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Abstract

Marketisation has directed higher education institutions and policies to focus on student support and provisions that promote better experience and value. By contrast, expectations of university students are under-researched and understated, with less attention placed on what and how students should perform in higher education. This paper further develops the concept of the *ideal student* at university, which aims to promote transparency and explicitness about what is expected of students, and potentially alleviate inequalities driven by implicit and unspoken rules of higher education. We report on the development and findings of the ideal student survey, conducted with 1,043 university students and staff in the UK. Factor analysis revealed eight dimensions of the ideal student, which we have tentatively described as *Diligence & Engagement*, *Organisation & Discipline*, *Reflection & Innovation*, *Positive & Confident outlook*, *Supportive of Others*, *Academic skills*, *Employability skills* and *Intelligent & Strategic approach*. Each factor is discussed with a focus on the differences between the views of staff and students. We conclude with a discussion of how the concept of the ideal student has the potential to promote better equality and opportunities for student success, by making explicit what is expected of university students.

Keywords*: ideal student, ideal university student, student characteristics, expectation of student, student identity, student attributes*

Introduction

In countries such as the UK and Australia, the higher education market has ensured that institutions and their policies are invested to improve student experience and support, with students as partners now central in strategic university decisions (Healey, Flint & Harrington, 2014). The shift in emphasis towards the student body is highlighted in the growth of research on better teaching and learning practices such as assessment and feedback (Carless, 2015), technology-enhanced learning (Kirkwood & Price, 2014) and inclusive curriculum design (Hitch, MacFarlane & Nihill, 2015). By comparison, expectations held of students are underexplored, especially from the lens of desirable and ideal characteristics of students at university.

This paper aims to further develop the working concept of the ideal student, which can be defined as 'the desirable but realistic expectations of students in higher education' (Wong & Chiu, 2021a, p. 506), aimed at promoting transparency about what is expected in an ideal student. By understanding what is valued and not valued, we can potentially alleviate social inequalities driven by unvoiced assumptions and implicit rules of higher education (Bathmaker et al., 2016; Crozier et al., 2008; Wong, 2018; Wong & Chiu, 2019b). The concept of the ideal student can highlight the nuances in expectations that university

staff and students might have by providing us with a conceptual platform to discuss and evaluate any potential mismatches of expectations held of students, which is a particular concern as highlighted in research on student transitions into university (Briggs, Clark, & Hall 2012; Gale & Parker, 2014).

More specifically, in this paper we report on the development and findings of the ideal university student survey, where we map the relative importance of different student characteristics that can be found in an ideal student. Our analysis unveiled eight dimensions of the ideal student in higher education. We discuss how construction of the ideal student varies according to respondents' background, especially the difference between university staff and students. We conclude with a discussion of how the concept of the ideal student has the potential to promote equality and opportunities for student success.

Constructions of the ideal university student by roles and disciplines

Given the prominence of marketisation and consumerism in UK higher education (Brown and Carasso, 2013; Wong & Chiu, 2019a), our approach to the concept of the ideal student aims to promote a deeper and more open conversation around current expectations of university students, especially our desirable and ideal student characteristics. By ideal, we do not mean perfection or the best. As we elaborated elsewhere (see Wong & Chiu, 2021a for a fuller discussion of the conceptual development process), the concept of the ideal student constitutes the aspirations and imaginations of desirable student characteristics, which may not exist in reality, particularly as one individual. Following Weber's (2009) theory of *ideal types*, the ideal student can be thought of as a conceptual space where a range of desirable student characteristics are mapped out. More importantly, these characteristics are not meant to represent one specific person, but to be found across a spectrum of students. Here, the emphasis on multiple ideal student characteristics underpins the purpose of this paper, which is to offer an empirical insight into the different ways that the ideal student is conceived. We acknowledge that constructions of the ideal student are dependent on the roles and positions of the constructor, as different people and their roles could result in different ideals. Here, we focus on two arenas where existing literature has found desirable expectations of students to vary: 1) between different roles/stakeholders, especially staff and students, and 2) across disciplines.

Research on the ideal student is scarce, with limited studies in the higher education context. More recent studies were mostly in the school context (Bradbury, 2013; Harkness et al., 2007; Maslovaty, Cohen, & Furman, 2008). These studies focused on teachers' expectations and found that being attentive, disciplined, independent, motivated, punctual, respectful and responsible are key attributes in an ideal pupil. At university, lecturers in Sweden reported academic skills, abilities and attainment to be highly desirable of students (Thunborg, Bron & Edström, 2012). Physics tutors in Denmark constructed their ideal undergraduates to be committed, clever, interested and modest individuals (Ulriksen, 2009). Social science lecturers in England suggested that their ideal students are committed, critical, engaged, making progress, prepared and reflective, whilst attainment was not considered to be significant (Wong & Chiu, 2020). As such, constructions of desirable university students appear to be multidimensional. For university staff, their views of the ideal student can vary across countries, which may reflect institutional and cultural influences. Studies in Canada and Denmark reported that staff perceptions and expectations of university students can differ for home students and international students (especially

from Asia), with the former more likely to embody desirable student characteristics and the latter presumed to hold educational values that are different to Westernised ideals of autonomy, critical thinking and freedom (Tange & Jensen, 2012; Vinther & Slethaug, 2014).

Among university students themselves, the ideal student (in Spain, Llamas, 2006) is not only academically ambitious, capable, curious and motivated, but also energetic and passionate member of the wider university community. Leathwood (2006, in England) found undergraduate students to consider independence as a key attribute for university students, but also cautioned that the embodiment of these desirable characteristics are socially patterned, especially by gender, class and ethnicity (e.g. white middle-class men as the 'ready-made' desirable student architype). Broader literature on the views of university students tend to focus on their expectations of tutors and teaching, rather than on their own roles as students. For example, Sander, Stevenson, King and Coates (2000) studied UK undergraduates' expectations of and preferences in teaching, learning and assessment, whilst Lee, Kim and Chan (2015) focused on Singaporean students' expectations of lecturers, including characteristics of their desirable tutors, such as organisation, preparation and enthusiasm (see also Arnon & Reichel, 2007 in Israel; Douna et al., 2015 in Greece; Haamer, Lepp, & Reva, 2012 in Estonia). The desirable or ideal student, on the other hand, is underexplored.

The second key theme that marks a difference in constructions of desirable university students is variation by subject discipline. Existing literature, especially in medical and computer science, have noted desirable student characteristics that appear more specific to their respective fields. For example, O'Brien et al. (2016, in the US) reported that supervisors tended to construct the ideal medical student as being academically capable, committed, proactive, professional, and self-directed, as well as having more discipline-oriented attributes such as caring for patients. For computer science students, Thinyane (2013) found lecturers in South Africa to rate abstract thinking, creativity, computer playfulness, problem-solving and self-efficacy as key characteristics of the ideal computing student. Similarly, Cox, Cekic, Ahn and Zhu (2012) reported that engineering academics and professionals in the US valued the qualities of leadership, recognising and managing change, and synthesising engineering in their desirable expectations of engineering students. Bui and Porter (2010) found accounting lecturers and employers in New Zealand to expect accounting graduates to have good communication, interpersonal and team skills, as well as competency in discipline knowledge such as accounting concepts and principles, although the importance of these technical skills can vary by employer size.

Although lecturers from different disciplines may value particular attributes relevant to their respective fields, Thunborg, Bron and Edström (2012) argued that lecturers in their Swedish study, from the disciplines of biomedicine, chemistry, engineering, physiotherapy and social work, that academic skills, abilities and attainment are the mutually desirable characteristics for university students. In other words, some student characteristics appear ideal across disciplines, even though there are attributes that may be particularly important for specific disciplines. The breadth of available degree programmes is a challenge for meaningful comparisons to be made that highlights disciplinary differences in expectations of students. As such, we feel that the broad disciplines of the natural sciences, applied sciences, social sciences and arts & humanities could be a meaningful variable to explore disciplinary variations in constructing the ideal student.

As with Weber's (2009) theory of ideal types, we do not consider the ideal student as a singular entity, but rather a spectrum of desirable student characteristics that reflects the

context of the constructors. This paper presents the ideal university student survey as we map out and group the student characteristics that are considered as ideal, particularly between staff and students. Using survey data from 1,043 respondents, we unveil the student characteristics that are considered as most and least important. Here, we contribute to the development of the concept of the ideal student as we aim to promote greater transparency and reflection on what is expected of students at university.

Developing the ideal university student survey

Funded by the British Academy, the ideal university student project aims to explore and map the different characteristics and dimensions of the ideal student. We want to build on previous work and explore a wider range of possible characteristics related to the ideal student (Wong & Chiu, 2020, 2021a).

The ideal university student survey is interested in the constructions of the ideal student from the perspectives of university staff and students from the broad disciplines of the natural sciences, applied sciences, social sciences and arts & humanities. Essentially, we sought a range of views and ideas about the possible characteristics and attributes expected of students in an ideal world. The survey was developed using empirical data gathered from focus groups with university students and staff across disciplines, as well as relevant existing literature. Following ethical approval from the lead author's university, 33 focus groups were conducted with 132 students and staff in the qualitative aspects of the larger study (see Wong & Chiu, 2019b, 2021b). In each focus group, we included an individual activity where participants were asked to brainstorm and write down their top five most and least important characteristics of the ideal student (see Killen, 1994). Participants were then asked to share and discuss their own list as individuals were probed to explain and clarify their meanings and definitions of different student characteristics. In total, 795 student characteristics were brainstormed, with 636 keywords or phrases attributed to the top five most important characteristics in an ideal student and a further 159 for the least important features. As the numbers indicate, most participants did not fully complete both elements of the activity as many struggled to populate their least five important characteristics in an ideal student within the allocated time. Nonetheless, with 795 student characteristics, especially on the most important characteristics, we gathered plentiful empirical data to begin the development of the ideal university student survey.

Based on our participants' description and discussion of these ideal student characteristics, we gradually refined, collated and grouped together similar ideas and meanings in an iterative process that involves the conversion of lower-level concepts to higher-level concepts through the 'ladder of abstraction' (Corbin & Strauss, 2014). In other words, each student characteristic was recoded where relevant under a broader theme that aims to encapsulate the similar intended meanings of the keywords and phrases that were brainstormed for the ideal student. Our survey development also took note of the well-developed literature around graduate attributes, especially from Australia, but also increasingly in the UK (Bath, Smith, Stein, & Swann, 2004; Barrie, 2007; Brigstock, 2009; De la Harpe & David, 2012; France et al., 2016; Jackson, 2016; Ipperciel & ElAtia, 2014; Normand & Anderson, 2017; Oliver, 2013; Su, 2014). These attributes are institutional objectives, as well as marketing strategies, which enlist the expected skills that graduates of these institutions are expected to develop over the course of their degree. In some respects, graduate attributes constitute the institution's own ideal student, as the vision of the

outcomes ideally expected of their students. As anticipated, there are various overlaps between the literature and the ideal student characteristics that were brainstormed by staff and students.

Through an iterative and reflective process of amalgamation and refinement, the breadth of student characteristics (i.e. from the literature and focus groups) was consolidated and eventually confined and funnelled down into 51 items to reflect the common features that may constitute the ideal student. We acknowledge that whilst some items may comprise multiple descriptors, some of these keywords were grouped together due to their synonymous intended meanings, especially when we considered how it was described and explained by participants in the focus groups. For example, the first item we constructed is the statement: '*Enthusiastic, passionate, engaged and/or motivated in learning'*. Arguably, each of the four adjectives can be an item on its own, but these were grouped as one item because of their closely related meanings and the unlikelihood that the item outcome will vary drastically if broken down into finer descriptions. As such, not every student characteristic mentioned in focus group activities or the literature can be included, with considerations of practicality and manageability, but we are confident that the ideal university student survey we developed does provide us with a sufficient spread of possible ideal student characteristics that can yield meaningful data to explore the different constructions of the ideal student.

As an iterative process, we also cross-referenced and remapped the 51 items of ideal student characteristics back to the 795 student characteristics as brainstormed in the focus groups, where 49 items were matched. In other words, we had two items ('G*ood digital and/or technology skills*' and '*Good leadership skills*') that were solely based on the literature, both of which are related to graduate attributes. All 51 items in the survey therefore have a well-established empirical or literature base. The draft survey was reviewed by several colleagues with expertise and experiences in survey design, as well as piloted with 20 students for ease of completion and comprehension. Minor changes to language and wording were made before the survey was finalised.

Demographic data were collected as part of the survey to enable interactional and regression analyses, such as participant role (e.g., student, staff), institutional affiliation (pre-92 and post-92 university[i]), the broad discipline of the respondent (natural science, applied science, social science and arts & humanities), as well as participant data such as their gender, ethnicity, parental education (for student only) and level of study (for student only). For each ideal student characteristic item, respondents were asked to provide ratings on a 5-point Likert scale: 'not important (1)', 'slightly important (2)', 'moderately important (3)', 'important (4)' and 'very important (5)', in relation to their views of an ideal undergraduate student. All questions are optional and completed online.

Data collection

Survey data collection was between June 2018 and January 2019. The online survey takes around 10 minutes to complete and the survey website was designed to be friendly across desktop and mobile devices. Participants gave online consent prior to their survey participation. A paper version of survey for staff and students was also created, although only a handful of copies were distributed and completed as most respondents were approached and communicated electronically. Paper completions were subsequently entered into the online version manually. Our target respondents were university students

and staff at UK universities, including foundation, undergraduate and postgraduate students, as well as teaching, research, support, professional and administrative staff. Only a handful of respondents fell outside of our target (e.g., not based in the UK), which were excluded from the analysis.

Our recruitment methods were email based, including the use of personal contacts, higher education staff interest group mailing lists and, our main approach, a purposeful email to UK university staff. Using publicly available department websites, we collected and sent over 2,500 personalised emails to staff (who are mostly tutors but also some administrators) from over 30 universities, which included pre-92 and post-92 institutions in all UK regions. We gathered the names and emails of around 20 staff from each of the four broad disciplines (natural sciences, applied sciences, social sciences, arts and humanities), where available, with around 80 emails for each university. A variety of departments was chosen within each university and we note that not all universities we approached had departments under all four broad disciplines. As examples, these include schools or departments of Agriculture, Art, Biomedical Sciences, Economics, Engineering, Education, Environmental Sciences, Mathematics, Modern Language, Physics, Psychology and Social sciences.

Using mail merge, our recipients were invited to take part and to forward the survey link to their respective students, such as a noticeboard posting on their internal virtual learning environments. The invitation to staff included a brief description of the project, its aims and a link to the survey, where further information can be accessed. Our emails and survey website also included an example lesson plan on the use of the survey to facilitate class discussions on expectations of university students. Entry to a prize draw was promoted to encourage survey submission. The ideal university student survey was completed by 1,043 participants, with at least 10 participants from over 20 UK universities. Table 1 provides a further breakdown:

Table 1: Participant background in ideal university student (n=1,043)

Role	Student (70%)	Staff (29%)	Other (1%)
University	Pre-92 (60%)	Post-92 (40%)	
Gender	Female (64%)	Male (35%)	Other (1%)
Ethnicity	White (68%)	'Non-White' (32%)	
Discipline	Natural sciences (27.4%)	Social sciences (34.5%)	Other (1.9%)
	Applied sciences (19.6%)	Arts & humanities (16.6%)	

Due to low numbers from several minority ethnic groups, the category 'Non-White' was created to collate all other ethnicities that were not White for the purpose of statistical analysis. For the same reason, we grouped the disciplines of natural and applied sciences together, and the arts & humanities with the social sciences.

Data analysis

Analyses began with conducting reliability and validity analyses using exploratory factor analysis (EFA) and Cronbach's alpha to determine internal consistency and unidimensionality of scales. The EFA[ii] (using principal axis factoring with oblimin rotation) revealed the following eight factors: *Diligence & Engagement*, *Organisation & Discipline*, *Reflection & Innovation*, *Positive & Confident outlook*, *Supportive of Others*, *Academic Skills*,

Employability Skills, and *Intelligence & Strategic approach*. The Cronbach's alphas ranged from .765 (Organisation & Discipline) to .890 (Employability Skills)[iii]. One item ('Working smarter, rather than working harder') did not load consistently on any of the eight factors and was dropped from analysis (and thus, the survey was analysed on 50 items). See Appendix for the survey items, factor loadings and Cronbach's alphas for each of the eight factors.

Next, all of the factors that emerged from the first set of analyses were used to form composite variables (by taking scores on the 5-point Likert scale items and averaging across items). These variables were then utilised to explore patterns in the responses, including by role (staff/student), discipline, as well as gender and ethnicity. More specifically, descriptive (e.g. means and rankings) and multivariate analyses (e.g. non-parametric versions of t tests and ANOVAs, as the data were not normally distributed) were used to gain an overview of the data for each composite variable. Following this, regression analyses were used to explore which variables (background variables of role, discipline, type of university, gender and ethnicity, as well other composite variables) were most closely related to each outcome. Finally, to delve into the key comparison between staff and students, a series of Mann-Whitney U tests were performed to examine differences within these groups.

These analyses were used to address two broad research questions:

- What are the most important characteristics in an ideal university student?
- How do these characteristics of the ideal student vary by university staff and student?

Dimensions of the ideal student

Our analysis of survey data revealed eight factors, or dimensions, of the ideal student. These are provisionally labelled as: *Diligence & Engagement*, *Organisation & Discipline*, *Reflection & Innovation*, *Positive & Confident outlook*, *Supportive of Others*, *Academic skills*, *Employability skills* and *Intelligence & Strategic approach*. Table 2 provides a short description, with further details below and the appendices. We acknowledge that this level of abstraction can reduce and collapse the individual meanings of each student characteristic in the survey, but it would be cumbersome and impractical to report and discuss each of the survey items separately, at least in this paper (see Wong & Chiu, 2021b). Instead, we focus on the eight dimensions of the ideal student and how different stakeholders, especially staff and students, rated these dimensions.

The eight dimensions

Table 2: Overview of the ideal university student dimensions

Dimensions	Brief description	Mean	SD
Diligence & Engagement	Strong work ethic and positive learning attitude	4.271	0.511
Organisation & Discipline	Being prepared, punctual and procedural	4.078	0.664
Reflection & Innovation	Thoughtful and proactive about decisions and ideas	4.058	0.595
Positive & Confident outlook	Being positive, happy and confident	3.921	0.949

Supportive of Others	Being collegial and helpful to others	3.894	0.789
Academic skills	Study skills typically rewarded by lecturers	3.873	0.673
Employability skills	Employable skills typically valued by employers	3.453	0.853
Intelligence & Strategic approach	Someone who is clever, focused and capable	2.825	0.937

The first and most highly rated dimension from the survey is what we have termed *Diligence & Engagement*, with a mean rating of 4.271. It is comprised of nine items that broadly capture one's learning attitude and work ethic, such as enthusiasm, dedication and effort. This dimension is by far the most important among staff and students alike (see also Table 3). For students, not only is it their top dimension, their rating for this dimension is also the highest of all dimensions between students and staff. In other words, both staff and students viewed being *Diligence & Engagement* as the most important factor in an ideal student.

The second dimension is *Organisation & Discipline*, which includes being organised, prepared, punctual and procedural/rule-following. It is the second overall highest dimension at 4.078, ranked third among staff (3.880) and second for students (4.165). The third dimension, also with an overall rating above 4, is *Reflection & Innovation* (4.058). It is ranked by staff in third (3.984) and students in fourth (4.091) place. This dimension considers the ability of students to be thoughtful about the choices and decisions they make, as well as their initiative to be proactive or creative about their ideas and thinking. We recognise that being reflective does not necessary entail being innovative, or vice versa, and so it is important to appreciate that these dimensions are tentatively developed and grouped statistically with the purpose of providing us with meaningful and manageable interpretations.

The fourth dimension of the ideal student is *Positive & Confident outlook*, which refers to being positive, happy and confident. This dimension is made of up just two items and focuses on student optimism and a heathy mind-set. With student mental health and wellbeing an increasing priority for higher education (OfS 2019; Universities UK 2015), our data suggest that our student participants value the importance of *Positive & Confident outlook*, which is ranked third (4.105) within the student sample. Interestingly, *Positive & Confident outlook* was ranked sixth by staff, with a mean of 3.515 and a statistically significant difference (see Table 3). In other words, being confident and optimistic does not seem to be as important for staff as for students in their constructions of the ideal student.

The fifth dimension is *Supportive of Others*, with an overall mean of 3.894. It is rated in fifth place by both staff (3.677) and students (3.990). This dimension considers the importance of being collegial and helpful to others, including teamwork, trustworthiness and honesty.

With an overall mean of 3.873 is the sixth dimension, *Academic skills*, which refers to the study skills that are typically valued and rewarded at university, such as critical thinking and academic skills in writing, statistics, presentation and research. It is ranked in fourth place by staff (3.769) and sixth place by students (3.915), although we note that the means in fourth, fifth and sixth place have marginal differences, especially for students. Furthermore, it may be lower ranked for students but their mean for this dimension is still higher for than the rating by staff.

The seventh dimension is *Employability skills*, whilst ranked by both staff (3.054) and students (3.621) in seventh place, students' outscored staff by over half a point. This

dimension refers to employable skills that are typically valued by employers, including communication, leadership and social skills, as well as work experiences and extracurricular activities. Most of the ideal student characteristics under *Employability skills* are primarily informed by literature on graduate attributes (Normand & Anderson, 2017), which tend to reflect the goals and aspirations of universities. However, such relative lack of importance among staff merits further investigation, especially the potential mismatch between staff and their institutions on the ideal student.

The eighth and final dimension is *Intelligence & Strategic approach*, with an overall mean of 2.825. This dimension refers to students who are academically smart, capable and high-achieving, as well as with plans for the future. Whilst ranked last by both staff (2.265) and students (3.064), the difference in means is the largest of any dimension, at over three-quarters of a point. In other words, being intelligent and strategic do not appear to be that important for staff and only moderately more important for students. However, although it is the lowest rated dimension, our students, especially, still see it as a relevant and important dimension of the ideal student, as reflected in the overall mean.

Table 3: Staff vs Student on dimensions of the ideal university student

Dimension	Staff mean (*SD*) [rank*]	Student mean (*SD*) [rank*]	*U*	Sig (2-tailed)	Effect size[1] (Cohen's *d*)
Diligence & Engagement	4.213 (.491) [1]	4.290 (.516) [1]	93518.0	.008	.17
Organisation & Discipline	3.880 (.637) [3]	4.165 (.653) [2]	78636.0	<.001**	.44
Reflection & Innovation	3.984 (.546) [2]	4.091 (.611) [4]	96058.5	.007	.17
Positive & Confident outlook	3.513 (.932) [6]	4.105 (.892) [3]	67116.0	<.001**	.64
Supportive of Others	3.677 (.729) [5]	3.990 (.791) [5]	79942.5	< .001**	.42
Academic skills	3.769 (.650) [4]	3.915 (.679) [6]	94499.5	.002**	.19
Employability skills	3.054 (.819) [7]	3.621 (.811) [7]	66954.5	<.001**	.62
Intelligence & Strategic approach	2.265 (.743) [8]	3.064 (.906) [8]	54238.0	<.001**	.86

* Rank included for information; ** Significant difference at Bonferroni adjusted alpha value (.006); 1 Effect sizes of .2 are generally considered small, .5, medium and above .8, large (Cohen, 1988).

Finally, regression analyses were used to explore relationships among the dimensions, as well as to gather insight into background variables that may also be related. Eight models were created, one for each dimension, and these are summarised in Table 4.

Table 4: Regression models for each of the eight dimensions

Model*		Coefficient (B)	SE	Beta (std)	Adjusted R^2
Diligence & Engagement	Intercept (constant)	1.642	.096	N/A	
	Discipline (Sciences)	-.046	.026	-.045	
	Academic skills	.171	.023	.228	
	Reflection & Innovation	.206	.025	.241	
	Organisation & Discipline	.279	.022	.361	
					.468
Organisation & Discipline	Intercept (constant)	.943	.136	N/A	
	Gender (male)	-.112	.034	-.081	

	Institution type (post-1992)	.116	.033	.086	
	Intelligence & Strategic approach	.114	.024	.161	
	Diligence & Engagement	.451	.035	.349	
	Supportive of Others	.105	.028	.125	
	Employability skills	.144	.029	.186	
					.482
Reflection & Innovation	Intercept (constant)	1.527	.088	N/A	
	Institution type (post 1992)	-.088	.029	-.072	
	Role (staff)	.169	.034	.128	
	Discipline (sciences)	-.046	.029	-.039	
	Intelligence & Strategic approach	.133	.021	.208	
	Supportive of Others	.255	.024	.336	
	Employability skills	.087	.026	.125	
	Academic skills	.219	.025	.247	
					.533
Positive & Confident outlook	Intercept (constant)	.874	.124	N/A	
	Role (staff)	-.147	.056	-.070	
	Discipline (sciences)	.172	.048	.090	
	Intelligence & Strategic approach	.132	.034	.130	
	Supportive of Others	.494	.039	.409	
	Employability skills	.208	.041	.187	
					.470
Supportive of Others	Intercept (constant)	.386	.113	N/A	
	Gender (male)	-.088	.034	-.053	
	Role (staff)	.071	.040	.041	
	Employability skills	.353	.026	.384	
	Reflection & Innovation	.340	.034	.259	
	Positive & Confident Outlook	.235	.021	.284	
					.605
Academic skills	Intercept (constant)	.423	.142	N/A	
	Role (staff)	.156	.040	.105	
	Discipline (sciences)	.137	.034	.102	
	Intelligence & Strategic approach	.131	.025	.181	
	Diligence & Engagement	.326	.037	.247	
	Employability skills	.213	.027	.269	
	Reflection & Innovation	.203	.036	.181	
					.495
Employability skills	Intercept (constant)	-.260	.123	N/A	
	Gender (male)	-.085	.035	-.048	
	Role (staff)	-.236	.041	-.126	
	Discipline (sciences)	-.100	.035	-.059	
	Intelligence & Strategic approach	.233	.025	.255	
	Supportive of Others	.399	.028	.369	
	Academic skills	.283	.031	.224	
	Reflection & Innovation	.131	.039	.092	
					.654
Intelligence & Strategic approach	Intercept (constant)	-.990	.147	N/A	
	Gender (being male)	.154	.042	.079	
	Ethnicity (non-white)	.124	.045	.061	
	Institution type (post-1992)	.139	.043	.073	
	Role (Staff)	-.460	.049	-.224	
	Supportive of Others	.107	.037	.090	
	Employability skills	.349	.037	.319	
	Academic skills	.237	.039	.171	
	Reflection & Innovation	.300	.047	.192	
					.568

* Note, only those variables that are statistically significant for a model are included in that model

In terms of salient relationships among dimensions, the regression analysis found that the dimension of *Diligence & Engagement* was strongly associated with *Organisation & Discipline* and *Reflection & Innovation* (first model in Table 4). We believe that these three dimensions can contribute and enrich the 'personal skillsets' that were qualitatively identified as key elements in an ideal student (Wong & Chiu, 2020).

Our regression analysis (fourth model in Table 4) found the dimension *Supportive of Others* to be closely associated with the dimension *Positive & Confident Outlook*. Considering the student characteristics within each dimension, it is not difficult to envisage that these two dimensions could be considered as part of students' sense of self, self-efficacy and self-identity.

Further regression analysis found a strong association between *Intelligence & Strategic approach* and *Employability skills*, which is reasonable given the ultimate emphasis of both dimensions is on tangible and quantifiable outcomes. Perhaps these two dimensions shed light into the more pragmatic aspects of the ideal student that considers the purpose and outcomes of higher education.

In addition, although background variables (e.g., gender, ethnicity, institution type, discipline) are not as closely associated with any given dimension as other dimensions, the analyses broadly align with the findings of Mann-Whitney U tests between students and staff (Table 3), reinforcing that role (students vs staff) would appear to play a key part in influencing individuals' perceptions of the ideal student. Consequently, we delve further into these groups in the following section.

Within sub-group comparisons

In the previous section, we described the eight dimensions of the ideal student. Table 3 summarised the differences between staff and students. Generally, we observe that students rate each dimension more importantly than staff (i.e. higher means) and with the majority of these differences being statistically significant. The largest mean differences are *Positive & Confident outlook*, *Employability skills* and *Intelligence & Strategic approach*, even though the latter two were both ranked in seventh and eighth by staff and students. If we interpret these dimensions by their respective rankings, the highest and lowest dimensions are the same. The biggest ranking order difference is *Positive & Confident outlook* (ranked 6th by staff and 3rd by students), followed by *Reflection & Innovation* (ranked 2nd by staff and 4th by students) and *Academic skills* (ranked 4th by staff and 6th by students). The dimension *Positive & Confident outlook* appears to differ the most between staff and students, either by means or by rankings, as well as having one of the bigger effect sizes of the staff-student comparisons (d = .64).

To appreciate the differences within staff and student respondents, we also analysed how constructions of the ideal student within each group vary by other categorical and demographic variables, such as their broad discipline, institution type, gender, ethnicity, parental education (student only) and year of study (student only). In these analyses, a significance level of .00625 was used, using the Bonferroni correction for multiple tests.

Further analysis with staff found no significant differences by gender and ethnicity, even though we caution that the number of staff who were *not* White was low (n=26, out of 302 members of staff). Under subject discipline, the four broad disciplines were grouped into two broader disciplines due to lower numbers, which can also be interpreted as the

divide between STEM (Science, Technology, Engineering and Mathematics) and non-STEM subjects. Here, staff from the natural and applied sciences (n=89) tend to rate various attributes higher than those from the social sciences and arts & humanities (n=196), with a statistically significant difference ($p < .006$, Bonferroni corrected) in only one dimension: *Intelligence & Strategic approach*[iv] (although this difference approached significance in the *Supportive of others* dimension as well). On the *Intelligence* dimension STEM staff (M = 2.498, SD = .805) rated attributes more highly than non-STEM staff (M = 2.167, SD = .706), U = 6636.5, p = .001, with an effect size of $d = .37$. Similarly, staff working in post-92 universities (n=163) typically rate attributes more highly across the ideal student characteristics than staff working in pre-92 institutions (n=139), but with only one statistically significant dimension: *Employability skills*, with post-92 staff rating this more highly (M = 3.181, SD = .786) than staff from pre-92 institutions (M = 2.907, SD = .837), U = 9009.0, p = .006, representing an effect size of $d = .32$.

Within our student cohort, we found statistically significant differences by gender and ethnicity, with females (n=469) rating higher than males (n=230) in four dimensions and ethnic minorities (n=292) rating higher than the White British (n=419) in seven dimensions. There was no consistent direction of difference between students from the natural and applied sciences (n=399) and students in the social sciences and arts & humanities (n=321). However, students in social sciences and arts & humanities rated attributes in the *Organisation & Discipline* dimension more highly (M = 4.251, SD = .640) than those in the natural and applied sciences (M = 4.095, SD = .659), $U = 53706.5$, $p = .001$, representing an effect size of $d = .26$. As with staff, students at post-92 universities also rated the dimensions of the ideal student with higher importance than their counterparts in pre-92 institutions, with three statistically significant dimensions: *Diligence & Engagement*, *Organisation & Discipline*, and *Intelligence & Strategic approach.*

For students, we were also able to analyse variations by parental education and level of study. We used binary options for ease of comparison. We found no clear patterns between students with at least one parent who attended university (n=414) and students with parents without a degree (n=288), and no differences were statistically significant. For students' level of study, we were particularly interested in the views of Year 1 students (n=337), as the newcomers into the university environment. We found that Year 1 students rated higher for all eight dimensions of the ideal student when compared to non-Year 1 students (n=376). This difference was significant across all but three dimensions: *Reflection & Innovation*, *Academic Skills* and *Positive & Confident outlook*.

In this section, we have provided a descriptive analysis of the survey and unveiled eight dimensions of the ideal student (Table 2) and their variations by staff and student (Table 3). Next, we discuss the potential meanings and implications for further development of the concept of the ideal student.

Discussion and conclusion

This paper presented the development and findings of the ideal university student survey, which has provided us with new insight and broader understanding of the characteristics of the ideal student in contemporary higher education. Whilst still exploratory in nature, our survey has identified eight dimensions of the ideal student and how these are similar or different according to university staff and students. Below, we discuss the possible meanings and implications of our outcomes.

From the survey, we provisionally labelled the dimensions of the ideal student in higher education as *Diligence & Engagement*, *Organisation & Discipline*, *Reflection & Innovation*, *Positive & Confident outlook*, *Supportive of Others*, *Academic skills*, *Employability skills* and *Intelligence & Strategic approach*. We argue these dimensions can extend and enrich existing work, which has qualitatively identified particular academic and personal skills that are desirable of university students (Thunborg, Bron & Edström, 2012; Ulriksen, 2009). Whilst our analysis also identified *Academic skills* as an important dimension, we did not find one specific dimension to account for 'personal skills' (Wong & Chiu, 2020) but rather we appear to have further refined its possible constituents. Of the eight dimensions, at least three – *Diligence & Engagement, Organisation & Discipline* and *Reflection & Innovation* – can be interpreted as a sub-element of personal skills, and we might even suggest that the dimensions of *Supportive of Others* and *Positive & Confident outlook* be considered as part of an expanded interpretation of this macro-dimension of personal skillset. Either way, the ideal university student survey has provided us with quantitative data that enabled a more nuanced understanding of the different dimensions in an ideal student. Our analyses focused on the different ways in which staff and students rated each ideal student characteristic and whilst students as a cohort ranked higher than staff across all items, there were notable differences in mean for three of the eight dimensions, namely *Positive & Confident outlook*, *Employability skills* and *Intelligence & Strategic approach*.

The dimension *Positive & Confident outlook* was ranked third by students (with a mean of 4.105) but only sixth by staff (3.515), with over half a point difference in mean. The higher rating and ranking by students illustrate their greater appreciation of the importance of personal welfare in an ideal student, compared to their staff counterparts. Students may particularly value contentment in realisation of the awaiting pressures *after* their higher education journey, such as financial debt and employment (Esson & Ertl, 2016). The importance of student happiness and confidence is also crucial in efforts to promote better student mental health and wellbeing (HEFCE, 2015; Laidlaw, McLellan, & Ozakinci 2016), which is a current policy concern in UK higher education (OfS 2019), especially as demands for university mental health services and counselling have reportedly increased in recent years (The Guardian, 2016). The discrepancy between staff and students on the dimension *Positive & Confident outlook* highlights a potential difference in their respective perceptions and priorities around student welfare. In their Higher Education Academy report, Houghton and Anderson (2017) recommended the development of student mental wellbeing to be embedded as a part of the mainstream curriculum to improve student learning, success and satisfaction, rather than as a separate responsibility for a dedicated, usually centralised, support team. If we wish to promote staff's perceptions on the importance of students to be *Positive & Confident outlook*, then it might be beneficial for staff professional development and trainings to have a focus on the possible roles of staff to support the welfare of their students.

Whilst the dimension *Employability skills* is ranked seventh both by staff (3.054) and by students (3.621), their difference in mean is statistically significant and over half a point. Here, students are more likely to value the importance of employable skills than staff in the ideal student. We suspect the relative lower ratings by staff in this dimension may reflect their assumed roles and purposes, which are likely to be specialist educators in their own teaching and research discipline. In other words, the roles and responsibilities of tutors – the overwhelming majority of our staff respondents – are not traditionally associated with

careers advice and preparation, which would typically be the responsibilities of a separate career services (Bradley, Quigley, & Bailey, 2019). In a study on student readiness for graduate employment, Jorre and Oliver (2018) called for a greater shift of degree programmes towards 'assessment for employability', which aligns with the concept and objective of 'authentic assessments' (Sotiriadou et al., 2019) where assignments are based on *real-life* problems and situations. Our findings would support this call if we wish to bridge the gap in expectations between staff and students on the importance of *Employability skills* for university students. Furthermore, as universities are increasingly measured, advertised and ranked by the employment statistics of their graduates, it is important for institutions to ensure that their priorities in developing students' *Employability skills* are sufficiently aligned with, and shared by, their staff. It is therefore beneficial to consider how staff can help students to appreciate the transferable skills gained from their degree course as these skills are not always recognised by students (Times Higher Education, 2019). Further study is merited on the potential and actual challenges for tutors to enact institutional policy on student employability into teaching practices.

So far, the discussions seem to emphasise an expanded role for teaching staff to include student welfare and work-related skills into their curriculum and teaching. However, there are caveats to these recommendations. We need to acknowledge that being a university student is more than just academic learning via teaching staff. Students are also supported by a variety of professional and support staff and services at university (e.g., library, student union, security), which can shape how students conceive the ideal student. As such, the relatively lower ratings from our teaching staff on the dimension of *Employability skills*, for instance, should not be an immediate cause for concern, as we ought to be mindful of the roles and influences of the wider university structure and support services.

The dimension *Intelligence & Strategic approach* is ranked bottom and lowest for both staff (2.265) and students (3.064), despite having the largest difference in mean that is over three-quarters of a point. Staff are less likely than students to consider high achievement to be an important element in the ideal student. The relative insignificance of students' grade or outcome was previously reported among social science lecturers (Wong & Chiu, 2020) and our survey reinforces this shared view by staff, as illustrated by the large gap in means between the seventh (*Employability skills*, 3.054) and eighth dimensions (*Intelligence & Strategic approach*, 2.265) within our staff respondents (see Table 3). Whilst it is also the lowest ranked dimension for students and over half a point lower than their seventh dimension (*Employability skills*, 3.621), the relative gap between staff and students warrants further investigation, especially the delicate balance between the importance of the learning *process* and the learning *outcome*, with the latter soaked by pragmatic concerns and pressures to achieve a 'good' degree that have implications for future employment or further studies.

We also investigated variations within the staff and student cohorts, with statistically significant differences by discipline (staff), institution type (staff and student), gender (student), ethnicity (gender) and level of study (student). STEM staff rated higher than non-STEM staff in three dimensions (*Supportive of Others, Positive & Confident outlook* and *Intelligence & Strategic approach)* and the initial surprise may be *Supportive of Others*, which were similarly rated by their student counterparts. Given the attributes of teamwork and sociability are often the emblems of the social sciences and arts & humanities, the ratings for *Supportive of Others* by STEM staff highlight the importance of collegiality in an

ideal STEM undergraduate – a quality which might not always be promoted to young people by wider media and societal discourses (Tan, Jocz, & Zhai, 2017). Both staff and students from post-92 universities rated *Employability skills* more importantly than their pre-92 counterparts, which might reflect the greater emphasis of post-92 universities on employability. For example, the NUS (2008) reported that post-92 students are more likely to be looking for full-time employment than their pre-92 counterparts, who are more inclined to consider further study. Another possible reason for the emphasis of post-92 staff and students on *Employability skills* is a recognition of the lower symbolic capital afforded by the status of their university degrees (when compared to pre-92 or 'elite' universities), which means more attention is needed to develop *Employability skills* in preparation for employment (Morley & Aynsley, 2007).

Within the student population, females and minority ethnic students tend to rate the ideal student dimensions as more important than their male and White British counterparts. We speculate wider gender, racial and ethnic inequalities and discourses may contribute to their feelings of 'never good enough', or the need to work harder for the same recognition or reward. Our first-year students rated higher on all eight dimensions of the ideal student than non-Year 1 students (n=376), which means that perceptions of what is ideal in a student seem to change (and seemingly less important for each dimension) as students familiarise and establish their university student identity and status. It is therefore important for staff and the university to recognise and appreciate this shift, and perhaps worthwhile for expectations of students at each level of university study to be regularly discussed and negotiated to minimalise potential mismatches throughout the degree journey.

The aim of this paper was to present the eight dimensions of the ideal student, which further advanced our conceptualisation of this concept. We discussed the development of the ideal university student survey and provided a foundation for future research and practice to better understand the desirable and valuable characteristics in university students. Whilst the eight dimensions are necessarily tentative, our survey has offered a statistical and nuanced interpretation of the ideal student, beyond the academic and personal skillsets that were previously identified.

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Appendix

Table 5: Dimensions and items of the ideal student survey with factor loadings and Cronbach's alphas

Composite Variables	Item components	Factor loadings	Cronbach's Alpha (for variable)
Diligence & Engagement	1 Enthusiastic, passionate, engaged and/or motivated in learning	0.424	0.855
	2 Dedicated, focused and/or determined in learning	0.681	
	3 Disciplined, diligent and/or respectful in learning	0.696	
	4 Responsible and/or professional in learning	0.651	
	5 Good attitude, willingness and/or behaviour in learning	0.633	
	6 Good preparation and/or readiness in learning	0.668	
	7 Hard working and/or studious in learning	0.589	
	9 Do more than required and/or go the extra mile in learning	0.437	
	10 Always trying their best in learning	0.429	
Organisation & Discipline	11 Good attendance and/or punctuality	0.370	0.765
	18 Good organisational or time-management skills	0.356	
	41 Seek support when needed	0.519	
	42 On-time submission of assignments	0.601	
	46 Follow university or teaching instructions, rules or procedures	0.537	
Reflection & Innovation	8 Curious, inquisitive and/or open-minded about learning	0.432	0.785
	28 Being independent or self-directed	0.218	
	31 Being reflective or self-aware	0.393	
	36 Being proactive and/or taking initiatives	0.186	
	37 Being creative, innovative and/or divergent in thinking	0.373	
	44 Acceptance of own weakness or room for improvement	0.396	
	48 Challenge instructions or existing knowledge/practices	0.527	
Positive & Confident outlook	26 Being positive or happy	0.492	0.793
	27 Being confident	0.548	
Supportive of Others	29 Being friendly or approachable	0.544	0.861
	32 Being supportive of others	0.692	
	34 Being a good team player and/or working well with others	0.429	
	35 Being a trustworthy individual	0.724	
	38 Contribute to discussions and/or learning of others	0.302	
	39 An honest, moral or ethical person	0.675	

Academic skills	12 Good critical thinking, analytical and/or problem-solving skills	0.498	0.822
	13 Good numeric, mathematical and/or statistical skills	0.327	
	14 Good reading and/or writing skills	0.681	
	15 Good presentation, speaking and/or communication skills	0.622	
	16 Good digital and/or technology skills	0.523	
	17 Good research and/or inquiry skills	0.627	
Employability skills	19 Good job searching or job application writing skills	0.500	0.890
	20 Good interpersonal and/or communication skills	0.490	
	21 Good leadership skills	0.601	
	22 Good social skills and/or with wide social networks	0.669	
	23 Good cross-cultural awareness and/or appreciation of global diversity	0.469	
	24 Good balance between academic or social activities	0.534	
	45 Participation in extracurricular activities (societies or clubs)	0.412	
	49 Participate in work experience, placement or volunteering during university	0.338	
Intelligence & Strategic approach	25 Being a high achiever and/or has top grades	0.614	0.861
	30 Being modest, low-profile or quiet	0.558	
	33 Being intelligent, smart or clever	0.614	
	40 Prior knowledge or experience in the discipline	0.510	
	43 Someone with a strong belief in themselves and/or single-minded	0.518	
	47 Has plans or thoughts on post-degree pathways	0.541	
	50 Presentable or professional appearance (well-dressed, 'smart')	0.473	

[i] Most post-1992 UK universities have a historical orientation towards teaching and training, rather than research, whilst pre-1992 UK universities are mostly rooted in academic research.

[ii] For the EFA, the measurements of sampling adequacy were fine (e.g. KMO was .958, which is 'superb'), and the percentage of non-redundant residuals with absolute values greater than .05 was 3.0% (it should be less than 50%). The determinant was 2.46E−012, which is sufficiently large so that multicolliniarity should not be an issue.

[iii] Generally, Cronbach's alphas above .7 are considered acceptable and above .8 are good (Field, 2017).

[iv] A small number of staff (n=18) did not identify with the four broad disciplines and was therefore excluded in this particular analysis.