermining of women's voice offline, with the narrative that women are "rumour-mongering" and "gossiping" perhaps becoming stronger as women's sharing of information and voice occurs online. More research is needed to explore the gender dynamics that are occurring online within the context in the Majority World but there is evidence in this research and other research to suggest that gender constraints and gender norms are not necessarily being mirrored in online spaces. They are being fractured and contested and are themselves being shaped by the use of the internet as much as they are shaping its use.

9.5 Objective 4: To gain an understanding of what type of women in which circumstances are able to access and use the internet and benefit from these opportunities for empowerment.

The study attempted to gain a better contextual understanding of the use of the internet by establishing whether and how certain types of women were more or less able to use the internet in ways that are empowering. It also attempted to understand how the circumstances in which it was used would particularly affect the ways in which it could be used to empower. This section aims to consider whether any overarching conclusions can be drawn in relation to the research questions about the context in which the internet is used.

The research took into consideration the age of the participants, their levels of educational attainment, poverty, marital and employment status when analysing all of the research data as a way of establishing the socio-economic factors that could be influencing use of the internet. It did this so as to gain a more informed contextual understanding of the type of women who were more likely to be benefitting from use of the internet. The research revealed that education, age, and poverty were all key factors influencing internet usage although unexpectedly, poverty had less of an influence compared to the other factors. The discussion below will briefly comment on these key socio-economic factors in turn with a special focus on any unexpected findings.

9.5.1 Education

As has already been discussed, educational attainment is a key determinant in how the participants are using the internet in ways that could be empowering. Participants with higher levels of education are more likely to be using the internet to search for information about their rights and entitlements (section 6.5.5). This makes sense given the complexity of this type of information and the IT skills and language skills required to search for it and interpret it. Once again, this can be explained by the link between educational attainment and perceived higher levels of IT skills (see section 5.6.3.5.1).

It is also interesting that educational attainment appears to be affecting the participants' awareness of issues about privacy and security online and the possibility of misinformation or disinformation. There is a statistical association between educational attainment and having had experience of someone tracking their use of the internet (section 8.6.1) and between experiencing false information online and educational attainment (if both the female and male participants are considered) (section 6.7.3). Whilst the research shows that the internet is enabling some of the participants to access educational opportunities online, it is those with higher levels of education to begin with that are more likely to do so. Thus, rather than acting as a positive feedback loop which could challenge existing inequalities, the use of the internet may be reinforcing those inequalities by allowing the better educated to access further education online.

There are two aspects of the research where less educated women appear to be benefitting most from use of the internet. Female participants with lower levels of education are more likely to be gaining a wider network of contacts online. 90% of the female participants who had obtained no more than primary school education agreed that they had developed a wider network of people online, compared to only 81% of the female participants with tertiary education and compared to 59% of the male participants with the same level of educational attainment. In addition, there was a 11% gender difference in female participants with low levels of education sharing information compared to their male counterparts. The reason for these differences is uncertain but from observation in these communities and from further data analysis it appears that women with

low levels of education often have reduced freedom of mobility, either because of their lack of control over decision-making of when they can travel outside their own home or because of their domestic responsibilities and affordability constraints. Contrastingly, it was tentatively found from the case studies that higher level of educational may increase the participants' ability to gain contacts that bridge socio-economic divides.

Other research in the Majority World has highlighted the importance of education and the effective use of ICTs (Gigler, 2015, Isenberg, 2019 and Kifle, 2013). Further research is required to understand the circumstances in which the internet could be benefitting those with low levels of education and those in which it could be disadvantaging them. Furthermore, additional research is required to establish whether lower educational attainment can be compensated online by opportunities for informal learning or by specific training about how to use the internet.

9.5.2 Age

The research found that younger women (those under thirty years old) are more likely to struggle to pay for their own data compared to older women but are still using the internet more frequently. They are more likely to perceive that their IT skills are good enough to use the internet how they want compared to women over 30. They are learning new skills online more frequently and believing that they are listened to more online compared to older women.. The biggest difference in use from an age perspective was found in terms of political empowerment where younger women were searching more regularly for political information (section 6.5.4.1.2), posting political content online expressing their views about their community and country and expressing themselves online about their community (sections 8.4.2).

Some of these age differences were expected given the fact that younger people are more likely to have better IT skills, possibly through being more exposed to the internet in some shape or form at school or to social media through their peers.

The level of political engagement online by women under 30 was unexpected but possibly reflects shifts in gendered interests online as outlined above. Indeed, it was more surprising that age was not a bigger factor affecting internet use. From the comments from the participants and from observations, it appears that age is more of a factor in terms of motivation to gain access to the internet but once older people get online age becomes less of an influence on use. Research in the Majority World has mixed findings in terms of the influence age on internet usage. The World Wide Web Foundation's research found that age is an issue in terms of women accessing the internet in most of the Majority World countries where they conducted their research. However, Gigler's (2015) research in Bolivia found that age was not a significant determinant of access and use of the internet possibly because of the lack of exposure to the internet at the rural schools in the areas where his research took place. This is a reminder of the importance of taking a holistic, contextual perspective when considering the circumstances and factors determining internet access and use.

9.5.3 Wealth

As expected, it was found that the wealth of the participants played a significant role in whether they could afford a smartphone and the extent to which they use the internet, presumably due to the amount of data that they could afford. Surprisingly, however, it did not seem to influence the way that they used the internet in terms of opportunities for empowerment. It is interesting to note from observations, conversations and from the literature (Whitehead, 2018, CIPESA, 2018, Pinch, 2020), that the introduction of the social media tax in Uganda in June 2018 just after the field research finished, appears to have reduced the use of internet to a large extent, particularly amongst low income Ugandans. The research therefore offers a unique insight into internet use when it was affordable to many ordinary Ugandans and highlights the importance of affordability of data for using the internet in ways that can be empowering.

9.6 Objective 2d: What is the Potential for Changes in Power Dynamics to Occur at a Structural Level as a Result of the Changes at an Individual Level?

The final research objective to be answered examines the possibility that the use of the internet will lead to wider structural change in addition to empowering the female participants individually. The discussion will be structured around the three forms of power (*visible, hidden and invisible*) that were outlined in the conceptual framework section of the literature review in Chapter 2.

9.6.1 Visible

The research reveals that the use of the internet is in some ways supporting the formal mechanisms through which power is enforced. It is facilitating e-democracy by widening the participants' exposure to information about politics and the news. As discussed above, the internet has become an entry point for some of the female participants to gain a greater interest in politics possibly as the source of this information has changed to make it more informal and more accessible for some women. There is a slightly greater level of trust in the news online compared to offline because the news online is seen as being more detailed and up to date online and can be easily verifiable according to some of the participants. Furthermore, in some cases there was a greater trust in international media sites due to a perceived reduction in the possibility of political interference.

As well as helping to broaden the base of political engagement, the participants' use of the internet has also provided them with direct access to information about their rights and entitlements which is an important part of e-government. Surprisingly, 47% of the female participants had used the internet to search for this type of information (section 6.5.3). The constitution can be found online on government websites and information about different types of rights and entitlements can be found on NGO websites for example. It would have been very difficult for the female participants to access this information previously because of their comparatively limited ability to travel and the cost of engaging with lawyers or experts who could advise them about these types of legal issues.

Although this research shows that use of the internet is supporting e-democracy and e-government, it was expected that it would facilitate communication

between the participants and those in power, whether it was feeding back about policies or poor service provision (for example, poor roads) either individually or as part of a community organization. However, this research revealed that the participants were rarely using the internet to engage in these formal mechanisms of power. This accords with the review of ICT4D literature by Cummings and O'Neil, 2015 which found that it was difficult to find evidence to women's influence either collectively or individually on government policy and services through online activities. Only one of the female participants Participant Fortunate, a farmer and a local councilor, was participating online in a formal political social media forum to express her views (see section 8.3.2.1). However, she was already involved in politics offline. This finding is consistent with other research that suggests that women in the Majority World who are active in political and civic life *offline* are more likely to be using the internet to express their opinions on political issues *online* than those who are not active offline (World Wide Web Foundation, 2015).

In many ways, the lack of participation by women into these formal spaces for political engagement is unsurprising. As already discussed, there are concerns by the participants about speaking out formally online given the weak legislation protecting citizens' freedom of speech, privacy and security online. It has also been established from the research that female participants may be less willing to accept the risks of letting their voices be heard in public political spaces online than the male participants, thus in effect creating an indirect form of silencing of women's voices. Furthermore, the research has shown that when they do speak out, some of the women do so using the anonymity that the internet affords. However, this is a double-edged sword. On the one hand, the ability to distance oneself from one's true identity or from one's physical surroundings is enabling the participants to feel able to express themselves more freely. On the other hand, this anonymity may be undermining the potential of the internet to be used as a platform to illicit change. As Johnson 2004 points out, the danger of online communication is that it hides these gender differences (as well as race and class) rather than recognising and celebrating them. If women are anonymous online, how will this challenge the social construction of the authority of the male voice?

From a gender perspective, the gender neutrality of their voices may well be neutralizing the power of their message.

9.6.2 Hidden

The hidden forms of power include the ability to influence the agenda for visible decision-making. As set out in the results section above, there is evidence to suggest that the female participants are using the internet to express their views on issues including those that effect their country and community. Although, fewer female participants are using the internet for this purpose than the male participants, there is still a surprisingly high percentage (43% and 37% respectively) of the female participants that are expressing themselves in these areas. They are not doing this in a formal capacity but are often using social media to share their views online. There is no evidence in this research to suggest that the views of the participants about their country or community are in any way directly influencing the agenda for decision-making. However, the potential for their views to influence the agenda in their own very small way is still there; this is the first time that some women's voices can contribute in any way to influencing at any level. Other research has shown that social media campaigns in East Africa have certainly drawn the attention of politicians and policy makers but is debatable as to the extent that they have resulted in real change offline (Nyabola,2018; Falisse & Nkengurutse, 2019). On the other hand, it could be argued that President Museveni's 2018 attempt to curb the use of social media through his imposition of the social media tax was mainly in response to the powerful, consolidated voice of dissent to some of his policies that was being mediated through the use of the internet (Akumu, 2018). This suggests that online dissent is in some way having an impact.

9.6.3 Invisible

9.6.3.1 Control Over Information

Invisible forms of power shape the ways in which socio-political, economic change can occur. Control over access to information is a way in which these changes can be limited or controlled by those in power. As already discussed above, it can be

argued that the use of the internet challenges these controls over access to information by removing the traditional gatekeepers of information such as the male members of the family or conventional mass media. The use of the internet has opened up a whole world of information to the participants. They are no longer passive receivers of information, they can actively search for what they want and what they need. They can even access information that was previously difficult to access or “taboo” such as information about sexuality or sexual and reproductive health.

Furthermore, the use of the internet in some ways ensures that the participants are less susceptible to being provided with misinformation or disinformation. The participants spoke about having greater control over verifying information, by comparing different sources of information and looking at commentaries from other people. A prime example was given by some women about using the internet to find out about nutritional information where they had previously been told by the male members of their family that certain highly nutritious foods were not good for them. In addition, having a means to create your own content online can also challenge the control over information by calling out misinformation and disinformation; it allows ordinary people to criticise the official information provided and disseminate alternative information to large numbers of people. Several of the case studies suggest that some of the participants may be using their voice in a critical way online and would be willing to use the internet to challenge the official narrative. For example, participant Nana from Site 3 states that she is not afraid to speak out against the hypocrisy of certain Ugandan politicians online. It is also interesting that Participant Patience explained how she wanted to use the internet to speak out and challenge the misconceptions surrounding HIV so as to help others (see Box 8.6 above). This shows a willingness by some of the participants to use their voice in a way that challenges the accepted status quo of the world around them. Whether and by whom their voices are being heard has not been established in this research but as explained in the “hidden forms of power” section above, these voices, when added to large numbers of other voices, do have the potential to be heard and to possibly challenge misinformation and disinformation.

On the other hand, despite the new freedoms around information and the ability to challenge misinformation or disinformation, there are concerns that people may not have the ability to recognize 'false information' or 'fake news' online. In the same way that information can be easily disseminated and accessed online, false information or misinformation and can be easily created and spread online. Social media, in particular, affords a lack of accountability for the provenance and verifiability of information by bypassing the filtering mechanisms of these traditional gatekeepers (Djordjevic et al, 2016). Some of the visual clues to provenance and verifiability are also lost (Karlova & Fisher, 2013). Furthermore there is evidence that the mechanisms for accepting or rejecting misinformation or disinformation are dependent on already existing opinions and beliefs (one is much more likely to accept misinformation which supports your own opinions) (Djordjevic et al, 2016) and on informational literacy skills (Karlova and Fisher, 2013). This could lead to the reinforcement of opinions that support existing social norms rather than challenging them.

As already discussed above in terms of false information, the spread of misinformation has already had significant offline consequences. In neighbouring Kenya for example, there is evidence that the use of the internet as a means to spread misinformation and amplify rumour was partly responsible for the ethnic violence surrounding the 2007 election (Nyabola, 2018). Moreover, during the 2017 Kenyan election, it is believed that Cambridge Analytica used Facebook users data to micro-target voters with messages in order to influence their voting behavior (Roberts, 2018). It appears that the struggle over the "truth" of information and has become the new battleground for the fight over power.

Going back to this study and from a gender perspective, there is no doubt that the loosening of controls over information have been empowering for many of the women involved in this research and it is likely that women may have benefitted more than men because of the additional constraints that they faced previously in accessing information. However, the possible gender differences in recognizing 'false' information is of real concern and suggests that women may be more

vulnerable to manipulation through disinformation than men as a result of their lower levels of education, poor English language skills and lower frequency of use of the internet. Furthermore, the Cambridge Analytica scandal is a wake up call in terms of the implications of weak regulation over privacy of data. There is a real danger that the combination of weak data protection and gender norms which sanction men's rights to exert control over women's lives in countries like Uganda may result in increased surveillance and control over women. Unfortunately, this was not the main focus on the research and so further research would be required to better understand the gender implications of "fake" news and the potential for data theft and surveillance.

9.6.3.2 Control Over Knowledge Generation

Before the introduction of the internet, the female participants would have been less likely to be able to share their own experiences and knowledge with others compared to men because of gender constraints. As discussed above, there is evidence to suggest that previously men had more control over access to information and were the ones who were therefore more "informed". As one of the KIs was quoted as saying in Chapter 6,

"The men think that they know more. Women lose agency. They wait for the person who knows.....(the man)."

This quote suggests that, as a result of the control over access to information, there are gender identities that portray men as the ones who know more. One of the invisible forms of power that controls the boundaries of socio-economic and political change is control over the generation and dissemination of knowledge. It could be argued that there is evidence in this research that the use of the internet is changing some of these controls by not only allowing women to become knowledgeable as they gain access to information, but by enabling them to create content online and disseminate what they know to others. There is evidence, for example, that the female participants are joining interest groups online or in some cases even setting up interest groups and sharing information. As some of the literature suggests, the use of the internet is changing the power dynamics

surrounding the generation and legitimization of knowledge and for this reason scholars like Warschauer (2003) has spoken about the “democratization” of the means of production of knowledge.

The concept of this new online space for sharing information and experiences has implications for the way that knowledge is formed. Foster (2011) for example, believes that one of the main benefits of the internet is that, in addition to individualized learning, it can foster new collective ways of informal learning, which are similar to the participatory community learning approaches that have been used in development projects. From a social constructivist perspective, it facilitates social learning, that is, learning through social participation which legitimates knowledge through articulating & sharing experiences within and between groups and communities. This is interesting from a gender perspective. Feminist educationalists (for example, (Belenky *et al.*, 1988) have long spoken about women favouring different ways of knowing compared to men, with women valuing shared learning and “connected” knowing rather than the formal transfer of knowledge from “experts” to the uninitiated. Given the desire of the female participants to learn and share information with others as discussed above, the use of the internet could provide the opportunity for a shift in power dynamics around learning and knowledge generation.

9.6.3.3 Control Over Social Norms

From a connectivist learning perspective, the internet, through the facilitation of networks, can also build connections of knowledge and understanding that span different communities and countries (Foster, 2011). There is evidence from this research that as a result of the loosening of controls over social interaction, some of the participants have broadened their social networks and are sharing information with people outside their normal social and geographical boundaries. This has the potential to subtly challenge invisible forms of power by changing the ideological and psychological boundaries that frame our understanding of the world around us. From a gender perspective, this could be an important step on the process towards challenging the current dominant patriarchal norms. There is evidence that some of the female participants have joined groups online where they are discussing women-related issues, for example. The discussion of such issues with others could lead to a reflection on the current gender norms and creates the potential for women to become more critical of these norms. On the other hand, there is no guarantee that positive social change will occur as a result of increased networking, let alone positive change in respect of women's empowerment or gender equality. Indeed, SNSs could act as a self-reinforcing mechanism for existing social norms which reflect current dominant ideologies (Pariser, 2011) or they could also be hijacked by commercial entities and those already in power (Fuchs, 2017). Further research would be required to explore the gender differences in use of the internet in this way.

9.7 Revisiting the Conceptual Framework

The conceptual framework was developed using an iterative process based on the ideas from the literature and the findings from the research. It provided a structure within which the results could be analysed and discussed. This section reflects upon some of the strengths and weaknesses of the framework.

One of the strengths of the framework is that it allowed the different conceptualisations of empowerment to take centre stage, all the way through from the participants gaining access to the internet to the possibility that the use of the internet is changing power dynamics at a structural level. It drew particular attention to how power over the “enablers” is challenged through internet use and therefore allowed the research to reveal how women may be particularly benefitting from it. Structuring the findings from the research around these enablers (access to information, ability to interact with others, and self-expression), allowed the unique empowering features of the internet as an ICT to be exposed.

Furthermore, the use of different types of power (*power to*, *power with*, *power within* and *power over*) within the different dimensions (economic, social, political and psychological) of individual empowerment provided a flexibility of approach to ensure that all the aspects of empowerment could be explored but at the same time giving a structure to the analysis. The use of the different concepts of the *visible*, *hidden* and *invisible* forms of power allowed the relationship between individual empowerment and changes at a structural level to become apparent. Finally, setting this empowerment model within the framework of gender dynamics and the socio-economic context forced gender and the multiple identities of the participants to be considered throughout the analysis of the research findings.

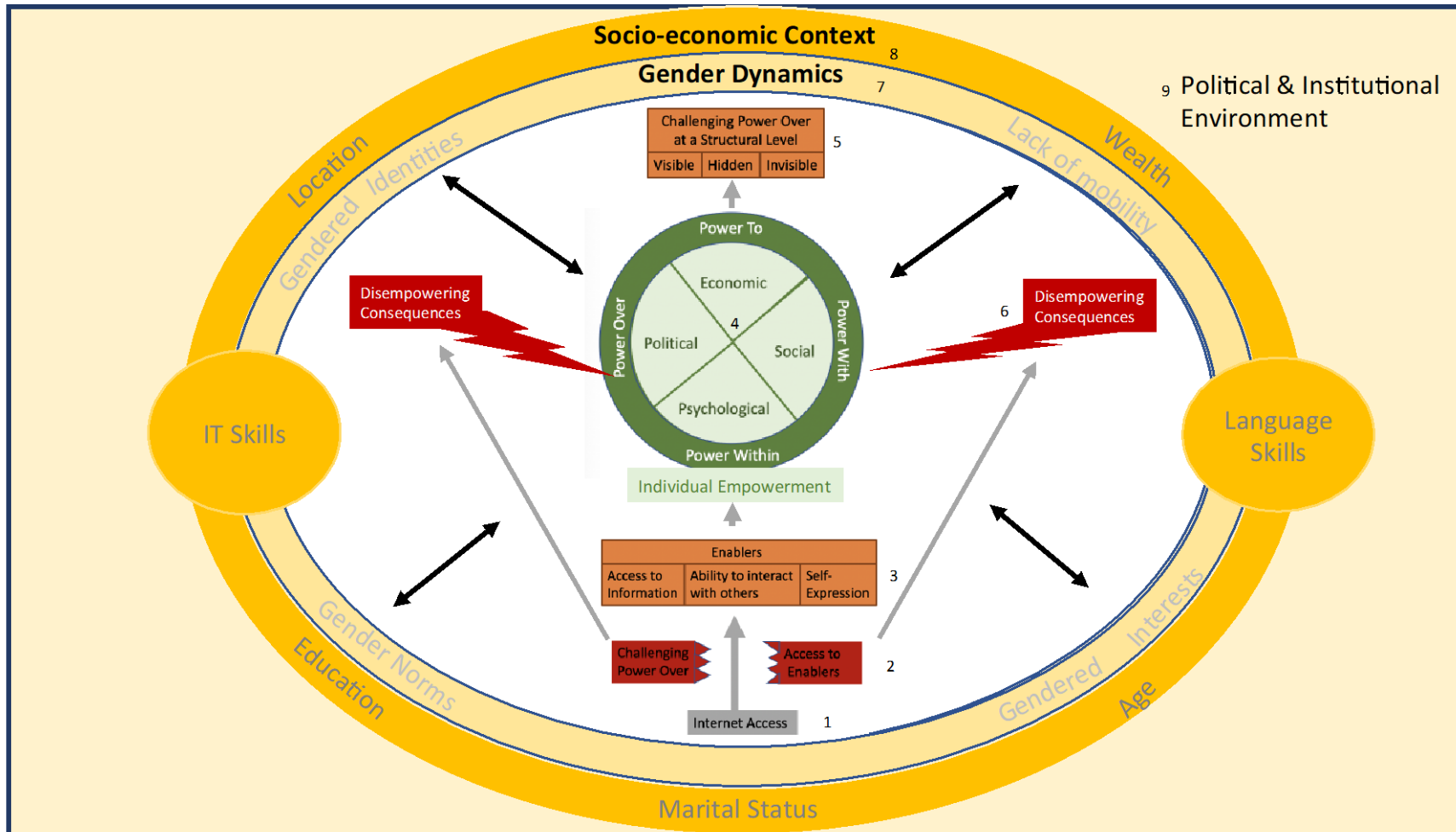
There are several key weaknesses of the framework. First of all, the framework is an over-simplification of a very complex problem. Ideally, if resources had

permitted, some of the concepts would have been developed further and other concepts would have been incorporated. For example, the effect of institutions on the participants' use of the internet and the opportunities for empowerment that it brings was not explored in the research. In addition, the concepts of *visible*, *hidden* and *invisible* power could have been developed further from a communication power perspective.

Another area of weakness is that the framework does not fully address the complex inter-relationships between the different concepts. These relationships were omitted from the diagrammatic representation of the conceptual framework as set out in Chapter 2. Following on from the analysis of the results, the framework has been amended to include some of these dynamics (see Figure 9.3 below). The research found that the relationship between the introduction of a technology and the changes in power within a person's life are complex and the complexity increases if the relationship between a technology and society are considered. The findings of this study confirm that, although the internet is having an effect on power structures within individuals lives and within society as a whole, this is not predetermined or uni-directional. The results do not support a notion of technological determinism whereby the introduction of a technology has a specific effect. At both an individual and a societal level, the effect that the internet has on power dynamics is shaped by the circumstances of the users and the environment in which it is used. It is also proposed, based on the findings, that the changes in power dynamics will then have an effect back on the socio-economic context and the gender norms under which people live. In order to capture this dynamic, black bi-directional arrows are shown within the empowerment model pointing out to the gender norms and socio-economic context and back towards the empowerment model.

Furthermore, the relationship between the technology and society can be seen as dialectical. Given that society is shaping the use of the technology, it makes sense that the technology will have multiple contradictory effects on society.

Figure 9.2 Amended Conceptual Framework with Complex Inter-relationships Between Concepts.



This explains how the use of the internet can have both empowering and disempowering consequences. For example, on the one hand, the challenges to the control over access to information can lead to many empowering consequences as a new world of information becomes available to the user. On the other hand, without the traditional gatekeepers and without the appropriate skills, the user can be overwhelmed by the information available and be unable to determine what is true and what is false. Grey arrows have been placed on the conceptual framework to represent this relationship.

Overall, the conceptual framework has been used effectively to provide a structure and discipline for the analysis of the results of this research. It also provides an interesting conceptual overview of this research area which would benefit from further development as the use of the internet evolves.

9.8 Summary

This chapter has explored how the internet is being accessed and used at the study sites and has discussed how the use of the internet is providing opportunities for individual empowerment across the different dimensions. Throughout it has focused on the gender dynamics surrounding its use and assessed what type of women in which circumstances are most likely to benefit from these opportunities. It has also discussed how these opportunities may be affecting power dynamics at a wider structural level. As part of these discussions, it has drawn upon the academic literature wherever possible but it is evident that there are significant gaps in these areas of research that are required to be filled before a deeper understanding of the use of the internet can be achieved. The following chapter will summarise the research findings and will include suggestions for further research as highlighted in this chapter.

Chapter 10 Conclusion

10.1 Introduction

This study set out to examine how the use of the internet was providing women with opportunities for empowerment. It attempted to use a power, gender and contextual analysis to gain a thorough understanding of their use of the internet and whether and how it is being used in ways that could be empowering. In this concluding section, a summary of the main findings of the research will be considered as well as describing the important contribution to knowledge that this research provides. The practical and policy implications of the research will then be discussed, followed by the recommendations for future research on this topic.

10.2 Summary of the Main Findings

10.2.1 Why and How are the Participants Gaining Access to the Internet and What are the Factors that are Influencing their Access and Use?

The research found that the primary motivation for the participants to use the internet is to be able to communicate with others. Nearly all the female participants are accessing the internet on internet-enabled phones rather than computers, with the majority learning how to use the internet from their family and friends. There are gender dynamics that are influencing each stage of the appropriation of the internet. The research reveals that some women lack awareness of the benefits from the use of the internet, which consequently reduces their motivation to use the internet.

The affordability of data and smartphones is a key constraint for women. Their financial constraints may allow them to afford only cheaper, less functional phones and buy cheaper social media data bundles, without functions such as

information searching. In addition, this research found that there are gender dynamics that are influencing the acquisition of smartphones; some men do not want their partners to have a smartphone because of the freedoms that it affords. In some instances this leads to nuanced bargaining strategies between women and men around smartphone acquisition.

This research has shown that access and use of the internet is significantly influenced by the perception of their own IT skills. Those who perceive that they have poor IT skills are not using the internet in ways that are as empowering compared to those who perceive that they have better skills. This is a gender issue, with a statistical association between gender and perception of IT skills, with the female participants perceiving that their skills are lower compared to the male participants. As expected, educational attainment and age are also influencing the perception of IT skills, with better educated and younger women believing that they have better skills. On the other hand, the fact that younger women have a better perception of their IT skills offers hope for the future. There were also suggestions during the research that the nature of the technology could be challenging gender stereotypes around the engagement with technology. The smartphone is a personal device with its fundamental purpose seen as a social networking and communications tool rather than as a piece of complex technology per se. Furthermore, social media has lowered the barriers for participation in social spaces and content creation that might increase the appeal of internet use to women.

10.2.2 What are the Opportunities for the use of the Internet to Empower Women?

Once women have gained access to the internet, their internet use gives them access to a suite of enablers, which challenge the controls that they previously faced. These enablers include: access to information; the ability to interact with others; and the ability to express oneself. Having access to these enablers further allows them to use the internet in ways that provide opportunities for empowerment. Their use of the internet provides them with *power to*, *power with*, *power within* and *power over*, within four dimensions of empowerment: economic,

social, political and psychological. A summary of the main findings within each of these dimensions are set out below.

10.2.2.1.1 Economic Empowerment

The research discovered that many of the female participants were using the internet to improve their livelihoods. Through their use of the internet, they were gaining the *power to* search for livelihood information, learn new livelihood skills, make better decisions about their livelihoods and through their *power with* other people through their social networks, to advertise their goods and services. There is evidence that they may be searching for livelihood information more than the male participants and that the use of the internet to support livelihoods may be particularly beneficial to female micro-entrepreneurs who are constrained from accessing information and customers because of the domestic responsibilities that keep them close to their homes.

10.2.2.1.2 Social Empowerment

Through the use of the internet, the research found that the participants were able to participate in new social spaces where they could express themselves more freely. Furthermore, they can interact with a wider group of people online and gain contacts that may bridge socio-economic divides. This is increasing the participants' social capital and reducing their social isolation. Their use of the internet also facilitates their sharing of information with others; not only do they know more, through increased access to information, they can communicate with more people and can create their own content online. Sharing information is the second most important reason for them using the internet and suggests that this could be changing their relationship with knowledge.

The research has also shown that the internet is providing the female participants with the *power to* access information and therefore make more informed decisions about their health and nutrition. Almost half of the participants trusted online health information more than offline information. The participants spoke about accessing women's health information such as sexual and reproductive health information that would have been difficult to access offline because of social and

gender constraints. The use of internet is not only providing some women with opportunities to improve their health and nutrition, it is also providing opportunities for improving their education through increasing the visibility of educational opportunities such as scholarships and enabling some women to do educational courses online. It also provides opportunities for informal learning.

10.2.2.1.3 Political Empowerment

It appears that the female participants are gaining the *power to* access political information, world news and information about their rights and entitlements that they would have found difficult to access previously. Moreover there is the suggestion that the use of the internet is making political information more accessible to some women because of the new media formats through which it is received such as blogs and social media and because of the possible blurring of the boundaries of gendered interests online. Over a third of the women studied are using the internet to express their own opinions about what is happening in their communities or country. Some of the women stated that they were doing this for the first time, thus suggesting a higher level of political engagement online compared to offline. The internet appears to provide a safer space where their voices can be heard on important issues and this has consequences in terms of their *power within* and psychological empowerment as set out below.

On the other hand, the research has shown that gender norms may still be constraining women's political engagement as the female participants were less involved than their male counterparts in searching for political information, world news or rights and entitlements or expressing themselves online about political issues. "Gendered interests" and gender norms may be reducing women's motivation and ability to engage in these issues even online and women may be less prepared to take the risks of speaking out on controversial issues.

10.2.2.1.4 Psychological Empowerment

There is evidence that the use of the internet has facilitated an increase in the participants' *power within*. It has increased their self confidence, partly because they now have access to information and can feel more informed, partly because they have a greater freedom of association and have more control over who they interact with, and partly because they have greater freedom of expression online. The boundaries of what they know have expanded and they are no longer so reliant on other people for information. Their increase in control over these enablers has given them greater agency and self –efficacy.

Through gaining access to increased information and by being able to interact with people outside their physical environment, some women have become more aware of the world around them. Furthermore, through being able to express themselves more freely online than offline and therefore having a greater voice, the internet provides a safe space for consciousness-raising as ideas and opinions can be exchanged. It is also a space where women feel they are listened to more compared to offline and are therefore prepared to share their problems. Thus, some women have reduced their sense of social isolation, particularly in cases where gender norms restrict their freedom of movement. This is having a positive emotional effect on some women and is increasing their sense of *power with others*.

10.2.2.1.5 Disempowering Consequences

The research found that the female participants were less likely to have encountered “false” information online compared to male participants. It was uncertain as to whether this was a result of them searching less for the types of information that could be “false” (for example, news or political information) or as a result of women’s reduced ability to recognize misinformation or disinformation. Those participants with lower levels of educational attainment, or with lower frequency of use of the internet or with poorer English language skills were all less likely to have come across false information online. This opens up the possibility that women, who in general are less educated, use the internet less frequently and who have a lower perception of their English language skills,

may be more vulnerable to manipulation online through disinformation compared to men.

There were also concerns by the participants about the lack of privacy and increased surveillance of their actions online. The female participants are more often exposed to online harassment and have weak protections to support their freedom of expression.

10.2.3 What are the Gender Dynamics in Terms of the Opportunities that the Internet Affords for Empowerment?

On the one hand, there is evidence that offline gender constraints, norms, identities and interests, are to a certain extent being circumvented and altered through internet use. As already discussed, this research has shown that the use of the internet is fracturing patriarchal controls over the suite of “enablers” that then allow the female participants to use the internet in empowering ways. The traditional role of men as “gatekeepers” of both information and social interaction, is being challenged online, since women have access to information as well as the ability to make social contacts on their smartphones without the need to travel or seek permission. The use of the internet helps to overcome some of the constraints that women face because of their relative lack of mobility due to their domestic responsibilities; women no longer need to leave their homes to be able to access information, communicate with others and participate in social spaces. The traditional male role as possessing the authoritative voice is also being challenged to some extent with the female participants believing that they can express themselves more freely online compared to offline. It appears that the internet is creating a safer space for self-expression, with some of the gender norms that prevent women from speaking out offline being weakened online. It could be argued that gender identities are being reconstructed online particularly as the device through which the internet is accessed is a personal device, with its primary function as a communications tool.

On the other hand, this research has shown that gender norms, identities and interests are being replicated online. Gender norms, for example, are acting to prevent female participants who have partners from using the internet as much as single women and it appears that they are less likely to be able to join discussion groups online, for example. The research suggests that some partners are controlling their use of their smartphones. Furthermore, intra-household gender dynamics may also play a part in constraining women as the female participants with less decision-making control were still likely to be constrained in terms of their ability to express themselves freely online. In addition, the research found that women are subject to more sexual harassment online compared to men and that this, in effect, reflects offline norms. Similarly, there is the idea that when women speak out online they are just “rumour-mongering” or “gossiping”. This trivialises women’s voices online and is similar to an offline narrative that undermines women when they try to speak out in spaces that are traditionally set aside for the authoritative voices of men.

10.3 What types of women and in which circumstances are more or less likely to benefit from these opportunities for empowerment?

Overall this research confirms that the use of the technology is shaped by the context within which it is used. Both the multiple identities of the women who use the internet and the different socio-economic and political factors at the different study sites influence how the female participants use the technology.

Education, age, wealth are all factors that are influencing the way that the internet is used, with educational attainment having the greatest influence. However, it is not just the educated elites who are using the internet, all types of women are benefitting to a certain extent and in a few cases there is evidence that the internet is benefitting those with the least education or those who are less wealthy. In a similar vein, in some circumstances, those participants in rural areas may be benefitting more from internet use because of their difficulty in accessing

information or skills, or sharing information offline as a result of their relatively greater physical isolation. On the other hand, in some ways the access to the internet may be more advantageous to those in peri-urban and urban areas because of the sheer numbers of other nearby people who are also online with whom they can advertise their goods and services, for example.

Although, internet use is shaped by the context in which it is used, it is also re-shaping the gender and socio-economic context in turn. This research gives examples, where it could be argued that, the participants' use of the internet is changing their identities by giving them opportunities to improve their resources, health and education either formally or informally.

10.3.1 What is the Potential for Changes in Power Dynamics to Occur at a Structural Level as a Result of Internet Use?

The research has tentatively shown that in some ways the use of the internet is challenging power dynamics at a more structural level. There is evidence that women are voicing their opinions about their country or community in the informal spaces of social media. This has the potential to challenge *hidden power*, by influencing the agenda for visible decision-making. There is no direct evidence to support this, however, President Museveni's introduction of the social media tax as a response to "rumour-mongering" online suggests that these informal spaces for political participation are seen as a challenge to the current structures of power.

The internet may be having its greatest affect by challenging the *invisible* forms of power, such as control over information, knowledge generation and social norms. It could be argued that the internet has challenged controls over access to information by removing the traditional gatekeepers of information. In addition, the internet is helping to increase the ability of people to create content for themselves and the ability to easily share this content or pass on information to others. This is helping to challenge controls over knowledge generation. The possibility to share knowledge and experiences with a wider group of people

online, opens up opportunities for new types of informal connectivist and constructivist learning that may challenge top-down traditional learning approaches. There is the possibility that this could lead to changes in people's awareness of the world around them and offer them different perspectives that could challenge current social norms.

Alternatively, these shifts in power which the internet is bringing about could open the way to increased disinformation as the accountability for the truth of information is swept away. The battle for power would then become the battle over defining the "truth" of information. As discussed above, women may be more vulnerable to this manipulation through disinformation compared to men. Furthermore, without the appropriate protections online over data and freedom of speech, the female participants could find themselves under greater control and surveillance than before their use of the internet.

10.4 Contribution to Knowledge

The findings contribute to a previously absent understanding of how non-elite women are using the internet on their mobile phones in Uganda. This contributes to knowledge about the digital gender divide in the Majority World and specifically in East Africa. In particular, the research reveals the extent to which the perception of IT skills exacerbates the gender divide and how the multiple identities of the users combine to constrain its effective use.

The research contributes to the thinking around gender and development communications by articulating and developing an understanding of the gender and power dynamics surrounding internet use. The study reveals how some patriarchal controls are being fractured online, particularly around the use of certain enabling features of the internet. There is evidence that gender norms are not necessarily being replicated online but that in certain circumstances, they are being re-shaped as a result of the interaction between the unique features of the technology and the context within which it is introduced. The research therefore suggests that women, in some ways, may be benefitting from the use of the

internet more than men. On the other hand, in many other ways, the use of the internet is replicating some of the gender norms which constrain women's lives offline. Moreover, the use of the internet may also have disempowering consequences that may affect women more than men. The thesis illuminates the dialectical relationship between internet use and the conditions in which it is used; its use is shaped by these conditions and yet these conditions are also changed by its use. It is important to understand this relationship so as to ensure that future ICT policies, projects and applications do not exacerbate current gender inequalities or even create new ones.

The study reveals the extent to which women are actively using the internet in ways that are empowering. It particularly contributes to the conceptual thinking around the link between the use of the internet and empowerment at different scales within a Majority World context. At an individual level, the notions of empowerment used in the conceptual framework are primarily influenced by Rowlands (1995) and also by the normative models of how ICTs empower women as conceptualised by Gururmuthy and Chami's (2014), Kleine (2010) and Gigler (2015). The study then follows these notions of empowerment through to a structural level, drawing upon the concepts of power described by Gaventa as developed from the work of Lukes (1974) and Rowlands (1995). The thesis is unique in its use of the three forms of power (visible, hidden and invisible) as elaborated by Gaventa as a means of conceptualizing the changes in power dynamics that the use of the internet at the micro-level is bringing about at the macro-level. This is a much-needed contribution to the discussion on the link between internet-use and empowerment..

The study is unusual in its methodology since it determines gender differences using a quantitative approach with both women and men and then explores the gender dynamics and context surrounding these differences using qualitative techniques focused on women. This provides a richness and depth of understanding of how the use of the internet is affecting women's lives in particular.

10.5 Implications for Policy and Practice

There are some practical and policy implications that can be drawn from the research and these are listed in Boxes 10.1 and 10.2 below.

Box 10.1 Recommendations for development practitioners.

- There is a need to train women on how to use the internet effectively as the participants' lack of IT skills was found to be one of the key constraints to them being able to use the internet effectively. The training should include both technical and content related skills so that the women can learn how to search for and verify information which will make them more able to assess whether information is true or false and less prone to manipulation.
- Many women are unaware of the empowering benefits that their use of the internet could provide and so are required to be sensitized so as to increase their motivation to use the internet.
- The social nature of the internet may be a way to draw upon current gender identities and engage women in internet training, making sure that the primary motivation for learning is to satisfy their social, economic, political and psychological needs rather than learning about the technology per se. With this in mind, internet-use training on smartphones could be integrated into other activities, for example, training about agriculture, health, micro-entrepreneurship, or civil society issues.
- Notwithstanding the point above, from this research there appears to be real benefits of teaching women to use the internet in certain ways; to search for information, to learn new skills, to use the internet for informal learning, to create content online, to advertise their goods and services, to participate effectively online in civic and political spaces.
- There is a gap in providing people with trusted local information in their local language online. There is an opportunity for trusted civil society organizations to use social media, apps, YouTube and websites to fill this gap and provide people with trusted and reliable livelihood and health information and online training. There is also an opportunity to capitalize on the desire to share information online using social media to spread important messages quickly and cheaply amongst communities.

Box 10.2 Recommendations for policymakers.

- Given the opportunities for empowerment that the internet affords, it is important that gender sensitive policies are put in place that reduce the digital gender divide in access and use. A priority is to lower the costs of smartphones and data and remove the social media tax in Uganda.
- The gender dynamics surrounding teaching of ICTs needs to be considered carefully at educational institutions so that women and girls have the time and space to learn about the internet, free of intimidation and in an atmosphere that removes, as far as possible, the underlying gender identities that constrain women's learning about ICTs.
- Women who have low levels of education are using the internet. Schools need to be teaching about the benefits and dangers of internet use from an early age, maybe even at primary school to ensure that everyone has basic training. The school curriculum needs to include training on the internet through the use of smartphones (rather than just focusing on computers). Pupils need to be taught how to use the internet for useful relevant tasks and how to verify the information they receive.
- Robust legislation is required that protects freedom of speech and privacy of data and punishes sexual harassment online. Without this, women may be less willing than men to express themselves using the internet.

10.6 Further Research

The use of the internet by women using mobile phones in the Majority World is an under-researched area. Further research is required in the following areas.

- There is a suggestion from this research that the use of smartphones and social media may be changing gendered attitudes to technology since the primary motivation for the use of this powerful technology and platform is social and applied. Further research into gender identities around the engagement with this technology and its applications would increase understanding in this area and consequentially help find solutions to overcoming constraints in women engaging with the internet.
- This research has shown that a key factor in determining effective internet use and hence opportunities for empowerment is ensuring that women possess both the appropriate IT skills and the self-confidence to use those skills. However, there is little research on the gender differences between actual and perceived skillsets, as well as how these gender differences influence how the internet is used in ways that could be empowering.
- There appears to be a paucity of research in East Africa on how women are actively using the internet for empowering livelihood purposes such as gaining livelihood information, innovating their businesses through new skills and using the internet to advertise their goods and services. The evidence presented in this research, would suggest a particular focus on female micro-entrepreneurs and farmers would be beneficial with a view to measuring the beneficial effects of their use from an economic and innovations perspective.
- Given the importance of health and nutritional information in the Majority World, there is a surprising lack of research on how women are actively using the internet for information about health and nutrition, particularly

from a gender and contextual perspective, as well as measuring the outcomes of their use. Furthermore, new research is required to understand how they search for this type of information online, what sources do they trust online, and how they make assessments of the validity of the information.

- This research has shown that women are using the internet to gain knowledge, widen their social networks and then share this knowledge with others. Further exploration is required to better understand what knowledge they are sharing and what are the implications of this from a development communications perspective.
- More research is required to study social capital online and understanding whether it is bonding and bridging and to what extent this reflects offline social capital and socio-economic factors.
- The female participants in this research appear to be more politically engaged online than offline, possibly because of the different new media formats through which information can be accessed, the blurring of gendered interests online or because of the ease with which social media creates a space for self-expression. An in-depth study is required to compare offline and online political engagement by non-elites and to understand the real-world political implications.
- There is a suggestion in this research that women may be less able to detect “false information” compared to men. This needs to be explored to gain a better understanding of whether women are really more vulnerable to misinformation or disinformation and the reasons why this may be the case.
- As a result of time constraints, this research was not able to examine the impact of all the uses of the internet by the participants. However, the female participants spoke about the damaging impact on their lives and

their relationships of the use of pornography by their male partners. They also spoke about their fears about marital infidelities that could be facilitated by the use of the internet. These areas would provide rich material for further research.

10.7 Overall Conclusion

The study has demonstrated that if women can gain access to the internet, it can provide them with opportunities for economic, social, political and psychological empowerment. It challenges the *power over* them exerted by those with power and allows them to access a suite of 'enablers', which they can use to exploit the opportunities for individual empowerment. The research suggests that in some ways the use of the internet may be benefitting women more than men because it can bypass the particular offline constraints that women face. On the other hand, in other ways, it may be reinforcing existing offline socio-economic inequalities between women and men. Moreover, the study has shown that the extent to which the internet can provide these opportunities for empowerment very much depends upon the gender dynamics and socio-economic factors within which it is used. The relationship between access to the internet and empowerment, is complex and dialectical. This research provides evidence to demonstrate that it is important to gain a better understanding of this complex relationship so that future strategies for the use of the internet can help to close the digital gender divide rather than exacerbate it.

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Appendix B FGD Protocols & Questions

B.1 Overview and Selection

There will be two focus groups at each site; one male only and one female only. It is envisaged that each session would last for no more than 2 hours. Purposive sampling will be used to select 5 participants for each group, for each site. The participants will be selected on the basis of their known use of the internet.

B.2 Equipment Needed

Participant Information sheets, money for travel allowance, sodas, snacks, paper for the registration form, scissors (for cutting off the consent slip).

B.3 Procedure

1. Welcome participants and ensure that they've all completed the registration form.
2. Determine whether it is appropriate to conduct the exercise in English. If not, ensure that whilst one of the research assistants facilitates the meeting, the other translates the discussion to the main researcher.
3. Explain the purpose of the research. The lead researcher is from the University of Reading in the UK and is doing research about how people are using the internet in Uganda.
4. Go through the participant information sheet with them, ask them to read it and allow them to ask any questions. Ask them to sign the sheet at the bottom and hand them in. They will get back a copy of the PIS at the end of the session.
5. Explain the purpose of the exercise to participants., that is, it is to get a better understanding of how and why they use the internet. Define the internet, for the purpose of the FGDs as the use of Facebook, WhatsApp, Google, Twitter, Email which help people to search for information, communicate and meet with others.
6. Explain that the exercise will last around 2 hours.
7. Ask if you can record the meeting. If not, ensure that one of the research assistants can take extensive notes using the pre-prepared template.
8. Go through the questions below stimulating discussion amongst participants wherever possible.
9. Throughout this session, make sure that all people participate. The process is about asking the participants their views. Explain that there are no right or wrong answers. Take a lot of notes about the discussion.
10. Thank everybody for their participation.
11. Explain that they shall be informed about the results from the research.

B.4 Main questions to be asked:

Themes	Questions
<p>Introduction</p> <p>Use & access</p>	<ol style="list-style-type: none"> 1) Ask them to state their name, what they do?, and how often do they use the internet? 2) What do you use the internet for? 3) On what device do you access the internet? Who owns the device and who pays for the internet? 4) Where did you learn to use the internet ? <ol style="list-style-type: none"> a) and how do you rate your IT skills?
<p>Information</p>	<ol style="list-style-type: none"> 1) What kind of information do you search for using the internet? <ol style="list-style-type: none"> a) Which sites do you visit to search for information? b) Is the information in English or Luganda or in another language? 2) What is the advantage of getting information online compared to from other sources? <ol style="list-style-type: none"> a) What are the disadvantages of getting information online? 3) Do you trust the information that you get online more or less than the information you get offline (radio, TV, face to face)? Explain why. 4) Is there any information that you look for online that you wouldn't look for offline? If so, what kind of information and why I do you look for if online and not offline? 5) Do you ever worry that people might find out what information you're looking at online?
	<p>BREAKTIME</p>
<p>Communication</p>	<ol style="list-style-type: none"> 1) Do you ever create your own content online and share it with others? Comments, blogs, photos, videos? <ol style="list-style-type: none"> a) If so, what type of content? Who reads, watches it? 2) Can you express yourself freely online, without fear? <ol style="list-style-type: none"> a) Have you had negative comments on what you've said online? Who from and why did you have such comments? b) Do you ever communicate with a hidden identity? If so, why?
<p>Association</p>	<ol style="list-style-type: none"> 1) Are you a member of any groups online? 2) Do you interact with more people in your social network groups online rather than in your face to face social groups? Why more online than offline? Or why more offline than online?

B.4 Main questions to be asked (cont):

Gender differences Women's group: Men's group:	3) a) Men use the internet more than women? What do you think? Women use the internet more than men? What do you think? b) Who do you interact with more online, men or women? Why?
Constraints	4) Are you ever criticised for using the internet? If so, why? Are women criticised in the same way for using the internet compared to men? 5) What is stopping you from using the internet more?

Appendix C Participatory Group Exercise Protocols

C.1 Overview and Selection

There will be three participatory groups at each study site; one female only group, one male only group and one mixed group. The initial selection will be made by community mobilisers with others recruited through snowballing if required. There will be 5 to 7 people in each group. With the mixed group approximately 66% or 75% of the group should be women.

C.2 Procedures

1. Welcome participants and ensure that they've all completed the registration form.
2. Determine whether it is appropriate to conduct the exercise in English. If not, ensure that whilst one of the research assistants facilitates the meeting, the other translates the discussion to the main researcher.
3. Explain the purpose of the research. The lead researcher is from the University of Reading in the UK and is doing research about how people are using the internet in Uganda.
4. Go through the participant information sheet with them, ask them to read it and allow them to ask any questions. Ask them to sign the sheet at the bottom and hand them in. They will get back a copy of the PIS at the end of the session.
5. Explain the purpose of this exercise to participants., that is, it is to understand how the use of the internet has impacted on their lives.
6. Explain that there are three separate exercises which in total will last around 2 hours and that we will have a break at the end of the second exercise.
7. Ask if you can record the meeting. If not, ensure that one of the research assistants can take extensive notes using the pre-prepared template.
8. Define the internet. Explain that it's what they use data for..... Google, WhatsApp, Facebook, You Tube, e-mails.
9. Thank everybody for their participation.
10. Explain that they shall be informed about the results from the research at a later date.

C.3 Exercise One: How the internet has changed their lives: Before and After

The aim of this participatory exercise is to see how the internet has changed people's lives.

1. Join pieces of flip chart paper together, put the title "How has the internet changed your life?" at the top. On the top left hand side of the large combined piece of paper, underneath the title put "BEFORE" and on the right hand side put "AFTER". Put a line down the middle.
2. Explain that you want the participants to think about what has changed in their lives now that they use the internet, try to get them to think about life before they had the internet and life after. Ask in turn if necessary to get the conversation going. Write their points on the flipchart, separating before and after.

C.4 Exercise Two: The impact of the internet on people's lives

1. Join pieces of flip chart paper together, put the title "Impact of the Internet on Your Life" in the middle of the combined piece of paper. Draw a line down the middle and put Positive (+ve) as a title on one side and Negative (-ve) on the other side
2. Give them a set of 2 colours of sticky notes each. Ask them to write down or draw the positive and negative impacts of the internet on their lives, using an agreed colour of sticky notes for +ve impacts and an agreed colour for -ve impacts.
3. Ask them in turn to stick their sticky notes onto the paper on either the +ve and -ve side and explain what they've put. Ask them to stick their note next to a similar impact if at all possible.
4. Once everyone has done this, ask them to all look at the flip chart and ask them whether they could move the sticky notes to group the impact into topics that are similar.
5. Ask them whether more impacts need to be added?
6. Ask the participants to explain what the flip chart is showing them. Are they surprised by what it shows?
7. For the mixed group ask whether they think that there are any differences on the impact on women and men's lives.
8. Try to make sure that all people participate. Take notes and observe, but don't interfere. Take a lot of notes about the discussion – the process is as important as the final diagram.
9. Summarise all the main points raised and ask the participants if this is a fair summary.
10. Take a photograph of the diagram.

C.5 Exercise Three Time: Analysis

1. Explain that we want to find out how often they use the internet during a typical day and what they use it for. Explain that we want them to tell us about their day yesterday: what activities they did at certain times of the day, when they used the internet and what did they use it for.
2. Show them an example of the analysis of their day and explain each of the column headings.
3. Ask them to spend 10 minutes filling in the sheet that we've given them.
4. Collect the sheets.
5. Thank the participants for their time.

Appendix D The Semi Structured Questionnaire

Please state the location:

- | | | | |
|-------------------|--------------------------|-----------------------|--------------------------|
| Kamwokya | <input type="checkbox"/> | Nakaseke PTC | <input type="checkbox"/> |
| Nakaseke Hospital | <input type="checkbox"/> | Nakaseke Int School | <input type="checkbox"/> |
| Nakaseke Town 1 | <input type="checkbox"/> | St Bruno Sewing Group | <input type="checkbox"/> |
| Nakaseke Town 2 | <input type="checkbox"/> | | |

Give a unique identifying code to the respondent

1. What is your sex? Female Male

2. How old are you?

- | | | | |
|-------------------|--------------------------|------------|--------------------------|
| 18 to 30 | <input type="checkbox"/> | 31 to 40 | <input type="checkbox"/> |
| 41 to 50 | <input type="checkbox"/> | Over 51 | <input type="checkbox"/> |
| Decline to answer | <input type="checkbox"/> | Don't know | <input type="checkbox"/> |

3. What is your marital status?

- | | |
|---|--------------------------|
| Never Married | <input type="checkbox"/> |
| Married (cultural or church) | <input type="checkbox"/> |
| Single | <input type="checkbox"/> |
| Living together with boyfriend/girlfriend | <input type="checkbox"/> |
| Widowed | <input type="checkbox"/> |
| Decline to answer | <input type="checkbox"/> |
| Divorced/Separated | <input type="checkbox"/> |

4. What is your highest level of education?

- | | |
|---|--------------------------|
| I have not been to school | <input type="checkbox"/> |
| Completed secondary school to O'Level | <input type="checkbox"/> |
| Primary school | <input type="checkbox"/> |
| Completed secondary school to A' Level | <input type="checkbox"/> |
| Training for a profession after O'level | <input type="checkbox"/> |

- Training for a profession after A'Level
- Tertiary (University degree or above)
- Decline to answer

5. What is your employment status?

NB There are multiple options

- Wage employed
- Self employed
- Student
- Homemaker/ housewife/ house husband
- Not working due to illness
- Unemployed
- Retired
- Decline to answer
- Farmer

6. How many hours a day do you spend on domestic duties (caring for children, spouse, elderly relatives, cooking etc)

- None 0-2 hours 3-4 hours
- 5- 6 hours 7-8 hours More than 8 hours
- Don't know Decline to answer

7. How often do you use the internet?

- All of the time Daily Weekly Monthly
- Once in a while Don't know

8. How do you access the internet?

NB There are multiple options

- On my own phone On my spouses' phone
- On my own computer/tablet
- Telecentre
- Internet café
- Someone else's phone/computer
- School/university. Workplace
- Decline to answer On my spouse/boy/girlfriends' computer
- \

9. Who pays for most of your data?

It's most, so you must choose one

Myself My spouse A relative My boss
My boyfriend/girlfriend A mixture of different people
Decline to answer

10. How did you learn to use the internet?

NB Multiple options

I taught myself Friends and family
School Telecentre
Formal training outside school Other

11a. How often do you use the internet to communicate with friends?

Daily Once in a while
Weekly Never
Monthly Don't know

11b. How often do you use the internet to get information about sports betting?

Daily Once in a while
Weekly Never
Monthly Don't know

11c. How often do you use the internet to learn a new skill?

Give an example of a skill e.g. fixing phones, learning farming/tailoring techniques

Daily Once in a while
Weekly Never
Monthly Don't know

11d. How often do you use the internet to share knowledge with other people?

Daily	<input type="checkbox"/>	Once in a while	<input type="checkbox"/>
Weekly	<input type="checkbox"/>	Never	<input type="checkbox"/>
Monthly	<input type="checkbox"/>	Don't know	<input type="checkbox"/>

11e. How often do you use the internet to find information about your rights and entitlements?

Daily	<input type="checkbox"/>	Once in a while	<input type="checkbox"/>
Weekly	<input type="checkbox"/>	Never	<input type="checkbox"/>
Monthly	<input type="checkbox"/>	Don't know	<input type="checkbox"/>

Please can you give an example of the rights and entitlements that you found online

11f. How often do you use the internet to watch YouTube videos?

Daily	<input type="checkbox"/>	Once in a while	<input type="checkbox"/>
Weekly	<input type="checkbox"/>	Never	<input type="checkbox"/>
Monthly	<input type="checkbox"/>	Don't know	<input type="checkbox"/>

11g. How often do you use the internet to search for a job?

Daily	<input type="checkbox"/>	Once in a while	<input type="checkbox"/>
Weekly	<input type="checkbox"/>	Never	<input type="checkbox"/>
Monthly	<input type="checkbox"/>	Don't know	<input type="checkbox"/>

11h. How often do you use the internet to find out about health information?

Daily	<input type="checkbox"/>	Once in a while	<input type="checkbox"/>
Weekly	<input type="checkbox"/>	Never	<input type="checkbox"/>
Monthly	<input type="checkbox"/>	Don't know	<input type="checkbox"/>

11i. How often do you use the internet to express your views about an important issue affecting your community?

Daily	<input type="checkbox"/>	Once in a while	<input type="checkbox"/>
Weekly	<input type="checkbox"/>	Never	<input type="checkbox"/>
Monthly	<input type="checkbox"/>	Don't know	<input type="checkbox"/>

11j. How often do you use the internet to find out information about your job, livelihood, profession (e.g. farming, tailoring)?

Daily	<input type="checkbox"/>	Once in a while	<input type="checkbox"/>
Weekly	<input type="checkbox"/>	Never	<input type="checkbox"/>
Monthly	<input type="checkbox"/>	Don't know	<input type="checkbox"/>

11k. How often do you use the internet to express your views about an important issue facing your country?

Daily	<input type="checkbox"/>	Once in a while	<input type="checkbox"/>
Weekly	<input type="checkbox"/>	Never	<input type="checkbox"/>
Monthly	<input type="checkbox"/>	Don't know	<input type="checkbox"/>

11l. How often do you use the internet to find out about world news?

Daily	<input type="checkbox"/>	Once in a while	<input type="checkbox"/>
Weekly	<input type="checkbox"/>	Never	<input type="checkbox"/>
Monthly	<input type="checkbox"/>	Don't know	<input type="checkbox"/>

11m. How often do you use the internet to advertise/market your products, services, business?

Daily	<input type="checkbox"/>	Once in a while	<input type="checkbox"/>
Weekly	<input type="checkbox"/>	Never	<input type="checkbox"/>
Monthly	<input type="checkbox"/>	Don't know	<input type="checkbox"/>

11n. How often do you use the internet to find out about politics?

Daily	<input type="checkbox"/>	Once in a while	<input type="checkbox"/>
Weekly	<input type="checkbox"/>	Never	<input type="checkbox"/>
Monthly	<input type="checkbox"/>	Don't know	<input type="checkbox"/>

11o. How often do you use the internet to do an online educational course?

Daily	<input type="checkbox"/>	Once in a while	<input type="checkbox"/>
Weekly	<input type="checkbox"/>	Never	<input type="checkbox"/>
Monthly	<input type="checkbox"/>	Don't know	<input type="checkbox"/>

11p. How often do you use the internet to find out about nutrition?

Daily	<input type="checkbox"/>	Once in a while	<input type="checkbox"/>
Weekly	<input type="checkbox"/>	Never	<input type="checkbox"/>
Monthly	<input type="checkbox"/>	Don't know	<input type="checkbox"/>

11q. How often do you use the internet to get new friends?

Daily	<input type="checkbox"/>	Once in a while	<input type="checkbox"/>
Weekly	<input type="checkbox"/>	Never	<input type="checkbox"/>
Monthly	<input type="checkbox"/>	Don't know	<input type="checkbox"/>

12. Please look at the list on the card and choose the 3 most important reasons why you use the internet?

Communicate with family and friends

- Get sports betting information
- Learn a new skill
- Share knowledge with other people
- Find information about my rights
- Watch YouTube videos
- Search for a job
- Find out about health information
- Express my views about an important issue facing my community
- Find information about my livelihood (e.g. farming, tailoring)
- Express my views about an important issue facing my country
- Find out about World news
- Advertise my products/services/business
- Find out about politics
- Access an educational course online
- Find out about nutrition
- Get new friends online
- I don't know

13. Do you trust the health information that you access online more than the health information that you access offline?

NB May need to explain online and offline. Always probe and check have understood.

- Trust more
- Trust it the same
- Trust less
- I don't know

Please explain why you answered in this way

.....

14. Do you trust the news that you access online more than the news you access offline?

- Trust more

- Trust it the same
- Trust less
- I don't know

Please explain why you answered in this way

.....

15a. In the last year, have you joined and taken part in a discussion group online (e.g. on Facebook, WhatsApp) that you were NOT part of offline (i.e. When you didn't meet physically)?

- Yes No Don't know

15b. If, you answered yes, what do the group (s) discuss?

NB There are multiple options

- Sport
- Healthcare issues
- Politics
- Community issues that interest me
- Friends and family matters
- Livelihood issues
- Other
- Don't know

(NB if they say "other", ask them what and record on a separate piece of paper)

16a. Do you ever create your own content online (posting photos, videos, comments, blogs) that you share on social media?

- Yes No Don't know

16b. Please say if you have posted something which is about any of the following?

Advertising my products and services

Sharing knowledge about my livelihood or profession

Expressing my views about an issue affecting your community or country

Sharing an important event in your life

17. How has the internet changed your self-confidence?

It has increased it

It has reduced it

There's been no change

I don't know

Please explain why you answered in this way

.....
.....

18. Have you experienced any of the following when you have been using the internet?

There are multiple options

Sexual harassment

Someone tracking your use of the internet e.g. government or individual

False information (misinformation)

My spouse or partner criticizing you for being online

Other people criticizing you for being online

None of the above

Don't know

19. Please state whether any of the following hinders/prevents you from using the internet in a way you would like to:

NB There are multiple options

- Your IT skills are not good enough
- Your English isn't good enough
- You don't have enough time
- You can't afford to buy enough data
- Your spouse/partner/boyfriend/girlfriend doesn't approve of me being on the internet.
- There is not enough relevant content.
- Sometimes the network is poor.
- Sometimes I have a problem charging my phone
- You don't have a smartphone.

20. The internet has helped me make more informed/ (better) decisions about my own and my family's healthcare:

- Strongly agree
- Agree
- Neither agree or disagree
- Disagree
- Strongly disagree
- Don't know

21. The internet has helped me make more informed/(better) decisions about my own and my family's nutrition:

- Strongly agree
- Agree
- Neither agree or disagree
- Disagree
- Strongly disagree
- Don't know

22. The internet has helped me make more informed decisions about my livelihood:

- Strongly agree
- Agree
- Neither agree or disagree
- Disagree
- Strongly disagree
- Don't know

23. I have used the internet to access new educational opportunities (can be online or offline):

- Strongly agree
- Agree

- Neither agree or disagree
- Disagree
- Strongly disagree
- Don't know

24. The internet has helped me to access information that would be very difficult for me to access offline:

- Strongly agree
- Agree
- Neither agree or disagree
- Disagree
- Strongly disagree
- Don't know

25. I have a wider network of people that I associate/(meet) with online compared to offline:

- Strongly agree
- Agree
- Neither agree or disagree
- Disagree
- Strongly disagree
- Don't know

26. The internet has given me more control over the information that I can access:

- Strongly agree
- Agree
- Neither agree or disagree
- Disagree
- Strongly disagree
- Don't know

27. I can express myself freely online:

NB might need to explain what online is and to explain that "they can say what they want"

- Strongly agree
- Agree
- Neither agree or disagree
- Disagree
- Strongly disagree
- Don't know

28. I can express myself freely offline:

NB might need to explain offline

- Strongly agree
- Agree
- Neither agree or disagree
- Disagree
- Strongly disagree
- Don't know

29. I feel that people are more willing to listen to my point of view online rather than offline:

- Strongly agree
- Agree
- Neither agree or disagree
- Disagree
- Strongly disagree
- Don't know

30. I feel that my use of the internet has saved me time:

- Strongly agree
- Agree
- Neither agree or disagree
- Disagree
- Strongly disagree
- Don't know

31. I have communicated with people online that I wouldn't be able to communicate with offline:

Strongly agree
Agree
Neither agree or disagree
Disagree
Strongly disagree
Don't know

32. How many members does your household have?

33. Are all household members who are aged between 6 and 12 currently in school?

Yes No
There is no-one between 6 and 12 in my household

34. Can the oldest female head/spouse read and write with understanding (in any language) ?

Yes No There is no female head/spouse

35. How many mobile phones do members of your household own?

36. Does any member of your household own a radio?

Yes No Decline to answer

37. Would you say that the money you earn is more than what your spouse/partner earns, less than what they earn, or about the same?

More Less About the same
I don't have a spouse/partner
I don't know I don't earn anything

38. Who is the main decision maker about how the money you earn will be used?

Myself My spouse/partner Both equally
Parent Other
I don't earn anything I don't know

39. Who is the main decision maker about how your spouse's or your partners earnings will be spent?

Myself My spouse/partner Both equally
Parent Other
I don't know I don't have a spouse/partner

40. Who is the main decision maker about health care for yourself?

Myself My spouse/partner Both equally
Parent Other I don't know

41. Who is the main decision maker about health care for your spouse/partner?

Myself My spouse/partner Both equally
Parent Other I don't know
I don't have a spouse/partner

42. Who is the main decision maker about healthcare for your children (if you have any)?

Myself My spouse/partner Both equally
Parent Other I don't know
I don't have any children

43. Who is the main decision maker about major household purchases?

Myself My spouse/partner Both equally
Parent Other I don't know

44. Who is the main decision maker about household savings?

Myself My spouse/partner Both equally
Parent Other I don't know

45. Who is the main decision maker about visits to your family or relatives?

Myself My spouse/partner Both equally
Parent Other I don't know

46. Who is the main decision maker about your children's education?

Myself My spouse/partner Both equally
Parent Other I don't know
I don't have any

47. What source of energy does the household mainly use for cooking?

Firewood, cow dung or grass (reeds)
Charcoal, paraffin stove, gas, biogas, electricity or other

48. What type of material is mainly used for the construction of the wall of your dwelling?

Unburnt bricks with mud, mud and poles or other
Unburnt bricks with cement, wood, tin/iron, concrete/stones, burnt stabilized bricks or cement blocks

49. What type of material is mainly used for the construction of the roof of your dwelling?

Thatch or tins
Iron sheets, concrete, tiles, asbestos, or other

50. What type of toilet facility does the household mainly use?

No facility/bush/polythene bags/ bucket or other
Uncovered pit latrine (with or without slab), Ecosan (compost toilet) or covered pit latrine without slab
Covered pit latrine with slab
VIP latrine or flush toilet

51. Does every member of your household have at least one pair of shoes?

Yes
No

52. You may be contacted in a few weeks to confirm that this interview was conducted and/or to ask whether you would be willing to take part in an in-depth interview. Can we re-contact you via your mobile phone?

Yes No
Decline to answer

Thank you for completing the questionnaire.

Appendix E Participant Timesheet Analysis

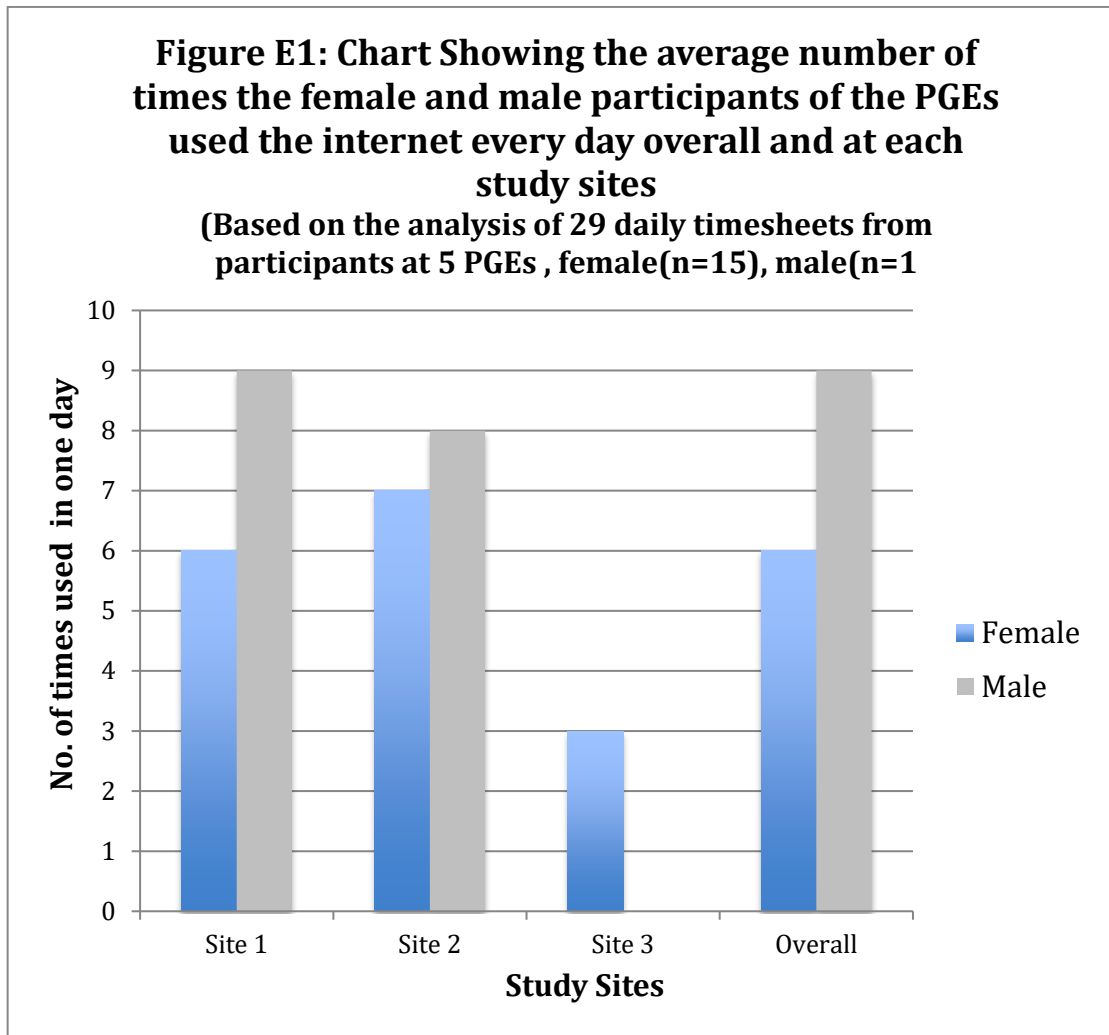
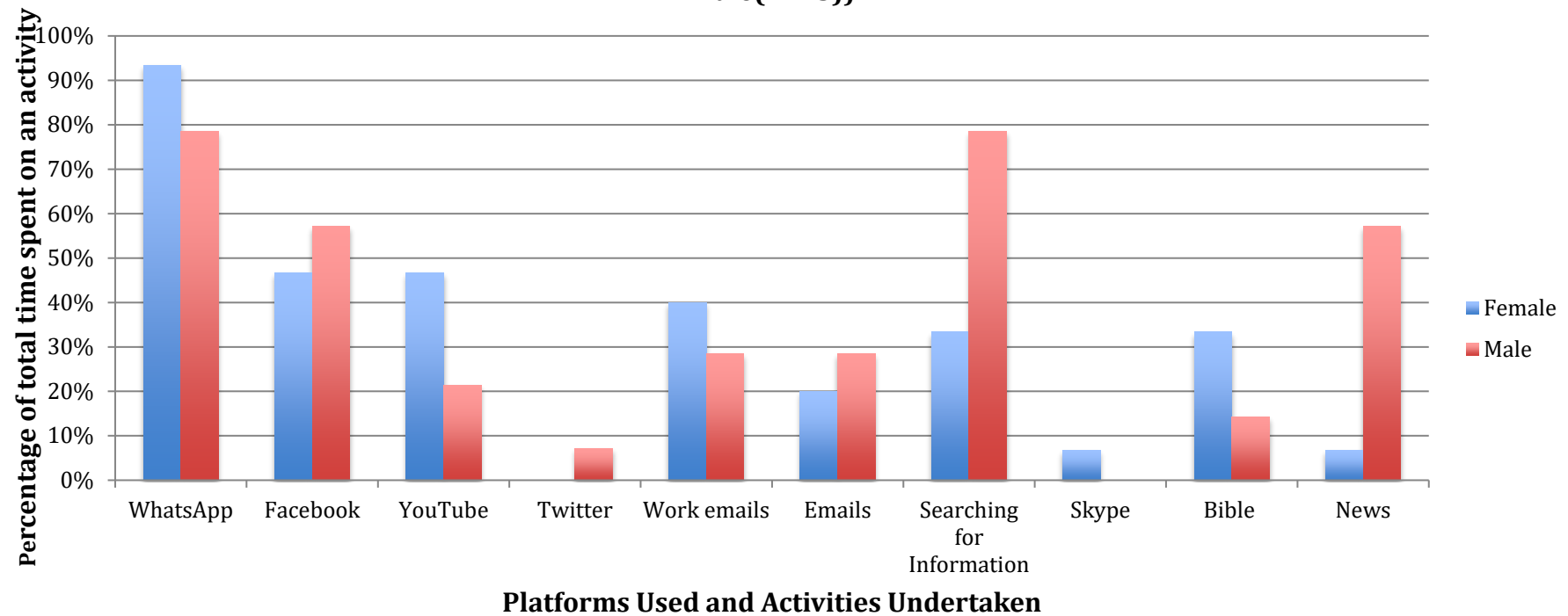


Figure E2: Chart showing the different types of platforms and activities that the participants uses online, analysed by gender

(Based on the analysis of 29 daily timesheets from participants at 5 PGEs , female(n=14), male(n=15))



Appendix F Lack of Relevant Information

Unexpectedly, there was only one comment at one of the FGDs about the difficulty in finding relevant information online. The questionnaire asked whether ‘not having enough relevant content’ was preventing the respondents from using the internet in the way that they wanted and only 16% agreed (see Table F.1 below).

Table F.1. "There is not enough relevant content". Affirmative responses analysed by gender.			
	Female	Male	Grand Total
	(n=189)	(n=147)	(n= 336, p=0.284*)
Yes	16%	12%	15%
Grand Total	100%	100%	100%
* - The chi squared test was performed to establish whether there is a relationship between gender and whether one perceives that there is enough relevant content to use the internet in the way that one wants.			

F.1 Gender Dynamics

There are only minor gender difference in terms of the key reasons why the participants are using the internet and any of these differences will be explored in the proceeding results chapters.

F.2 What Types of Women in Which Circumstances

When the data on relevant information was analysed, it was found that those respondents who had lower perceptions of their IT skills and their English language skills were much more likely to say that there was not enough relevant content than the other respondents (see Tables F.1 and F.2 below). At the FGDs it was established that most of the participants were searching for information online in English because there was little information online in the local languages. It would therefore make sense if those who had poor English language skills were less likely to be able to find relevant information. Furthermore, those with poor IT skills would also struggle to search effectively to be able to find information that was relevant.

Table F.2 "There is not enough relevant content". Female responses analysed by whether you perceive your English to be good enough.

	English good enough	English not good enough	Grand Total
	(n= 142)	(n=47)	(n=189, p =0.004*)
Enough relevant content	88%	70%	84%
Not enough relevant content	12%	30%	16%
Grand Total	100%	100%	100%

* - The chi squared test was performed to establish whether there is a relationship between whether one perceives that there is enough relevant content to use the internet in the way that one wants and whether you perceive that your English is good enough to use the internet the way that you want..

Table F.3. "There is not enough relevant content". Female responses analysed by whether you perceive your IT skills to be good enough.

	IT skills good enough	IT skills not good enough	Grand Total
	(n=95)	(n=94)	(n=189,p=0.028*)
Enough relevant content	89%	78%	84%
Not enough relevant content	11%	22%	16%
Grand Total	100%	100%	100%

* - The chi squared test was performed to establish whether there is a relationship between whether one perceives that there is enough relevant content to use the internet in the way that one wants and whether you perceive that your IT skills are good enough to use the internet the way that you want..

Appendix G Affordability of Internet-enabled Phones

Boxes 5.1 and 5.2 below set out illustrative quotes from the participants and the key informants which show how affordability is a key reason for women being unable to buy internet enabled (IE) phones. The comments suggest that women have lower incomes than men and are also likely to have greater family responsibilities so that they will prioritise feeding their families and paying for school fees, before buying an IE phone. In addition, the two IT teachers from the school and the PTC spoke about the constraints on girls being allowed out of the family home to find jobs to pay for the purchase of smartphones. This was confirmed by one of the pupils at the PTC, Participant Rashida,

“Boys can get jobs in the holidays and can be able to acquire phones but you can find a girl at home, every time is at home and is not allowed to work.”

Box G.1 Illustrative quotes by participants about how affordability is an issue for women in terms of purchasing IE phones.

Participant Nancy from Site 1, when asked why more women aren't using the internet, replies,

“Poverty. They cannot afford to buy that phone.”

Participant Viola from Site 2 explains why some women don't have smartphones and therefore can't access the internet,

“Some can't afford buying those phones.”

Participant Jessica from Site 2 responds to a discussion about whether women or men use the internet more,

“According to how I see, most men are working but most women are not working therefore, men have more access to internet and they even have money to buy the data, the phones, the computers.”

Box G.2 Illustrative quotes by key informants about how affordability is an issue for women in terms of purchasing smartphones.

KI Rita, the head of a women's group at Site 2 explains why women in her group are not accessing the internet,

“The major obstacle is that most women don't own smart phones If some of the group members decided and committed to buying phones they may be able to buy but they have many things they are focusing on that needs their funding so they look around and if they can manage cheaper phones and use the money for other demands on table then they do that.”

KI Brian, at Site 2 explains why less women have smartphones compared to men,

“Women are still carrying small phones not smart phones. It is because of affordability. Even if they can afford, they have family responsibilities (e.g. school fees) so they won't buy a smartphone. “

KI Deborah, the CDO from Site 3, explains why only 10% of women compared to 50% of men have smartphones in her area,

“It's affordability..... people in that area are low income earners, it's not easy for most of them to have smartphones. Especially women...they barely have any income. They have to wait on the husbands and the husbands might not see a need for a smartphone.”

KI Michael echoes other KI's comments that women have greater family responsibilities which reduce their ability to buy themselves smartphones,

“Men have more ICT tools e.g. smartphone..... Women will not invest money in buying gadgets when she has to consider the immediate needs of her family, e.g. children to feed; gadgets are not her priority.”

G.1 Sex for Smartphones

In this study evidence was found that some women are using transactional sex to obtain smartphones as a result of the desirability of the device and the problem of affordability of the phone. It should be noted that there was no evidence that the participants in this study had engaged in sexual activities in order to obtain a

phone. KI Janet, CDO at Site 1 explains how some women who don't have access to money will engage in any activity to get a smartphone,

“(they) find all means of getting a smartphone..... So I might engage in any risky act to get a smartphone. Whether it's prostitution or theft or anything to get a smartphone so that I'm able to access internet, I'm able to be on WhatsApp, I'm able to be on Facebook.”

A similar story was told by KI Deborah, a CDO at Site 3,

“we are seeing these younger women able to get smartphones. In whichever way....whether it's for sex, whether it's...you know....and even some parents, you find a mother in her forties who has this ordinary phone, not a smartphone, because they are scared of their daughter either giving in to sex, doing prostitution for the smartphone, they really work hard and buy them the smartphones. I see it quite often.”

When asked for an idea of the scale of the problem, she replied,

“if you go to a university and you sampled, let's say 10 girls, and you asked them really how they got the smartphones, you'd be shocked.”

Two of the KIIs, Deborah and Charles also spoke of men using the lure of a smartphone to have sex with women and girls. KI Deborah explains,

“So that is how really smartphones are treasured and I think that's how the men are using the smartphones to woo girls into sex. Because they know really if I get her a smartphone she'll not even have a way of saying no. I might even...actually if I really want her and I came with it and put it on the table we might even go to bed that very time.”

Appendix H Infrastructural Constraints

Problems with the internet network coverage and problems with charging smartphones emerged from the research as constraints that prevent the participants from using the internet as much as they would have liked.

H.1 Network Coverage Problems

As shown in Table H.1 below, over three quarters (76%) of the female respondents agreed that “sometimes the network is poor” and that this was preventing them from using the internet in the way that they would like.

	Female	Male	Total	p value
	(n=189)	(n=147)	(n=336)	
Study Sites				
Site 1(Total (n = 158), F (n= 82), M (n=76))	63%	66%	64%	
Site 2(Total (n = 158), F (n= 90), M (n=68))	90%	82%	87%	
Site 3(Total (n = 20), F (n= 17))	59%			
Site 2a(Total (n = 58), F (n= 38), M (n=20))	95%	90%	93%	
Site 2b(Total (n = 45), F (n= 23), M (n=22))	86%	85%	85%	
Site 3 (Total (n = 20), F (n= 17), M (n=3))	87%	73%	80%	0.2329*
Grand Total	76%	73%	75%	
* - The chi squared test was performed to establish whether there is a relationship between gender and the agreement with the statement "Sometimes the network is poor" at the specific study sites (comparing those who think that the network is poor and those who don't)				

H.2 Charging Problems

Based on the responses to the questionnaire, 38% of all female respondents agreed that “sometimes I have a problem charging my phone” (see Table H.2 below). The inability to charge their phones as a result of lack of access to electricity was raised at four of the PGEs (PGENAKMI, PGENAKM, PGEKAMW, PGEKAMM).

Table H.2 “Sometimes I have a problem charging my phone”. The %age of Respondents Agreeing to this statement analysed Study Site and by Gender				
	Female	Male	Grand Total	p value
Study Sites	(n=189)	(n=147)	(n=336)	
Site 1(Total (n = 158), F (n= 82), M (n=76))	33%	36%	34%	
Site 2(Total (n = 158), F (n= 90), M (n=68))	47%	34%	41%	0.1043 *
Site 3(Total (n = 20), F (n= 17))	18%			
Site 2a(Total (n = 58), F (n= 38), M (n=20))	53%	45%	50%	
Site 2b(Total (n = 45), F (n= 23), M (n=22))	34%	27%	31%	
Site 2c (Total (n = 20), F (n= 17), M (n=3))	52%	32%	42%	0.1669 *
Grand Total	38%	35%	37%	
* - The chi squared test was performed to establish whether there is a relationship between gender and the agreement with the statement "Sometimes I have a problem charging my phone" at the specific study sites (comparing those who do have a problem charging their phone and those who don't)				

H.3 Gender Dynamics

There are only minor gender difference in terms of infrastructural constraints.

H.3 What Type of Women in Which Circumstances

H.3.1 Network Coverage Problems

According to Table H.1 there are differences across the study sites in terms of network coverage. At Sites 1 and 3, which are within Kampala, the participants are relying on the 3G signals of a variety of telecommunications companies that, from observation, are fairly reliable. The main concern raised by the participants about the network at Sites 1 and 3 was the way that it had been turned off by the government for political purposes. At the more rural Site 2 there is only a weak MTN and a weak Airtel 3G signal. In order to increase internet access, the manager of the telecentre has set up a hub at the telecentre which attempts to direct an

internet signal to the school, the hospital and the PTC. Unfortunately, at the time of the research there was a very poor signal being transmitted through this infrastructure which meant that access to the internet at the secondary school, hospital and PTC was very difficult.

H.3.2 Charging Problems

The participants experienced difficulties in charging their phones particularly at Site 2 (see Table H.2 above). According to discussions with the participants and key informants, there is a reasonable electricity supply at both Site 1 and Site 3. When the Site 2 sub-sites were analysed, it was found that 53% of the female respondents at Site 2a and 52% of the respondents at Site 2c agreed with the statement “Sometimes I have a problem charging my phone”, suggesting that there might be a problem with charging at the hospital and at its surrounding accommodation and at the school. The discussion with one of the key informants who is a teacher at the PTC, revealed that due to funding shortages and the high cost of electricity, the schools do not want pupils to be charging their phones at the school and therefore make it difficult for the pupils to do so. This could explain the higher percentage of respondents at the school agreeing that they had problems charging. It may be a similar reason at the hospital that is also a government funded institution. There was also one comment from a participant (Brenda), who lives in a village outside the rural town (Site 2) that suggested that outside the town there were problems with getting access to electricity,

“Even power is not in every small village, even those that have phones charging is a problem and they cannot afford solar power.”

The quote above also suggests that affordability of electricity could be an issue for some of the participants. Surprisingly only two participants raised the affordability of charging as an issue but when the data was analysed, there was found to be a statistical association ($p = 0.036$) between “Sometimes I have a problem charging my phone” and “I can’t afford to buy data”, thus suggesting that affordability could be a key reason why the participants have a problem charging their phones (see Table H.3 below). Furthermore, if the statement “ Sometimes I have a problem charging my phone” is analysed by poverty as set out in Table H.4

below, unsurprisingly, poorer participants are more likely to agree that they sometimes have a problem charging their phones.

Table H.3 “Sometimes I have a problem charging my phone”. Female responses analysed by whether the respondent stated that they could or could not afford to buy data			
	I can afford to buy data	I can't afford to buy data	Grand Total
	(n=73)	(n=116)	(n=189, p =0.036*)
I don't have a problem charging my phone	71%	56%	62%
I have a problem charging my phone	29%	44%	38%
Grand Total	100%	100%	100%
* - The chi squared test was performed to establish whether there is a relationship between whether you have a problem charging ones phone and whether one can afford to buy data (comparing those who can afford to but data and those who can't).			

Table H.4 “Sometimes I have a problem charging my phone”. Female responses analysed by the level of poverty of the respondents (based on the PPI index)				
	Under 64	65-79	Over 80	Grand Total
	(n=52)	(n=100)	(n=18)	(n=189)
I don't have a problem charging my phone	53%	65%	70%	62%
I have a problem charging my phone	47%	35%	30%	38%
Grand Total	100%	100%	100%	100%

Appendix I Hours Spent on Domestic Duties per Day

The research found that female participants spent significantly more time on domestic duties compared to the male participants. Table I.1 below shows that most women carried out over three hours of domestic duties per day whereas most men spent two hours or less on domestic duties per day. For the purpose of the questionnaire, domestic duties were defined as either “caring for children, looking after a spouse or elderly relative, cooking or cleaning’. There is a statistical association between gender and how many hours are spent on these duties.

Table I.1 How many hours a day on average do you spend on domestic duties (caring for children, spouse, elderly relatives, cooking, cleaning etc). Responses analysed by gender.			
	Female	Male	Grand Total
No. of hours	(n=189)	(n=147)	(n=336, p < 0.001*)
2 hours or less	25%	56%	38%
3-6 hours	55%	38%	48%
Over 7 hours	18%	6%	30%
Don't know	2%	0%	1%
Grand Total	100%	100%	100%
* - The chi squared test was performed to establish whether there is a relationship between gender and the number of hours the respondents spend on domestic duties			

Appendix J The Employment Status of the Case Study Participants and How they are Using the Internet for their Livelihoods

Case Study Participant	Study Site	Livelihood	Single/ married/ widowed	Dependents at home?	Searching for livelihood information	Learning new skills about their livelihoods	Advertising their goods and services online
Self Employed							
Flavia	1	Dancer	M	N	Y	Y	Y
Nancy	1	Baker /cook	S	Y	Y	Y	Y
Faith	1	Cook /actor	M	Y	N	N	N
Maureen	1	Hairdresser	S	Y	Y	Y	Y
Sharon	1	Tailor	M	Y	Y	Y	Y
Yvonne	3	Tailor	S	Y	Y	Y	Y
Scovia	3	Tailor	S	Y	Y	Y	Y
Nana	3	Tailor (SE)	S	N	Y	Y	Y
Deborah	1	Loan business	S	N	N	N	N
Sub-Totals					7/9 said yes	7/9 said yes	7/9 said yes
Wage-Employed							
Cathy	1	Shop assistant	M	N	N	N	N
Eunice	2	Shop assistant	M	Y	N	N	N
Viola	2	Farmer/ ACDO	S	Y	Y	Y	N
Zawedde	2	CDO	S	N	Y	N	N
Hope	2	Midwife	M	Y	Y	N	N
Fortunate	2	Farmer/councilor	S	Y	Y	N	N
Brenda	2	Midwife	M	Y	Y	N	N
Rashida	2	Trainee teacher	S	Y	Y	Y	N
Maria	2	Trainee teacher	S	N	Y	N	N
Patience	3	Tailor (WE)	S	Y	Y	Y	N
Priscilla	3	Teacher	M	N	Y	N	N
Sub-Totals					9/11 said yes	3/11 said yes	0/11 said yes

Appendix K Additional Information for Key Results Tables

This appendix provides additional information for many of the key results tables set out within the results chapters. In particular, it provides the underlying study site analysis when the analysis has been undertaken at a meta-analysis level within the quantitative results tables. The meta-analysis has only been undertaken when there is other underlying evidence to support its use, that is, when there appears to be either an underlying trend at each of the study sites based on the analysis of the questionnaire data and/or there is underlying qualitative evidence to suggest a relationship between the variables. The detailed site analysis has not always been shown in the results chapters and so it has been included in this appendix for the sake of completeness.

Chapter 5

“I access the internet on my own computer/tablet”. Affirmative responses analysed by study site and by gender

The site analysis of the affirmative responses to the question “ I access the internet on my own computer” is analysed by gender in table K5.3 below. There is a gender difference at each of the sites in favour of men apart from at Site 2c where the difference is in favour of women. The participants at Site 2c are pupils at the schools and this may explain why so few of the men had computers at that site. There was only one female student who said that she had her own computer at 2c. There is evidence from the literature than women are less likely to own their own computer (for example, Madanda, 2011, Kifle 2012).

“How did you learn to use the internet?” “Family and friends” responses analysed by study site and gender

The site and gender analysis of the affirmative responses to the question “ I learnt to use the internet from friends and family” is set out in table K5.4 below. There is a gender difference at each of the sites in favour of women.

Table K5.3. I access the internet on my own computer/tablet. Percentage of respondents answering in the affirmative at each study site, analysed by gender.

	Site 1		Site 2a		Site 2b		Site 2c		Site 3		Grand Total (n=336)
	Female (n=82)	Male (n=76)	Female (n=38)	Male (n=20)	Female (n=29)	Male (n=26)	Female (n=23)*	Male (n=22)	Female (n=17)	Male (n=26)	
I access the internet on my computer/tablet	5%	17%	16%	50%	3%	19%	4%	0%	29%	33%	13%

Table K5.4. How did you learn to use the internet? " I was taught by friends and family" affirmative responses analysed by study site and by gender

	Site 1		Site 2a		Site 2b		Site 2c		Site 3	
	Female (n=82)	Male (n=76)	Female (n=38)	Male (n=20)	Female (n=29)	Male (n=26)	Female (n=23)	Male (n=22)	Female (n=17)	Male (n=3)
Friends and family	66%	45%	53%	25%	69%	42%	78%	68%	76%	33%

“How often do you use the internet?” Female responses for “All of the time” or “daily” analysed by study site and age

The study site and age analysis of the female responses to the question “ How often do you use the internet?” in respect of the answers “ all of the time” or “daily” is set out in table K5.9 below. There is an age difference at each of the sites in favour of younger women except at Site 2b where the difference is slightly in favour of older women. There is no known reason for this anomaly but the large age differences at the other sites justified doing a meta-analysis of the chi-squared test in respect of the age differences.

Table K5.9. How often do you use the internet? Female affirmative responses to the answer "all of the time or daily" analysed by study site* and by age								
	Site 1		Site 2a		Site 2b		Site 3	
	18 to 30 (n=59)	Over 30 (n=23)	18 to 30 (n=21)	Over 30 (n=18)	18 to 30 (n=17)	Over 31 (n=12)	18 to 30 (n=10)	Over 31 (n=7)
All of the time or daily	81%	61%	95%	47%	71%	75%	76%	33%

* - Site 2c has been excluded as there is very little difference in educational attainment between the pupils

“My IT skills are not good enough”. Female responses to this statement analysed by study site and educational attainment

The female responses to the question as to whether “ my IT skills are not good enough” to use the internet in the way that I want, has been analysed by study site and educational attainment in Table K5.24 below. The analysis shows that the female participants with lower levels of educational attainment are more likely to state that their IT skills are not good enough compared to those with higher levels of educational attainment at each of the different study sites.

Table K5.24. "My IT skills are not good enough". Female responses analysed by study site* and educational attainment								
	Site 1		Site 2a		Site 2b		Site 3	
	Education up to A'Level (n=50)	Education A'Level and above (n=32)	Education up to A'Level (n=7)	Education A'Level and above (n=31)	Education up to A'Level (n=11)	Education A'Level and above (n=18)	Education up to A'Level (n=5)	Education A'Level and above (n=12)
My IT Skills are not good enough	64%	36%	57%	54%	44%	41%	100%	56%

* - Site 2c has been excluded as there is very little difference in educational attainment between the pupils

'My English is not good enough'. Female responses to this statement analysed by study site and educational attainment

The female responses to the question as to whether “ my English is not good enough” to use the internet in the way that I want, has been analysed by study site and educational attainment in Table K5.26 below. The analysis shows that the female participants with lower levels of educational attainment are more likely to state that their English is not good enough compared to those with higher levels of educational attainment at each of the different study sites.

Table K5.26. "My English is not good enough". Female responses analysed by study site* and educational attainment								
	Site 1		Site 2a		Site 2b		Site 3	
	Training for a profession after O'Levels and below (n=50)	A'Level and above (n=32)	Training for a profession after O'Levels and below (n=7)	A'Level and above (n=31)	Training for a profession after O'Levels and below (n=18)	A'Level and above (n=11)	Training for a profession after O'Levels and below (n=5)	A'Level and above (n=12)
* - Site 2c has been excluded as there is very little difference in educational attainment between the pupils								
My IT English is not good enough	48%	9%	27%	11%	39%	12%	60%	25%

“My IT skills are not good enough”. Female responses to this statement analysed by study site and age

The female responses to the question as to whether “ my IT skills are not good enough” to use the internet in the way that I want, have been analysed by study site and age in Table K5.27 below. The analysis shows that the younger female participants are less likely to state that their English is not good enough compared to the older participants at each of the different study sites.

Table K5.27. "My IT skills are not good enough". Female responses analysed by study site* and age								
	Site 1		Site 2a		Site 2b		Site 3	
	18 to 30 (n=59)	Over 30 (n=23)	18 to 30 (n=21)	Over 30 (n=18)	18 to 30 (n=17)	Over 31 (n=12)	18 to 30 (n=10)	Over 31 (n=7)
* - Site 2c has been excluded as there is no difference in age between the pupils								
My IT Skills are not good enough	46%	65%	48%	59%	35%	58%	33%	71%

“I don’t have enough time”. All responses to this statement analysed by study site and gender

All the affirmative responses to “I don’t have enough time” have been analysed by study site and gender in Table K5.28 below. The analysis shows that there is a gender difference at all of the study sites apart from Site 1 where there is no gender difference. The difference at the other sites was large and a chi-squared test at a meta-analysis level was undertaken.

Table K5.28. "I don't have enough time". All responses analysed by study site* and gender								
	Site 1		Site 2a		Site 2b		Site 2c	
	Female (n=82)	Male (n=76)	Female (n=38)	Male (n=20)	Female (n=29)	Male (n=26)	Female (n=23)	Male (n=22)
* - Site 3 has been excluded as there were so few men a the site								
I don't have enough time	36%	36%	63%	50%	72%	38%	52%	36%

Chapter 6

“How often do you use the internet to find out information about your job, livelihood, profession?” All responses analysed by study site and by gender.

All the responses to the question “How often do you use the internet to find out information about your job, livelihood, profession?” have been analysed by study site and gender and the “regularly” responses are shown in Table K6.3 below. The analysis shows that there is a gender difference at all of the study sites apart from Site 1 where there is no gender difference. It is not known why there is not a gender difference at site 1 but a hypothesis could be that women’s lower levels of educational attainment at that site compared to men’s could be reducing women’s use of the internet for this purpose. There is other evidence that educational attainment may be associated with using the internet for this purpose and so would support the hypothesis. A chi-squared test at a meta-analysis level was undertaken.

Table K6.3 How often do you use the internet to find out information about your job, livelihood, profession? All responses analysed by study site* and by gender.								
	Site 1		Site 2a		Site 2b		Site 2c	
	Female	Male	Female	Male	Female	Male	Female	Male
* - Site 3 has been excluded as there were so few men at the site	(n=82)	(n=76)	(n=38)	(n=20)	(n=29)	(n=26)	(n=23)	(n=22)
Regularly**	62%	63%	71%	65%	59%	42%	48%	36%
**- Either daily, weekly or monthly								

“How often do you use the internet to learn a new skill?” Female responses analysed by study site and by employment status

Female responses to the question “How often do you use the internet to learn a new skill?” have been analysed by study site and by whether the respondent is self employed or not. The “regularly” responses are shown in Table K6.6 below. The analysis shows that there is a difference in favour of the self-employed at all of the study sites.

Table K6.6 How often do you use the internet to learn a new skill? Female responses analysed by study site* and by employment status (self employed or not self employed).									
* - Site 2c responses have been excluded because the participants are all students	Site 1		Site 2a		Site 2b		Site 3		
	I am not self employed	I am self employed	I am not self employed	I am self employed	I am not self employed	I am self employed	I am not self employed	I am self employed	
	(n=41)	(n=41)	(n=30)	(n=8)	(n=13)	(n=16)	(n=4)	(n=13)	
Regularly**	51%	71%	63%	88%	46%	50%	50%	62%	
** - Either daily, weekly or monthly									

“How often do you use the internet to find out information about your job, livelihood, profession?” Female responses analysed by study site and by whether they perceive that their English language skills are good enough.

Female responses to the question “How often do you use the internet to find out information about your job, livelihood, profession” have been analysed by study site and by whether the respondent thinks that their English is good enough to use the internet in the way that they want. The “regularly” responses are shown in Table K6.8 below. The analysis shows that there are not enough respondents in each category at Site 2a, and 2c to be able to discern a trend across the different sites. However, there is a statistical association at Site 1 where the numbers of respondents in each category are large enough to support further analysis. A chi squared test at a meta analysis level was undertaken.

Table K6.8 How often do you use the internet to find out information about your job, livelihood, profession? All responses analysed by study site and by whether the respondents perceive their English to be good enough to use the internet in the way that they want.										
	Site 1*		Site 2a		Site 2b		Site 2c		Site 3	
	My English is good enough (n=55)	My English is not good enough (n=27)	My English is good enough (n=34)	My English is not good enough (n=4)	My English is good enough (n=21)	My English is not good enough (n=8)	My English is good enough (n=20)	My English is not good enough (n=3)	My English is good enough (n=12)	My English is not good enough (n=5)
Sub-total Regularly**	67%	44%	68%	100%	57%	63%	50%	33%	67%	80%
* - There is a statistical association at Site 1 with p = 0.012 ** - Either daily, weekly or monthly										

“How often do you use the internet to learn a new skill?” All responses analysed by study site and by whether they perceive that their English language skills are good enough.

All responses to the question “How often do you use the internet to learn a new skill?” have been analysed by study site and by whether the respondent thinks that their English is good enough to use the internet in the way that they want. The “regularly” responses are shown in Table K6.9 below. The analysis shows that there are not enough respondents at Site 2a and 2c to be able to discern a trend across the different sites. However, there is a large gender difference at Site 1 and Site 3. A chi squared test at a meta analysis level was undertaken.

Table K6.9 How often do you use the internet to learn new skills? All responses analysed by study site and by whether the respondents perceive their English to be good enough to use the internet in the way that they want.										
	Site 1		Site 2a		Site 2b		Site 2c		Site 3	
	My English is good enough	My English is not good enough	My English is good enough	My English is not good enough	My English is good enough	My English is not good enough	My English is good enough	My English is not good enough	My English is good enough	My English is not good enough
	(n=114)	(n=43)	(n=54)	(n=4)	(n=44)	(n=11)	(n=42)	(n=3)	(n=14)	(n=6)
Sub-total Regularly*	68%	53%	44%	75%	45%	45%	52%	33%	79%	17%
*- Either daily, weekly or monthly										

“The internet has helped me make more informed decisions about jobs/livelihoods.” Female responses analysed by study site and by whether they perceive that their IT skills are good enough

Female responses that were in agreement to the statement “The internet has helped me make more informed decisions about jobs/livelihoods” have been analysed by study site and by whether the respondent thinks that their IT skills are good enough to use the internet in the way that they want. This is shown in Table K6.10 below. The analysis shows that there is a trend across all the study sites whereby those participants who perceive that they IT skills are good enough are more likely to agree that the internet is helping them to make more informed decisions about their jobs and livelihoods than those that perceive that their IT skills are not good enough.

Table K6.10 The internet has helped me make more informed decisions about jobs/livelihoods. Female responses in agreement with this statement were analysed by study site and by whether the respondents perceive their IT skills to be good enough to use the internet in the way that they want.										
	Site 1		Site 2a		Site 2b		Site 2c		Site 3	
	My IT skills are good enough (n=40)	My IT skills are not good enough (n=42)	My IT skills are good enough (n=18)	My IT skills are not good enough (n=20)	My IT skills are good enough (n=16)	My IT skills are not good enough (n=13)	My IT skills are good enough (n=14)	My IT skills are not good enough (n=9)	My IT skills are good enough (n=7)	My IT skills are not good enough (n=10)
Sub-total agreement*	80%	76%	83%	80%	88%	38%	64%	44%	86%	70%
*- Either strongly agree or agree										

“How often do you use the internet to find out information about your job, livelihood, profession?” Female responses analysed by study site and by age.

Female responses to the question “How often do you use the internet to find out information about your job, livelihood, profession?” have been analysed by study site and age and the “regularly” responses are shown in Table K6.11 below. The analysis shows that there is an age difference at all of the study sites with younger women more likely than older women to use the internet on a regular basis for finding out about their jobs, livelihoods or profession.

Table K6.11. How often do you use the internet to find out information about your job, livelihood, profession? Female responses to the answer "daily, weekly, monthly", that is, on a regular basis analysed by study site* and age.								
*- Site 2c has been excluded as all the participants were under 30	Site 1		Site 2a		Site 2b		Site 3	
	18 to 30 (n=59)	Over 30 (n=23)	18 to 30 (n=21)	Over 30 (n=18)	18 to 30 (n=17)	Over 31 (n=12)	18 to 30 (n=10)	Over 31 (n=7)
	Regularly**	61%	57%	86%	53%	66%	50%	80%
**- Either daily, weekly or monthly								

“How often do you use the internet to find out about health information?” Female responses analysed by whether the participants perceive that their English is good enough to use the internet the way that you would like.

Female responses to the question “How often do you use the internet to find out about health information?” have been analysed by study site and by whether the respondent thinks that their English is good enough to use the internet in the way that they want. The “regularly” responses are shown in Table K6.16 below. The analysis shows that at there are not enough respondents at Site 2a, 2c and maybe even Site 3 to be able to discern a trend across all the different sites. However, there are large differences at Site 1 and Site 2b where the numbers of respondents in each category are large enough to support further analysis. The is also qualitative evidence to support a link between English language skills and the use of the internet for obtaining health information. A chi squared test at a meta analysis level was undertaken.

Table K6.16 How often do you use the internet to find out about health information? Female responses analysed by study site and whether you think that your English is good enough to use the internet the way that you would like										
	Site 1		Site 2a		Site 2b		Site 2c		Site 3	
	My English is good enough	My English is not good enough	My English is good enough	My English is not good enough	My English is good enough	My English is not good enough	My English is good enough	My English is not good enough	My English is good enough	My English is not good enough
Sub-total	(n=55)	(n=27)	(n=34)	(n=4)	(n=21)	(n=8)	(n=20)	(n=3)	(n=12)	(n=5)
Regularly*	55%	44%	82%	100%	57%	43%	55%	43%	40%	58%
*- Either daily, weekly or monthly										

“The internet has helped me make more informed/(better) decisions about my own and my family’s nutrition”. Responses analysed by study site and gender.

All of the participants’ agreement to the statement “The internet has helped me make more informed/(better) decisions about my own and my family’s nutrition “ has been analysed by study site and gender in Table K6.19 below. The analysis shows that there is a gender difference in favour of women at Site 1, Site2b and Site 2c. There is a gender difference in favour of men at Site 2a which could be explained by the fact that 2a is the hospital and so this may be influencing the interest of the hospital staff in nutrition. The qualitative evidence suggests that the female participants are more likely to be using the internet to search for nutritional information compared to the male participants. A chi squared test at a meta-analysis level was undertaken.

Table K6.19 “The internet has helped me make more informed/(better) decisions about my own and my family’s nutrition”. Responses analysed by study site* and gender.								
	Site 1		Site 2a		Site 2b		Site 2c	
	Female	Male	Female	Male	Female	Male	Female	Male
* - Site 3 has been excluded as there were so few men at the site	(n=82)	(n=76)	(n=38)	(n=20)	(n=29)	(n=26)	(n=23)	(n=22)
Sub-total agreement**	72%	58%	63%	70%	59%	46%	70%	59%
**.-Either strongly agree or agree								

“I have used the internet to access new educational opportunities.” Female responses in agreement analysed by study site and levels of educational attainment.

The female responses in agreement to the statement “I have used the internet to access new educational opportunities.” have been analysed by study site and educational attainment in Table K6.21 below. The analysis shows that across all the study sites (apart from Site 2b), the female participants with lower levels of educational attainment are less likely to have used the internet to access new educational opportunities. The educational attainment at Site 2b appears to make no difference to the agreement of this statement but the reason for this going against the trend is unknown. A chi-squared test at a meta-analysis level was undertaken.

Table K6.21 “I have used the internet to access new educational opportunities.” Female responses in agreement analysed by study site* and levels of educational attainment.								
	Site 1		Site 2a		Site 2b		Site 3	
* - Site 2c has been excluded as there is very little difference in educational attainment between the pupils	Training for a profession after O'Levels and below (n=50)	A'levels and above (n=32)	Training for a profession after O'Levels and below (n=7)	A'levels and above (n=31)	Training for a profession after O'Levels and below (n=18)	A'levels and above (n=11)	Training for a profession after O'Levels and below (n=5)	A'levels and above (n=12)
Sub-total agreement**	34%	66%	57%	74%	44%	45%	0%	58%
*- Either strongly agree or agree								

“I have used the internet to access new educational opportunities.” Female responses in agreement analysed by study site and by whether the participants perceive that they have the right IT skills to use the internet in the way that they would like

Female responses that were in agreement to the statement “I have used the internet to access new educational opportunities” have been analysed by study site and by whether the respondent thinks that their IT skills are good enough to use the internet in the way that they want. This is shown in Table K6.22 below. The analysis shows that there is a trend across all the study sites whereby those participants who perceive that their IT skills are good enough are more likely to have used the internet to access new educational opportunities compared to those participants who perceive that their IT skills are not good enough.

Table K6.22 “I have used the internet to access new educational opportunities.” Female responses in agreement analysed by study site* and by whether the participants perceive that they have the right IT skills to use the internet in the way that they would like.								
	Site 1		Site 2a		Site 2b		Site 3	
* - Site 2c has been excluded as this question is not relevant for the pupils at the school	My IT skills are good enough	My IT skills are not good enough	My IT skills are good enough	My IT skills are not good enough	My IT skills are good enough	My IT skills are not good enough	My IT skills are good enough	My IT skills are not good enough
	(n=40)	(n=42)	(n=18)	(n=20)	(n=16)	(n=13)	(n=7)	(n=10)
Sub-total agreement**	53%	40%	72%	70%	63%	23%	71%	20%
**- Either strongly agree or agree								

“I have used the internet to access new educational opportunities.” Female responses in agreement analysed by study site and by whether the participants perceive that they have good enough English to use the internet in the way that they would like

Female responses that were in agreement to the statement “I have used the internet to access new educational opportunities” have been analysed by study site and by whether the respondent thinks that their English is good enough to use the internet in the way that they want. This is shown in Table K6.23 below. The analysis shows that there is a trend across all the study sites apart from Site 2b that suggests that those participants who perceive that their English is good enough are more likely to have used the internet to access new educational opportunities compared to those participants who perceive that their English is not good enough. At Site 1 there is a statistical association. It is not known why there is an exception at Site 2b. Furthermore, the low numbers of participants with a poor perception of their English language skills which makes drawing conclusions concerning the trend difficult. Observation during the research suggests that those with better English were more likely to be able to access educational opportunities online. A chi squared test at a meta -analysis level was undertaken.

Table K6.23 “I have used the internet to access new educational opportunities.” Female responses in agreement analysed by study site* and by whether the participants perceive that they have good enough English language skills to use the internet in the way that they would like.								
	Site 1***		Site 2a		Site 2b		Site 3	
	My English is good enough	My English is not good enough	My English is good enough	My English is not good enough	My English is good enough	My English is not good enough	My English is good enough	My English is not good enough
* - Site 2c has been excluded as this question is not relevant for the pupils at the school	(n=55)	(n=27)	(n=34)	(n=4)	(n=21)	(n=8)	(n=12)	(n=5)
Sub-total Agreement**	59%	22%	74%	50%	43%	50%	50%	20%
**- Either strongly agree or agree								
***- There is a statistical association at Site 1 where p = 0.0003.								

“How often do you use the internet to find out information about politics?” All responses analysed by study site and by gender.

The responses to the question “How often do you use the internet to find out information about politics?” have been analysed by study site and gender and the “regularly” responses shown in Table K6.24 below. The analysis shows that there is a gender difference at all of the study sites with the male participants more likely to use the internet for this purpose on a regular basis compared to the female participants. A chi squared test at a meta analysis level was undertaken.

Table K6.24 How often do you use the internet to find out information about politics? All responses analysed by study site* and by gender.								
	Site 1		Site 2a		Site 2b		Site 2c	
	Female	Male	Female	Male	Female	Male	Female	Male
* - Site 3 has been excluded as there were so few men at the site								
	(n=82)	(n=76)	(n=38)	(n=20)	(n=29)	(n=26)	(n=23)	(n=22)
Regularly**	43%	54%	42%	70%	41%	54%	52%	68%
** - Either daily, weekly or monthly								

“How often do you use the internet to find out information about world news?” All responses analysed by study site and by gender.

All the responses to the question “How often do you use the internet to find out information about world news?” have been analysed by study site and gender and the “Regularly” responses are shown in Table K6.25 below. The analysis shows that there is a gender difference at all of the study sites with the male participants more likely to use the internet for this purpose compared to the female participants. A chi-squared test at a meta-analysis level was undertaken.

Table K6.25 How often do you use the internet to find out information about world news? All responses analysed by study site* and by gender.								
	Site 1		Site 2a		Site 2b		Site 2c	
	Female	Male	Female	Male	Female	Male	Female	Male
* - Site 3 has been excluded as there were so few men at the site	(n=82)	(n=76)	(n=38)	(n=20)	(n=29)	(n=26)	(n=23)	(n=22)
Regularly**	65%	80%	71%	90%	66%	85%	52%	95%
** - Either daily, weekly or monthly								

“How often do you use the internet to find out information about rights and entitlements?” All responses analysed by study site and by gender.

All the responses to the question “How often do you use the internet to find out information about rights and entitlements?” have been analysed by study site and gender and the “regularly” responses are shown in Table K6.27 below. The analysis shows that there is a gender difference at Sites 1, 2b and 2c with the male participants more likely to use the internet for this purpose on a regular basis compared to the female participants. However, at Site 2a, the female participants appear to be using the internet more for this purpose which goes against the trend. It is known that some of the female participants from Site 2a (the hospital) had had training on how to use the internet at the nearby telecentre through a local NGO and that one of the midwives who had had the training talked about finding out about FGM online. This could explain the gender difference in favour of women at this site but further investigations would be required to confirm this. Other qualitative research suggested that women were less aware than men that they could find out about this information online. A chi-squared test at a meta-analysis level was undertaken.

Table K6.27 How often do you use the internet to find out information about rights and entitlements? All responses analysed by study site* and by gender.								
	Site 1		Site 2a		Site 2b		Site 2c	
	Female	Male	Female	Male	Female	Male	Female	Male
* - Site 3 has been excluded as there were so few men at the site								
Regularly**	(n=82) 29%	(n=76) 39%	(n=38) 34%	(n=20) 25%	(n=29) 14%	(n=26) 27%	(n=23) 13%	(n=22) 41%
**- Either daily, weekly or monthly								

“How often do you use the internet to find out about world news?” Female responses analysed by study site and whether you think that your English is good enough to use the internet in the way you would like.

Female responses to the question “How often do you use the internet to find out about world news?” have been analysed by study site and by whether the respondent thinks that their English is good enough to use the internet in the way that they want. The “regularly” responses are shown in Table K6.29 below. The analysis shows that at there are not enough respondents at Site 2a, 2c and maybe even Site 3 to be able to discern a trend across all the different sites. However, there are large differences at Site 1 and Site 2b where the numbers of respondents in each category are large enough to support further analysis. There is also qualitative evidence to support a link between English language skills and the use of the internet for searching for world news. A chi-squared test at a meta-analysis level was undertaken.

Table K6.29 How often do you use the internet to find out about world news? Female responses analysed by study site and whether you think that your English is good enough to use the internet the way that you would like										
	Site 1		Site 2a		Site 2b		Site 2c		Site 3	
	My English is good enough	My English is not good enough	My English is good enough	My English is not good enough	My English is good enough	My English is not good enough	My English is good enough	My English is not good enough	My English is good enough	My English is not good enough
	(n=55)	(n=27)	(n=34)	(n=4)	(n=21)	(n=8)	(n=20)	(n=3)	(n=12)	(n=5)
Sub-total Regularly*	67%	59%	71%	75%	72%	50%	55%	33%	50%	40%
*- Either daily, weekly or monthly										

“How often do you use the internet to find out about your rights and entitlements?” Female responses analysed by study site and by educational attainment

The female responses to the question “How often do you use the internet to find out about your rights and entitlements?” have been analysed by study site and educational attainment and the “Regularly” responses are shown in Table K6.21 below. The analysis shows across all the study sites (apart from Site 2a) that the female participants with lower levels of educational attainment are less likely to have used the internet to find out about their rights and entitlements on a regular basis. At Site 2a those with lower levels of education are more likely to use the internet for this purpose than those with more education. As discussed above it is known that some of the female participants from Site 2a (the hospital) had had training on how to use the internet at the nearby telecentre through a local NGO and that one of the midwives who had had the training talked about finding out about FGM online. This may explain the anomaly at Site 2a but further investigation would be required to confirm this. A chi-squared test at a meta-analysis level was undertaken.

Table K6.31 How often do you use the internet to find out about your rights and entitlements? Female responses in agreement analysed by study site* and levels of educational attainment.								
	Site 1		Site 2a		Site 2b		Site 3	
* - Site 2c has been excluded as there is very little difference in educational attainment between the pupils	Training for a profession after O'Levels and below (n=50)	A'levels and above (n=32)	Training for a profession after O'Levels and below (n=7)	A'levels and above (n=31)	Training for a profession after O'Levels and below (n=18)	A'levels and above (n=11)	Training for a profession after O'Levels and below (n=5)	A'levels and above (n=12)
Sub-total regularly**	22%	41%	43%	35%	11%	18%	0%	25%
*- Regularly includes daily, weekly or monthly use for this purpose								

“How often do you use the internet to find out information about politics?” Female responses analysed by study site and age.

Female responses to the question “How often do you use the internet to find out information about politics?” have been analysed by study site and age and the “regularly” responses are shown in Table K6.32 below. The analysis shows that there is an age difference in responses at Site 2a and smaller differences at Site 2b and Site 3, with younger women more likely to use the internet for this purpose. However, older women appear to be using the internet more for this purpose at Site 1, suggesting that there may be other factors influencing the use of the internet for political purposes. Nonetheless, a chi-squared test at a meta-analysis level was undertaken.

Table K6.32. How often do you use the internet to find out information about politics? Female responses to the answer "daily, weekly, monthly", that is, on a regular basis analysed by study site* and age.								
Site 2c has been excluded as all the participants were under 30	Site 1		Site 2a		Site 2b		Site 3	
	18 to 30 (n=59)	Over 30 (n=23)	18 to 30 (n=21)	Over 30 (n=18)	18 to 30 (n=17)	Over 31 (n=12)	18 to 30 (n=10)	Over 31 (n=7)
Regularly**	41%	48%	62%	18%	53%	42%	10%	7%
** - Either daily, weekly or monthly								

“Have you ever experienced false information (misinformation) when using the internet?” All responses analysed by study site and by gender

Female responses to the question “Have you ever experienced false information (misinformation) when using the internet ?” have been analysed by study site and by gender. This analysis is shown in Table K6.35 below. It shows that there is a gender difference at all of the study sites with the male participants more likely to have experienced false information compared to the female participants.

Table K6.35 Have you ever experienced false information (misinformation) when using the internet? Female responses analysed by study site and gender.								
	Site 1		Site 2a		Site 2b		Site 2c	
	Female	Male	Female	Male	Female	Male	Female	Male
* - Site 3 has been excluded as there were so few men at the site								
	(n=82)	(n=76)	(n=38)	(n=20)	(n=29)	(n=26)	(n=23)	(n=22)
Yes	49%	68%	58%	80%	41%	46%	61%	73%

“Have you ever experienced false information (misinformation) when using the internet?” Female responses analysed by study site and whether you think that your English is good enough to use the internet how you want

Female responses to the question “Have you ever experienced false information (misinformation) when using the internet ?” have been analysed by study site and by whether the respondent thinks that their English is good enough to use the internet in the way that they want. This is shown in Table K6.36a below. The analysis shows that at there are not enough respondents at Site 2a, 2c and maybe even Site 3 to be able to discern a trend across all the different sites. However, there are differences at Site 1 and Site 2b where the numbers of respondents in each category are large enough to support the analysis. When both the female and male affirmative responses are analysed together (see Table K6.36b below) there are still not enough respondents at Site 2a and 2c in the different categories to support a trend. However, the results at four of the five sites suggest that English language skills may be influencing whether the respondents have experienced false information or not. A chi squared test at a meta analysis level was undertaken.

Table K6.36a Have you ever experienced false information (misinformation) when using the internet? Female responses analysed by study site and whether you think that your English is good enough to use the internet how you want.										
	Site 1		Site 2a		Site 2b		Site 2c		Site 3	
	My English is good enough (n=55)	My English is not good enough (n=27)	My English is good enough (n=34)	My English is not good enough (n=4)	My English is good enough (n=21)	My English is not good enough (n=8)	My English is good enough (n=20)	My English is not good enough (n=3)	My English is good enough (n=12)	My English is not good enough (n=5)
Yes	55%	33%	62%	25%	50%	38%	60%	67%	67%	40%

Table K6.36b Have you ever experienced false information (misinformation) when using the internet? All responses (both female and male) analysed by study site and whether you think that your English is good enough to use the internet how you want.										
	Site 1		Site 2a		Site 2b		Site 2c		Site 3	
	My English is good enough (n=115)	My English is not good enough (n=43)	My English is good enough (n=54)	My English is not good enough (n=4)	My English is good enough (n=44)	My English is not good enough (n=11)	My English is good enough (n=42)	My English is not good enough (n=3)	My English is good enough (n=14)	My English is not good enough (n=6)
Yes	61%	49%	69%	25%	45%	36%	67%	67%	71%	50%

Have you ever experienced false information (misinformation) when using the internet? All responses analysed by study site and by educational attainment

All responses to the question “Have you ever experienced false information (misinformation) when using the internet ?” have been analysed by study site and by educational attainment . This analysis is shown in Table K6.37 below. It shows that there are large differences at all of the study sites except Site 3, with the more educated participants more likely to have experienced false information compared to those with lower levels of education. At Site 3 there is only a small difference in favour of those with less education. The reason for this is unknown but it could be because the participants at Site 3 had all been trained in the use of the internet by a local NGO and from the qualitative research appeared to be more aware of the negative aspects and dangers of internet use. A chi squared test at a meta analysis level was undertaken.

Table K6.37 Have you ever experienced false information (misinformation) when using the internet? All responses in agreement analysed by study site* and levels of educational attainment.								
	Site 1		Site 2a		Site 2b		Site 3	
	Training for a profession after O'Levels and below (n=50)	A'levels and above (n=32)	Training for a profession after O'Levels and below (n=7)	A'levels and above (n=31)	Training for a profession after O'Levels and below (n=18)	A'levels and above (n=11)	Training for a profession after O'Levels and below (n=5)	A'levels and above (n=12)
* - Site 2c has been excluded as there is very little difference in educational attainment between the pupils								
Yes	50%	67%	44%	69%	36%	58%	64%	67%

Have you ever experienced false information (misinformation) when using the internet? All responses analysed by study site and by frequency of use of the internet

All responses to the question “Have you ever experienced false information (misinformation) when using the internet?” have been analysed by study site and by frequency of use of the internet. This analysis is shown in Table K6.39 below. Across all the study sites it appears that those respondents who use the internet more frequently are more likely to have experienced false information. There are small numbers of respondents in the category “All of the time” at some of the study sites but nonetheless a trend can be seen. A chi squared test at a meta analysis level was undertaken.

Table K6.39 Have you ever experienced false information (misinformation) when using the internet? Female responses analysed by study site* and by frequency of use												
	Site 1			Site 2a			Site 2b			Site 2c		
	All of the time (n=13)	Daily (n=49)	Less than Daily (n=20)	All of the time (n=2)	Daily (n=26)	Less than Daily (n=10)	All of the time (n=7)	Daily (n=14)	Less than Daily (n=8)	All of the time (n=1)	Daily (n=13)	Less than Daily (n=9)
Yes	77%	51%	26%	0%	65%	50%	57%	38%	36%	100%	62%	56%

* - Site 3 has been excluded because there are not enough respondents in the "less than daily" category to allow for a meaningful analysis

Chapter 7

“I have communicated with people online that I wouldn't be able to communicate with offline”. Responses of those who are either married or living with their partners, analysed by study site and gender

Table K7.5 below sets out the study site and gender analysis for the strength of agreement to the statement *“I have communicated with people that I wouldn't be able to communicate with offline”* considering only those participants who are married or living with their partners. The analysis by study site shows that there are large gender differences at Site 1 and Site 2a for the strength of agreement, with the male participants more likely than the female participants to strongly agree with the statement. However, there is no gender difference at Site 2b where the women are just as likely as the men to strongly agree. The reason for the difference at Site 2b is uncertain. It could be a result of the isolation of partnered women in the rural town which increases the benefit of the internet to increase their ability to communicate. Further investigation is required. There is qualitative evidence to suggest that women who are married may face greater constraints in using the internet to communicate more widely. A chi-squared test at a meta-analysis level was therefore undertaken.

Table K7.5 “I have communicated with people online that I wouldn't be able to communicate with offline.” Responses of those who are either married or living with their partners, analysed by study site* and gender						
	Site 1		Site 2a		Site 2b	
	Female	Male	Female	Male	Female	Male
* - Site 2c has been excluded as none of the pupils were married or living with a partner and Site 3 has been excluded as there were so few men at the site	(n=82)	(n=76)	(n=38)	(n=20)	(n=29)	(n=26)
Strongly agree	45%	70%	53%	67%	64%	63%
Agree	52%	30%	47%	33%	35%	38%

Chapter 8

"I feel that people are more willing to listen to my point of view online than offline." Female responses analysed study site and by age.

The female responses to the statement , "I feel that people are more willing to listen to my point of view online than offline." have been analysed by study site and age in Table K8.12 below. The analysis shows that the younger female participants at Sites 1, 2a and 2b are more likely to agree that people are more likely to listen to their point of view online rather than offline. There are large differences in responses depending on age at these three study sites. However, at Site 3, the trend does not hold and older women are more likely to agree with the statement compared to younger women. It is not understood why this is the case but the small numbers of participants in each age category at this site may be distorting the results at this site and a chi squared test at a meta analysis level was undertaken.

Table K8.12. " I feel that people are more willing to listen to my point of view online rather than offline." Female responses analysed by study site* and by age

	Site 1		Site 2a		Site 2b		Site 3	
	18 to 30 (n=59)	Over 31 (n=23)	18 to 30 (n=21)	Over 31 (n=18)	18 to 30 (n=17)	Over 31 (n=12)	18 to 30 (n=10)	Over 31 (n=7)
Strongly Agree	20%	26%	19%	6%	12%	17%	20%	14%
Agree	59%	43%	57%	53%	65%	33%	10%	29%
Sub-total agree	80%	70%	76%	59%	76%	50%	30%	43%
* * - Site 2c has been excluded as there is no difference in age between the pupils								

Participants agreeing that they had created content online that had expressed their views about an issue affecting their community or country. All responses to this statement analysed by study site and gender

The participants' responses as to whether they had created content online that had expressed their views about an issue affecting their community or country have been analysed by study site and gender in Table K8.14 below. The analysis shows that there are large gender difference at all of the study sites apart from Site 2b where there is a gender difference in favour of women. It is suspected that this may be result of the lower levels of education amongst the male participants at Site 2b compared to the rest of the sites although further research would be required to confirm this. The difference at the other sites was large and the gender difference at Site 1 was statistically significant. A chi squared test at a meta-analysis level was undertaken.

Table K8.14. I post content where I express my views about an important issue affecting my community or country. All responses analysed by study site* and gender								
	Site 1**		Site 2a		Site 2b		Site 2c	
	Female (n=82)	Male (n=76)	Female (n=38)	Male (n=20)	Female (n=29)	Male (n=26)	Female (n=23)	Male (n=22)
* - Site 3 has been excluded as there were so few men at the site								
I post content where I express my views about an important issue affecting my community or country	38%	61%	34%	55%	38%	27%	48%	64%
**- there is a statistical association at Site 1 whereby p = 0.008								

“Have you joined and taken part in a discussion group online?” Affirmative responses analysed by study site and by gender.

The participants’ affirmative responses as to whether they had joined and taken part in a discussion group online were analysed by study site and gender in Table K8.14 below. The analysis shows that there is a large gender difference in favour of men at all of the study sites. A chi squared test at a meta analysis level was undertaken.

Table K8.15 Have you joined and taken part in a discussion group online? . All affirmative responses analysed by study site* and gender								
	Site 1		Site 2a		Site 2b		Site 2c	
	Female	Male	Female	Male	Female	Male	Female	Male
* - Site 3 has been excluded as there were so few men at the site	(n=82)	(n=76)	(n=38)	(n=20)	(n=29)	(n=26)	(n=23)	(n=22)
Yes	61%	82%	71%	85%	41%	65%	52%	64%

“Have you joined and taken part in a discussion group online discussing healthcare issues?”Percentage of affirmative responses of those who had already said that they had joined a discussion group, analysed by study site and by gender.

The participants’ affirmative responses as to whether they had joined and taken part in a discussion group online and were discussing healthcare issues were analysed by study site and gender in Table K8.16a below. The analysis shows that there are gender differences in favour of the female participants at all of the study sites. A chi-squared test at a meta-analysis level was undertaken.

Table K8.16a Percentage of respondents, who have joined a discussion group online discussing healthcare issues out of the total number of participants who have joined a discussion group. All affirmative responses analysed by study site* and gender								
	Site 1		Site 2a		Site 2b		Site 2c	
	Female	Male	Female	Male	Female	Male	Female	Male
* - Site 3 has been excluded as there were so few men at the site Numbers of participants joining an online discussion group	(n=50)	(n=72)	(n=27)	(n=17)	(n=12)	(n=17)	(n=12)	(n=14)
Yes	36%	19%	70%	59%	42%	12%	17%	14%

Have you joined and taken part in a discussion group online discussing politics? Percentage of affirmative responses of those who had already said that they had joined a discussion group analysed by study site and by gender.

The participants' affirmative responses as to whether they had joined and taken part in a discussion group online discussing politics were analysed by study site and gender in Table K8.16b below. The analysis shows that there are gender differences in favour of the male participants at all of the study sites. A chi-squared test at a meta-analysis level was undertaken.

Table K8.16b Percentage of respondents, who have joined a discussion group online discussing politics, out of the total number of participants who have joined a discussion group . All affirmative responses analysed by study site* and gender								
	Site 1		Site 2a		Site 2b		Site 2c	
	Female	Male	Female	Male	Female	Male	Female	Male
* - Site 3 has been excluded as there were so few men a the site	(n=50)	(n=72)	(n=27)	(n=17)	(n=12)	(n=17)	(n=12)	(n=14)
Yes	28%	43%	22%	53%	8%	47%	25%	29%

“Have you joined and taken part in a discussion group online?” Affirmative responses analysed by study site and by perception of IT skills.

The female participants’ affirmative responses as to whether they had joined and taken part in a discussion group online were analysed by study site and by perception of IT skills in Table K8.17 below. The analysis shows that the participants who perceive that they have good IT skills are more likely to have joined an online discussion group compared to those who do not across all of the study sites. A chi-squared test at a meta-analysis level was undertaken.

Table K8.17 Have you joined and taken part in a discussion group online? . Female affirmative responses analysed by study site* and whether you perceive that your IT skills are good enough to use the internet in the way that you want										
	Site 1		Site 2a		Site 2b		Site 2c		Site 3	
	My IT skills are good enough	My IT skills are not good enough	My IT skills are good enough	My IT skills are not good enough	My IT skills are good enough	My IT skills are not good enough	My IT skills are good enough	My IT skills are not good enough	My IT skills are good enough	My IT skills are not good enough
	(n=40)	(n=42)	(n=18)	(n=20)	(n=16)	(n=13)	(n=14)	(n=9)	(n=7)	(n=10)
Yes	68%	53%	78%	65%	56%	23%	71%	22%	86%	60%

“Have you joined and taken part in a discussion group online?” Affirmative responses analysed by study site and by perception of English language skills.

The female participants’ affirmative responses as to whether they had joined and taken part in a discussion group online were analysed by study site and by perception of English language skills in Table K8.18 below. The analysis shows that the participants who perceive that they have good English language skills are more likely to have joined an online discussion group compared to those who do not, across all of the study sites. A chi-squared test at a meta-analysis level was undertaken.

Table K8.18 Have you joined and taken part in a discussion group online? . Female affirmative responses analysed by study site* and whether you perceive that your English is good enough to use the internet in the way that you want										
	Site 1		Site 2a		Site 2b		Site 2c		Site 3	
	My English is good enough	My English is not good enough	My English is good enough	My English is not good enough	My English is good enough	My English is not good enough	My English is good enough	My English is not good enough	My English is good enough	My English is not good enough
	(n=55)	(n=27)	(n=34)	(n=4)	(n=21)	(n=8)	(n=20)	(n=3)	(n=12)	(n=5)
Yes	65%	52%	74%	50%	48%	25%	55%	33%	83%	40%

“How often do you use the internet to express your views about an important issue affecting your country?” Responses analysed by study site and by gender

The percentage of participants who stated that they used the internet to express their views about an important issue affecting their country on a regular basis are analysed by study site and gender in Table K8.21 below. The analysis shows that there are gender differences in favour of the male participants at three out of four of the study sites. There is a higher percentage of female participants than male participants stating this at site 2a, which goes against the trend. It is uncertain why this is the case but it may be connected with the fact that many of the female hospital staff (for example, nurses and midwives) had had specialist training in use of the internet at the telecentre. Further investigation would be required to better understand the difference at this site. Qualitative research also suggested that there were gender difference in using the internet for expressing one’s political views. A chi-squared test at a meta-analysis level was undertaken.

Table K8.21 How often do you use the internet to express your views about an important issue affecting your country? The percentage of respondents stating that they did so on a regular basis (daily, weekly and monthly responses combined) analysed by study site* and gender									
	Site 1		Site 2a		Site 2b		Site 2c		
	Female	Male	Female	Male	Female	Male	Female	Male	
* - Site 3 has been excluded as there were so few men at the site	(n=82)	(n=76)	(n=38)	(n=20)	(n=29)	(n=26)	(n=23)	(n=22)	
Expressing views about their country on a regular basis	51%	53%	45%	40%	34%	54%	39%	50%	

“How often do you use the internet to express your views about an important issue affecting your community?” Responses analysed by study site and by gender

The percentage of participants who stated that they used the internet to express their views about an important issue affecting their community on a regular basis are analysed by study site and gender in Table K8.22 below. The analysis shows that there are gender differences in favour of the male participants at three out of four of the study sites. There is a higher percentage of female participants than male participants stating this at site 2a, which goes against the trend. It is uncertain why this is the case but it may be connected with the fact that many of the female hospital staff (for example, nurses and midwives) had had specialist training in use of the internet at the telecentre. Further investigation would be required to better understand the difference at this site. Qualitative research also suggested that there were gender difference in using the internet for expressing ones political views. A chi squared test at a meta analysis level was undertaken.

Table K8.22 How often do you use the internet to express your views about an important issue affecting your community? The percentage of respondents stating that they did so on a regular basis (daily, weekly and monthly responses combined) analysed by study site* and gender								
	Site 1**		Site 2a		Site 2b		Site 2c	
	Female	Male	Female	Male	Female	Male	Female	Male
* - Site 3 has been excluded as there were so few men at the site								
Expressing views about their country on a regular basis	(n=82)	(n=76)	(n=38)	(n=20)	(n=29)	(n=26)	(n=23)	(n=22)
	39%	59%	39%	30%	31%	42%	36%	59%
**- there is a statistical association at Site 1 whereby p = 0.008								