An investigation into the extent to which a transnational university partnership develops students in the manner predicted by the contributing institutions' graduate attributes.

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Abstract

The aim of this research is to investigate student development in the context of a transnational higher education partnership to deliver a foundation program between a Russell group university in the UK and a recently established university in Kazakhstan. It is argued that there is a crisis in the higher education sector internationally whereby the value of a degree is decreasing while the cost of obtaining a degree is increasing and that communication by universities of the purpose and value of a degree is a contributing factor to this crisis. It is further argued that the context of this research is of interest given the strategic importance of Kazakhstan on the New Silk Road and the continuing expansion of the internationalisation of higher education.

This research uses mixed methods and is divided into three discrete but complementary studies:

Study 1: An investigation into the development of graduate attributes, capabilities and their predictors. This study is quantitative and longitudinal in nature and uses a survey instrument administered at two points, the beginning and end of the academic year.

Study 2: An investigation into the perceptions of student development from the perspective of teaching and administrative staff working on the foundation program. This study is qualitative in nature and uses in depth interviews.

Study 3: An investigation into student experiences and perceptions of their own development of graduate attributes, capabilities and their predictors. This study is qualitative in nature and uses group interviews with student participants of study 1, to both confirm and explore the findings from the previous two studies.

The results indicate that participants in the overall study, both students and staff, do not have a fixed conception of the institution of the university. However, there was consensus between participants in the three studies over certain qualities that individuals develop whilst at university, which include critical thinking, openness and maturity.

Changes in capability and graduate attributes, as measured by the survey instrument in this study, were correlated. An unexpected finding was that the only significant changes in capability were decreases in those capabilities connected with stress and affiliation. Exploration of this finding in the third study revealed that the nature of the foundation year itself, in that it is a pass or fail hurdle for entry to the university, may be responsible for the decreases in capabilities. Participants in study 1 also registered a significant increase in the personality trait of conscientiousness. This trait aligns with graduate attributes associated with organisational skills and autonomy.

Analysis of the data set revealed that intrinsic motivation (such as a desire to study as an end in itself) and stress are important predictors of the development of graduate attributes. However, students entering the university are largely motivated by extrinsic factors (predominantly connected to future employment) and over the course of the foundation year, levels of intrinsic motivation decrease and stress increase.

There are two principal conclusions arising from this study. Firstly, students do develop in the manner perceived by students and staff. This is in line with the intrinsic notion of the benefits of the university as described in general by graduate attributes. Secondly, how students develop can be predicted by the analysis of variables including intrinsic motivation and stress.

It may be the case that the extrinsic motivation of students observed in this research is a product, at least in part, of the direction universities are taking and the crisis in HE described earlier. The measurement of student development should be an important step not only in the mitigation of this crisis through allowing for the promotion of the intrinsic value of HE, but also in predicting where students may encounter obstacles to their development.

Foreword

Having worked in higher education (HE) in four different countries (the UK, Vietnam, Turkey and Kazakhstan) for more than fifteen years, I have had a reasonable exposure to contemporary developments within the sector. I have seen and been involved in the teaching of increasing numbers of international students. I have experienced positive manifestations of internationalisation and also instances where there have been some challenges. In three years spent teaching at an international branch campus in Vietnam, I observed the popularity of that institution within the country, but was also aware of the commonly held perception that the graduates from that institution were not equipped with the same capabilities as graduates from the parent institution. I also observed that despite these opinions being widely held, there seemed to be no simple way to guarantee parity of provision between the institutions.

Initially this research had intended to use a survey instrument to compare student development between the branch campus of the university in Vietnam and the home campus in Melbourne. Unfortunately, despite previous assurances that this project would have access to the institution's student body, when the formal request was made, the university refused to allow the project to take place.

Since then I have been working at a new university in Kazakhstan which became the location of this research. This required a complete reformulation of the project. The university at the centre of this study operates on a unique model of transnational HE cooperation. Each school of the university has a different partner university. The foundation year, which is the year that this research focuses on, was at the time of this study partnered with a UK Russell group university. Working here, I have observed talented and successful yet uncritical scholarship students on entry to the university, develop into critical and open-minded undergraduates. This development is one of the principle functions of higher education. However, there is no measurement of development of this sort despite it typically appearing in lists of graduate attributes.

It seems that the issues I observed in Vietnam and the development I have observed in Kazakhstan share the same root problem, which is a lack of proper measurement of student development. This problem is I feel, a symptom of universities failing to properly communicate the benefits they offer to individuals and society. Subsequently, this is the issue at the centre of this research. In an attempt to prevent identification, the names of the institutions involved in this research have been changed.

I would like to thank my supervisors David Murphy and John Morgan, as well as friends and family for their support and understanding over the years.

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1: Introduction

The context of the project

Higher education (HE) research involves the investigation of topics ranging from academic integrity to the design of learning spaces. This research is centred on the measurement of student development, specifically the development of skills and attitudes of the order described by universities in lists of graduate attributes. Subsequently, the focus will not be on academic development as evidenced by content knowledge or the assessment of content knowledge.

Furthermore, the situation of research into HE can range from foundation courses to PhD study. This study is focusing on student development during a foundation year, although it will be argued in the discussion that the longitudinal nature of the study should be extended to include undergraduate study. The geographical location of the study is within a transnational partnership between a new university aimed at becoming a regional educational hub located in Kazakhstan and a leading Russell Group University in the UK.

The research problem

The problem at the heart of this research is that universities do not consistently measure graduate attributes. While there is evidence in the literature that the sorts of attributes typically listed as graduate attributes are indeed developed during the course of an undergraduate degree (although the majority of these studies have been conducted in western universities), a consistent approach to this measurement is lacking.

In this introductory chapter, it will be argued that the ability to demonstrate student development is important because of the current crisis facing higher education, a crisis described in some detail in the 2013 Barber report.

> The fundamental question…is whether a university education is a good preparation for working life and citizenship in the 21st century or, more precisely, whether it will

> continue to be seen as good value, given the remorseless rise in the cost of a university education over recent decades (Barber, Donnelly, Rizvi, & Puttnam, 2013).

As this quotation from the report suggests, higher education internationally faces a range of challenges in the coming years connected with the perceived value of a degree. However, it will be argued that there are ambiguities connected to what the perceived value of a degree actually is; that there are extrinsic values such as job opportunities as well as intrinsic values such as personal development. Furthermore, it will be argued that the crisis highlighted by the Barber report is the result of trends in HE of internationalisation, massification and commercialisation, which have in turn resulted in the promotion of the extrinsic value of a degree as a means to an end rather than an end in itself. This in turn leads to the overall argument of this research, which is that a measurement of student development of graduate attributes will contribute to the ability of institutions to demonstrate the intrinsic rather than extrinsic value of a degree and thus, to a certain extent at least, mitigate the impending crisis in HE.

The Barber Report

The Barber Report, entitled somewhat ominously "An avalanche is coming," concludes that there is a crisis in education whereby the value of a degree is being called into question which will lead to a situation where unless change is implemented, "an avalanche of change will sweep the system away" (Barber et al., 2013, p. 5).

The report lists six conditions that are leading to this crisis. These are:

- The global economy is changing
- The global economy is suffering
- The cost of higher education is rising above that of inflation
- The value of a degree is failing
- Content is ubiquitous
- Competition is increasing

(Barber et al., 2013).

The report argues that the global economy is changing. Technology and globalisation are causing a reconceptualization of traditional employment roles. The content value of a degree is less of a selling point as knowledge is expanding at such a rapid rate and how people access knowledge has changed. It is no longer the case that information comes to us exclusively from experts in lectures or in books. Instead, the answer to most enquiries can be accessed via a quick online search. So instead of repositories of knowledge, what the global economy requires, the report argues, is "well-educated, imaginative, collaborative, confident people who take personal responsibility and will go the extra mile" (Barber et al., 2013, p. 10).

An additional change to the global economy is the redistribution of wealth to an increasingly narrower elite of wealthy individuals. In 1990 the top 10% of the population across the OECD was approximately seven times that of the poorest 10%. By 2015 that ratio had increased to ten times (OECD, 2015). Education is seen internationally as a means to the end of improving standards of living, and graduates typically do earn more than non-graduates, with certain subjects such as medicine and economics earning considerably more than other subjects studied (Britton, Shephard, Vignoles, & Dearden, 2016). As more and more people in developing countries achieve higher standards of education, so those without higher qualifications in developed countries face greater competition for work, as is the case in Spain where youth unemployment hit 50% in 2012 (Barber et al., 2013).

The report concludes that there will likely evolve different types of university (the report lists five but observes that this is speculation) and that in the future institutions need to focus on the value they offer.

> In the new world the learner will be in the driver's seat, with a keen eye trained on value. For institutions, deciding to embrace this new world may turn out to be the only way to avoid the avalanche that is coming (Barber et al., 2013, p. 67).

It seems reasonable to conclude then, that the value of a degree is something which ought to be established in order for stakeholders to be able to make informed decisions based on such value.

Massification, globalisation and competition for jobs

The twin factors of massification (a term coined by Altbach (2009) to describe the increasing numbers of people attending university) and globalisation (the movement of students and institutions across borders) have encouraged a focus on the extrinsic value of a degree. In general, a conception which focuses predominantly on the economic value of universities may have particularly damaging potential. As Collini points out, "a society does not educate the next generation in order for them to contribute to its economy. It educates them in order that they should extend and deepen their understanding of themselves and the world" (Collini, 2012, p. 88). Although this might sound somewhat idealistic, it is difficult to escape the conclusion that a focus on economic benefits causes people to consider the value of their purchases as consumers. Despite the negatives associated with this, the trend has been noted by Altbach (2015), who describes what he sees as a shift from the idea of the university as public good to the university as private good.

Students then are increasingly viewed as consumers of education. As Slaughter and Rhodes point out, institutions increasingly "see students as revenue sources and products" (Slaughter & Rhoades, 2000, p. 74). The UKES survey 2015 talks about the customer experience of HE stating, "Current signs suggest that the NSS will change in the future to encompass more questions about students' learning experiences, but it will always focus on quality assurance: ensuring that students receive the basic elements of a good customer experience" (Buckley, 2015, p. 5).

For students, the opportunities that a HE qualification provides can be substantial. In the west, an undergraduate degree is a prerequisite for many entry level jobs and in developing economies, a degree, especially from a foreign institution, may constitute a significant boost to employment prospects and of course earnings. However, there are substantial problems facing those choosing to study at university. As noted above, a degree is no longer a guarantee of employment. This state of affairs appears to have been acknowledged by the UK Minister for

Universities and Science Jo Johnson who, writing recently in the Telegraph newspaper, observed the following.

> A degree offers far more than just increased income though. The pursuit of knowledge is the mark of a civilised society. Higher education offers a pathway to countless fulfilling jobs that make our society better, from nursing to industrial design, and from software engineering to teaching. And a good university education broadens horizons, develops life skills beyond study and offers friendships and connections that can last a lifetime (Johnson, 2017).

Johnson also commented that there was "a duty to promote value for money" (2017). In fact, there is a perception among many students that the one certainty of obtaining a degree is that there will be a lifetime of repayments to be committed to. What would appear to be a lack of value for money. A student group in North America published a manifesto in 2009 highlighting this problem.

> We work and we borrow in order to work and to borrow. And the jobs we work toward are the jobs we already have. Close to three quarters of students work while in school, many full-time; for most, the level of employment we obtain while students is the same that awaits after graduation. Meanwhile, what we acquire isn't education; it's debt. We work to make money we have already spent, and our future labor has already been sold on the worst market around. Average student loan debt rose 20 percent in the first five years of the twenty-first century—80-100 percent for students of color. Student loan volume—a figure inversely proportional to state funding for education—rose by nearly 800 percent from 1977 to 2003. What our borrowed tuition buys is the privilege of making monthly payments for the rest of our lives. What we learn is the choreography of credit: you can't walk to class without being offered another piece of plastic charging 20 percent interest. Yesterday's finance majors buy their summer homes with the bleak futures of today's humanities majors (Research and Destroy, 2009).

To a certain extent, this picture is borne out in the UK where statistics indicate that while 62% of graduates entered employment in 2010, the highest proportion of the jobs they went into (13.8%) were in the retail sector (Redman & Penn, 2011). This is further supported by observations from Brown and Hesketh (as cited in Waters, 2009) that there is little evidence supporting the commonly held belief that there is increasing demand for highly skilled graduates and that subsequently there is an oversupply of graduates in certain fields. As Tsiligiris (2012) notes, "Sadly, not many institutions can guarantee students that they will be able to find a job any time soon after graduation." Finally, it seems that graduates often now work in positions that were traditionally not occupied by graduates. This, as Tomlinson notes, is "leading to a potential mismatch between their level of qualification and its market utility" (Tomlinson, 2008, p. 50).

As noted above, a consequence of the massification of HE is that employment opportunities for graduates have of course declined, as competition for jobs from candidates with similar qualifications has increased. The literature suggests that the competition for graduate jobs is international. The effective globalisation of the graduate job market ignores national borders and it is more cost effective to employ graduates from China or India than it is those from Western Europe or the USA, as the former typically have lower wage expectations than the latter.

> The competition for jobs has shifted from one largely restricted within clearly defined national boundaries to a global auction open to competition across borders. . . . But the global auction for jobs increasingly works in reverse to an auction where the highest bidder wins (Brown et Al 2011 pp. 6–7 as cited in David, 2011, p. 152).

However, this development, whereby an undergraduate degree does not guarantee a job, is present in developing as well as developed states. Mok and Wu observe that in China a degree doesn't necessarily facilitate social mobility and that the "conventional wisdom believing that education is generally viewed as amongst the most important determinants of labour market

success is being challenged" (Mok & Wu, 2015, p. 79). Furthermore, states throughout the Asia region are experiencing a crisis of graduate unemployment.

> In South Korea, there are 3 million economically inactive graduates, while some 38% of Japanese graduates were unemployed 8 months after graduation in 2009, and the graduate employment has not yet improved. Similarly, one in three young graduates is unemployed in India, while in China, although accurate data are hard to come by, it appears that in 2013 alone, only 38% of graduates were issued contracts with contracts being an indicator of quality jobs (Lauder 2014 as cited in Mok & Wu, 2015, p. 82).

Another statistic worth noting is that in terms of employment, the choice of degree seems to be largely irrelevant (outside certain vocational subjects such as medicine). Approximately the same number of UK BSCs and BAs find employment (HESA, 2012). According to Little and Arthur (2010) more than a third of UK graduates reported that their first job upon graduation bore no relation to the degree they had studied. This observation is backed up by the National centre for universities and businesses (NCUB) which observes in a 2017 report that, "the share of graduates who found employment in innovative sectors (as defined by the UK innovation survey[3]), is 39.1%, 1.2% lower than last year, and driving the five-year average down" (Meehan, 2017, p. 6).

At the same time there appears to be a process of credential inflation, whereby ever more advanced qualifications are sought by students in order to obtain employment in jobs which actually bear little relevance to the subjects studied. According to Waters (2009) in Hong Kong, a bachelor's degree, even from an overseas institution is no longer a guarantee of a job.

In Hong Kong, postgraduate degrees (especially MBAs) are seen as essential supplements to an overseas undergraduate experience (Waters, 2009). There is as a result a question as to how these qualifications actually make a graduate more employable other than the fact that they are higher qualifications. One might well ask how an MA in English literature would prepare someone for work in a bank to any greater extent than a BA in the same subject would. Were an explanation of the difference to be made, the justification for the higher

qualification may well lie in the area of skills. Oxford Brookes do in fact make a distinction between the attributes of undergraduate and postgraduate students (Haigh & Clifford, 2010).

However, there can also be the perception among industry that the more qualified a student is, the less appropriate they are for business, as the CIHE report points out.

> There were also a trickle of negative views expressed about PhDs spending a long time in purely academic study. The longer a student stays in study, going on to PhD or post doc, and delves in depth in a specific subject, the less they were seen to have the breadth and flexibility needed in a fast changing business environment and so were seen as less useful to some organisations (though their specific area of research could be extremely useful) (Connor & Brown, 2009, p. 19).

So, it seems that the incentive to study for students is a fluid and complex one. In the UK at least, there is a confusing message from industry where a 2:1 is the lowest degree many employers will consider a graduate for employment with, yet many graduates see no relationship between their studies and their job and even feel overqualified for the post-graduation work they do (Little & Arthur, 2010). Tomlinson (2008) argues that despite the expansion of higher education, the differences between elite and mass education have been maintained and that this is in part the fault of the influence of industry. "The evidence clearly shows that employers play an active role in reinforcing patterns of labour market inequality amongst different graduates" (Harvey, Moon and Geall 1997; Brown and Hesketh 2004 as cited in Tomlinson, 2008, p. 60).

At the other end of the scale, the situation regarding graduates from the world's most elite universities is not without its problems. As Deresiewicz notes, the USA's Ivy League has created "an education system that produces highly intelligent, accomplished twenty-two-year-olds who have no idea what they want to do with their lives: no sense of purpose and, what is worse, no understanding of how to go about finding one" (Deresiewicz, 2014, p. 19).

Despite the advantages a degree may bestow, it seems that if current trends continue, the combination of higher fees in countries like the UK and lack of a guarantee of employment after

graduation, may well lead to fewer students going to university. It is likely for example that these factors led to the 10% drop in UK student applications in 2012. This has been the case at the University of Southampton among others (Vasagar, 2012). Subsequently focusing on the economic value of a degree, or the notion of the degree as a means to the end of employment, may not be so beneficial a strategy for universities to employ.

How universities are funded

In addition to the impact of massification and globalisation, changes in the way universities are funded have also led to the conceptualisation of the value of a degree being a means to an end. Universities in many western countries have suffered from reductions in central government funding. This is certainly the case in the UK where the previous Labour government's pledge to increase student numbers has resulted in a funding shortfall that has been magnified in recent years by the global financial downturn and subsequent austerity measures. Funding sources have changed and institutions can no longer rely on support from national governments. Instead fees are being raised which puts pressure on institutions to respond to consumer-like expectations of HE which may compete with the traditional operation of the university. As Collini notes, "universities are increasingly expected to operate within a narrowly financial or commercial notion of 'efficiency' which is equated with increased output at reduced cost" (Collini, 2012, p. 130).

This change in funding models has been a cause in the growth of internationalisation. For example, one result of this is that international students (who typically pay up to three times as much for the same course) have been recruited to fill the funding gap. As Shepard (2009) notes, at Imperial College London, international students pay fees of $32,500 a year. Over the 175 UK HE institutions, there has been an increase in fees of 3.7% between 2008 and 2009, with international student fees contributing 8% (around 4bn pounds sterling) of the total income of UK students (Shepherd, 2009). As Luxon and Peelo note, "fees of non-EU students are at present crucial for the fiscal well-being of British universities, and are likely to continue to be so for

some time" (Luxon & Peelo, 2009, p. 52). In Australia, there is a similar situation with some commentators such as Dobson and Holtta (2001) asserting that Australian higher education has in actual fact become a significant export commodity. The western model of HE seems to be what the rest of the world wants. It is predicted that by 2020, 4 out of 10 graduates will be from China or India (Jobbins, 2012). However, as Botas (2012) points out, international students are often seen as cash cows in the UK at least, for institutions running up against the barriers of reduced government funding.

In this climate, where the importance of international students is increasing, there are problems associated with the growth of these student numbers. Despite claims that international students perform as well as or better than home students (Botas, 2012) there is substantial evidence that international students perform worse (Benzie, 2010; Lehtonen & Karjalainen, 2009; Maslen, 2008) and even that they reduce the overall achievement of the classes they participate in (Foster, 2012). Further issues with regard to international students have been illustrated by the case of London Metropolitan University in 2012 which had its licence to teach international students revoked at least in part because of lack of attendance and inability of the international students there. This is likely to result in a very negative impact for both the students involved and the institution itself. Whatever the case, international students are clearly very important and there are question marks over their performance.

Despite the importance of internationalisation to the HE sector, the current international political climate is one that seems to be favouring nationalism over internationalism. Brexit in the UK, the election of Donald Trump as president of the USA and other nationalistic trends such as in Turkey and Hungary, point to a situation where movement of students across borders, the lifeblood of internationalisation, faces new and growing obstacles.

Despite the perceived economic draws of HE, there is evidence that international students are also interested in the additional 'soft currencies' afforded them through study at a western university in addition to the value of a degree itself. Student motivation to study abroad is a

complicated affair. A study by Li (2013) revealed that a substantial factor in the decision-making process for students to study for a master's degree in the UK was that the duration was shorter (a year in the UK rather than two years in China) and the cost, which when compared with study at a university in the USA, was considerably less. In addition to these factors which might be said to support the financial model mentioned above (speed and economy), students in the study also mentioned that learning skills such as working in teams, analysing information and research and presentation skills were of great value and made them more attractive to employers. As Li notes "It not only casts some doubt on the previously taken for granted value of overseas qualifications, it reveals that the students themselves are largely aware of this declining value" (2013, p. 15). So at least part of what international students value, are the skills which are not obviously associated with the discussed focus of the university.

University league tables

Despite this, one of the principal instruments by which universities communicate themselves to students is through league tables. League tables are relatively new, the first being established by Shanghai Jiao Tong (now known as the academic ranking of world universities or ARWU) in 2003. Since then additional league tables such as the Times Higher Education (THE) and Quacquarelli Symonds (QS) have appeared. While the different tables have different criteria for positioning institutions, there is typically some element connected, to a lesser or greater degree, with research. The three principle systems (THE, QS and ARWU) all have more than 50% of their impact being dependent on research (Barber et al., 2013), which may not be the most useful measure for those choosing to study at a given institution. Also, rankings have contributed to the refining of the concept of a good university to align with that of the western model of higher education.

Any given university's position within the rankings is clearly of great importance. Marginson (2007) points out, rankings have reshaped the context of global HE. The vice chancellor of the university of Malaya was forced to resign when that university slipped in the

THE rankings (Salmi, 2009). Rankings communicate reputation and reputation is of great importance to universities. As Gallagher and Garrett observe, "any elite university's name is its most important asset, and a degree bearing its name is its most valuable product" (2012, p. 26).

Rankings have become so influential at least in part because they are easy to use and allow stakeholders to make decisions about universities worldwide. Previously only a handful of institutions could claim to have a worldwide reputation (Harvard, MIT, Oxford and so on) and the notion of high and low quality institutions depended on national knowledge of the local students that would attend those institutions (Marginson, 2007).

However, with the growth of movement of students internationally, some measure of how good institutions were outside of local knowledge was necessary. After all, reputation is, according to Mazzarol and Soutar (2002) the most important factor in the decision making process of students choosing a place of study. Rankings are simple to understand and offer the sort of information the average consumer is familiar with (Rauhvargers, 2011). A consequence of this however is that, as the majority of the top 50 universities are located in North America and Western Europe, the model of education associated with those institutions is the model of education associated with the concept of a world class university.

There are strengths and weaknesses associated with leagues tables, as the following quote illustrates.

> International university rankings are fixated on a narrow band of data and prestige scores. Citation indexes are biased toward the sciences and engineering, biased in their focus on peer-reviewed journals published mostly in English, on the number of Nobel laureates and other markers of academic status, and tilted toward a select group of largely older universities that always rank high in surveys of prestige.
>
> These indicators are useful and informative, supplying a global and comparative measure of productivity and status. Yet government ministries are placing too much faith in a paradigm that is not achievable, that often fails to value the broader activities and outputs

> of many universities, and that loses sight of the economic and socioeconomic mobility needs of their countries (Douglass, 2010, p. 3).

Rankings may not be the best tool for prospective students to use to make decisions about universities. As Rauhvargers points out, rankings are far better equipped to act as a measure of research than they are as a measure of teaching (2011), a statement seemingly at odds with the establishment of the Teaching Excellence Framework TEF in the UK in 2017. Furthermore, these rankings do not take into account the 'soft currencies', learning skills and so on that students, especially international students, value as part of their education (Li, 2013). As Holmes (2001) notes, rankings are an indicator of excellence, but as Williams (2002) and Collini (2012) point out, excellence is the somewhat vacuous referent that has come to define the modern university. It seems fair to say that rankings may fail to capture the complete worth of an institution. Altbach sums up the problem commenting "these rankings are quite limited in what they measure and thus provide only an incomplete perspective on higher education and on the universities that are ranked" (Altbach, 2013a, p. 78).

The fact that the different rankings systems are compiled in different ways and the possibility, as Marginson (2007) suggests that they do not paint a fair picture of a university's performance, call in to doubt their value as a true measure of the appropriateness of any given institution for students to choose to study at. For example, the number of international students studying at a university is a substantial part of the measure used by the THE. However, if rankings affect the decisions made by international students, then institutions higher up the rankings are more likely to attract more international students thus cementing their positions at the top of the rankings. The Shanghai Jiao Tong rankings use internationally relevant research as a measure. This may lead to a neglect of the value of local research, a point of particular relevance to international branch campuses (IBCs). In short, rankings do not paint an accurate picture of universities.

A seemingly unavoidable conclusion from the use of rankings is that where competition defines an institution, there has to be winners and losers. With regard to the institution of the university, it seems there is growing international presence on the higher side of the equation and job cuts at lower ranked institutions on the other. Furthermore, a system where tertiary funding is based on competition in rankings does not seem to support the reality of the sorts of things that differentiated tertiary institutions need to achieve. As noted earlier, different rankings are compiled in different ways, but for the purpose of convenience the following example uses the UK based Complete University Guide. Someone choosing to study Education, may consult the ranking for that subject. According to the 2018 guide, the University of Huddersfield ranks as the 16th best place to study Education in the UK. According to the same list, Warwick University is the 53rd best place to study Education in the UK. However, Warwick University places at number 8 in the overall UK list whereas Huddersfield ranks at 72 in the UK. The difference between the rankings of the two institutions is even starker when considered internationally. According to the Times Higher Education rankings for 2017, Warwick placed at number 82 internationally, while Huddersfield placed in the 600 to 800 range. It is interesting to consider which number would be of more value to prospective students. If it is the case that the overall ranking is of more importance, then there are serious consequences for the perceived importance of differentiation. Whatever the result, there seems to be a tension with regard to the concept of differentiation within the HE sector.

The idea that a simple linear hierarchy serves best the needs of universities or potential students seems to deny the reality of a sector involving differentiated institutions. This point is illustrated by the different positions of institutions relative to the growing range of rankings available. In the summer of 2017, the results of the teaching excellence framework (TEF) were released in the UK. Several top ranking institutions (according to the research influenced rankings mentioned above), received the lowest possible grade (bronze) for teaching. Institutions receiving bronze included the Russell Group universities Southampton and the London School of

Economics. It is worthy of note, that a choice of institution based on the TEF may not be that reliable as students would be unlikely to graduate before the next TEF was released (after 3 years) meaning that the rating may have gone up or down.

If getting a job is the most important consideration in student motivation to enter HE, then rankings based on research and teaching may not be the most appropriate. Returning again to the question of how stakeholders use rankings, a different picture is given by the QS employability rankings. This league table is compiled on the basis of employer reputation (30%) alumni outcomes (25%) partnerships with employers per faculty (25%) and employer/student connections (10%) (Quacquarelli Symonds, 2017). The top 20 of this table features institutions from eight different states (the USA, UK, Australia, Hong Kong, China, Canada, Japan and Switzerland) while the QS world rankings top 20 contains institutions from just five different countries (the USA, UK, Australia, Singapore and Switzerland) with the majority of those institutions (15 out of 20) based in the USA and the UK.

It is unclear which league table is of more significance to employers or students. In 2017 the Economist magazine released a table based on the value added to expected earnings that a degree from a given institution could generate. In the UK, the top three institutions are Portsmouth, Aston and Newman while the bottom ranked institution (number 125) is St Andrews, an institution which ranks at 92 in the QS world table.

Despite the importance of rankings, a high ranking may not be enough to guarantee a university's success. The University of Southampton was ranked 127 in the world in 2011- 12 according to the Times Higher Education rankings. This comparatively high position (above institutions such as Georgetown in the USA and Exeter, Birmingham and Warwick in the UK) did not prevent a decline in the 2012 undergraduate intake of 600 on 2011 student numbers (Vasagar, 2012). Given the importance of student fees to a university's financial stability, the significance of a drop in numbers of more than 10% (Southampton usually takes between 5,000 and 5,500 undergraduates each year) is clear.

Overall, rankings promote the notion that there is some essential set of qualities which universities ought to possess and which define whether or not they are good universities, an idea which has been argued may be damaging to the institution in general. The very nature of rankings promotes competition, and depends on the condition that some institutions be better than others for their existence. As Sadlak and Cai observe, "it needs to be accepted that only a limited number of higher education establishments have already or can realistically aspire to world-class status with regard to their teaching and research performance" (2009, p. 13). If universities are focused purely on climbing rankings tables, this will have to mean success for some and failure for others. This notion of competition between institutions (as opposed to cooperation, as might be thought to be desirable in the area of education) fits in with evidence that suggest that universities have moved towards the management styles of the private sector (Amaral et al., 2002; Braun & Merrien, 1999b; de Boer, Enders, & Schimank, 2007 as cited in Pham, 2012). As they have opened themselves up to the commercial ups and downs of any business, it once again seems fair to observe that some will do well while others will not.

It seems then, that leagues tables are pushing institutions towards a homogenous notion of the world class university, which is at odds with the conclusions of the Barber Report. That document stresses the importance of the differentiation of institutions.

> Citizens need to seize the opportunity to learn and re-learn throughout their lives. They need to be ready to take personal responsibility both for themselves and the world around them. Every citizen is a potential student and a potential creator of employment. University leaders need to take control of their own destiny and seize the opportunities open to them through technology – Massive Open Online Courses (MOOCs) for example – to provide broader, deeper and more exciting education. Leaders will need to have a keen eye toward creating value for their students. Each university needs to be clear which niches or market segments it wants to serve and how. The traditional multipurpose

> university with a combination of a range of degrees and a modestly effective research programme has had its day (Barber et al., 2013, p. 5).

The sentiment of the last sentence here appears to be that the idea of the university as projected through university rankings is not one which is likely to endure.

However, apart from rankings, there are questions as to how reputations are generated and how an institution can project its identity and purpose. As universities seek to establish a brand identity (Chapleo, 2010; Chapleo, Carrillo Durán, & Castillo Díaz, 2011; Joseph, Mullen, & Spake, 2012) and the notion of world class being important in this context, there is the question as to how this identity is communicated. How can students know what a particular university brand stands for or what a degree from any given institution actually translates into? A degree is not the same as say an electrical product, where performance can be instantly assessed. Rankings then, do not do a good job of communicating the variety of roles that universities fulfil. Furthermore, they contribute to the potentially damaging singular conception of the institution and because of their nature feed into this notion of education as a consumer product. They do not, for example, take into account the soft currencies mentioned above (Li, 2013). Instead these are traditionally transmitted through statements of universities generic graduate attributes. Given the importance of these currencies to students, it would seem important that they are accurately represented. However, as will be discussed in greater depth in the literature review, there are problems with assessing graduate attributes.

It seems clear then that communication remains a serious problem for universities. As Collini notes, "while universities are spectacularly good at producing new forms of understanding, they are not always very good at explaining what they are doing when they do this" (2012, p. 86). Students need better information and guidance as noted in the Browne Review (2010). Collini further observes that universities are not always so good at the execution of the tasks at which they are supposed to excel (Collini, 2012). "What is asked for now is not any insight into how learning happens or how minds may be enlarged, but a confirmation to third

parties that the announced procedures have been followed" (Collini, 2012, p. 105). There is a lack of trust in universities (Collini, 2012) which, given the change in graduate employability and focus on finance, is perhaps unsurprising. In light of this then it seems that now more than ever, it is important for universities to communicate the intrinsic value of a degree. The need for educated citizens is noted in the Barber report as being of particular importance given the current global climate.

> Given the state of the global economy, tensions in international relations, massive gaps between wealth and poverty, the deepening threat of climate change and the ubiquity of weapons of mass destruction, our contention is that we need a generation better educated, in the broadest and most profound sense of that word, than ever before (Barber et al., 2013, p. 3).

Universities serve a public good and contribute to the growth of a society, not just a society's economy. A strong economy is not a good in and of itself, but rather is only good so far as it serves as a means to the end of a just society. This might again sound somewhat idealistic, but the reality seems to be that a focus on economic value leads to a perception of a degree as being a consumer product. As consumers, students consider the value of their purchase, and the prospect of unemployment coupled with substantial debt is a very weak economic argument for obtaining a degree.

Post-Soviet higher education

The context of this research is an international higher education partnership in Kazakhstan between a UK Russell group university and a Kazakhstani university. Kazakhstan is a relatively young post-soviet state located in central Asia. As such the context of HE in this region will be briefly explored.

Higher Education in Central Asia experienced a development quite different to that in the west during the period of the existence of the USSR and immediately after its dissolution. The central government of the USSR saw HE as a cornerstone of the development of society as

evidenced by the growth in the numbers of tertiary institutions and the number of people attending these institutions. In the Ukraine alone, there were 985 universities by the end of 2013 (Oleksiyenko, 2014) and 1 in 10 people were involved in higher education in some form, as students or teachers (Kuraev, 2016). That there was great interest from western journals on the subject of Soviet HE between the late 1950s and he late 1970s, indicates that this system generated a lot of interest in the west (Chankseliani, 2017). The system under the USSR "attempted to sustain a broad measure of social equity and mass educational opportunity, even if those measures were arguably compromised by episodes of repression, corruption that spread in the post-war era, and political favouritism" (Johnson, 2008, p. 164).

In addition to there being greater participation in HE, there was a difference with the content of HE. Institutions were not autonomous and subsequently curricula were controlled centrally and unified (Kuraev, 2016). Certain subjects, such as Philosophy, Linguistics, Economics and even Botany were overlooked (Johnson, 2008). Burkhalter, Maganat and Shegebayev (2012) make the claim that education was a form of propaganda and was characterised by memorization, lecturing and an absence of independent thought. Suppression of subjects such as Philosophy and other Humanities or Social Sciences may be felt to align with such a lack of the promotion of critical thinking.

In the period immediately after the collapse of the USSR, the centralised system of HE disintegrated in those states which were newly independent. With largely unregulated markets, private institutions opened in many former Soviet states offering programs of varying quality with problems including corruption, lack of regulation and poor quality of provision. As Johnson points out.

> The crises of the 1990s thus severely degraded the ability of the ‘‘new’’ (or newly independent) nation states in the region to maintain policy coherence in higher education, to sustain a reasonable level of social equity, to regulate academic quality, or to

> systematically link higher education reform to new mechanisms for economic innovation (2008, p. 160).

The situation involved what Johnson describes as "a universally acknowledged plunge in academic quality" (2008, p. 169).

Kazakhstan

Kazakhstan was the last of the former Soviet republics to be established after the collapse of the USSR, coming into existence in 1991. With a population of approximately 18 million, it is the ninth largest country in the world and is bordered by China, Kyrgyzstan, Russia, Turkmenistan and Uzbekistan. It is at the very heart of central Asia. Resource rich, the country is focused on development both socially and economically as detailed in the "Kazakhstan 2050" strategic plan which sets out the country's goal to become one of the top 30 developed nations by 2050 (Aitzhanova, Katsu, Linn, & Yezhov, 2014). A major part of this plan involves development of the education sector, especially the secondary and tertiary areas.

Post 1991, as with the other countries of the former USSR, the education system underwent rapid and far ranging change (S. P. Heyneman, 2011). Kissane (2005) argues that this took the form of de-Russification (the move away from the use of Russian as the language of education and the focus on teaching Russian history) and de-Sovietization (the removal of symbols and representation of Soviet power) combined with re-Kazakhification (Kissane, 2005). There were however, two major problems facing education development which needed to be overcome. These were issues connected with language and the legacy of Soviet organisation and corruption (Mahon & Niklas, 2016).

The English language needed to be incorporated into the education system. In addition to English becoming increasingly the language of international business, English is also the most dominant language of research. While Russian was the lingua franca of the Soviet Union, and is still widely spoken in Kazakhstan, Russian language journals appear to be largely overlooked by the rest of world (Kirchik, Gingras, & Larivière, 2012). Furthermore, the need to deliver courses

in English was necessary after Kazakhstan joined the Bologna process (Saniyazova, 2017) a fact illustrated by the seven universities in Kazakhstan that have English as the medium of tuition. Given the prominence of Russian and the desire of the government to support the Kazakh language, English would become the third language for most students.

As noted earlier, the collapse of the Soviet Union and its centralised system of HE, led to a vacuum in the sector where corruption took root and there was a lack of focus for curricula. In the Soviet system, universities served the public sector and were not autonomous. Lecturers underwent pay cuts relative to the cost of living which, coupled with degrading conditions and increasingly limited opportunities for significant research, meant many supplemented incomes with bribes (McLendon, 2004; Niyozov, 2004). Subsequently, HE needed to be autonomous and have English as the medium of instruction.

The initial solution to these problems was a program called "Bolashak" which is the Kazakh word for "future". This was a program of scholarships for Kazakhstani students to study overseas which began as early in the country's history as 1993. It was designed to help students pursue undergraduate and graduate degrees at the best universities internationally as the country "needed to develop its human capital, to train highly qualified people, who would be able to invest their skills and knowledge in further reforming all aspects of life in Kazakhstan" (Saniyazova, 2017, p. 3).

While the Bolashak program experienced a great deal of success with 3000 grants a year being awarded from 2005, it was expensive and there was a concern about brain drain with grant recipients choosing to stay in the countries they studied in to work or study further. This issue was not unique to Kazakhstan, as Chankseliani notes, "the challenge that the post-Soviet countries are facing is to design and implement policies that will help them reap benefits from student mobility and minimise the negative effects of brain drain" (Chankseliani, 2016, p. 312). The issue of brain drain was initially countered by the requirement for Bolashak recipients to return to Kazakhstan and work for a minimum of five years in their specialist field there (Perna,

Orosz, and Zhumakulov 2015, as cited in Saniyazova, 2017). Subsequently the next development in HE in Kazakhstan was the establishment of a new university, the institution at the centre of this research.

> The intention was to establish an institution of higher education that would comply with international academic standards and become the first international research university in Kazakhstan. The further vision was to develop it into a world-class university that would serve as a regional hub of knowledge and research (Saniyazova, 2017, p. 11).

With the establishment of this university, the Bolashak program ceased to fund undergraduate study. Data on student mobility form Kazakhstan indicates that the number of students travelling abroad peaked in 2010 and then began a steady decline (Chankseliani & Hessel, 2016), an observation that may be explained by the idea that more Kazakhstani students were attending HE at this new home institution instead of travelling abroad. As the university grows and expands, the plan is to cease Bolashak funding for graduate study as well.

Aim and scope of the study

The aim of this study is to investigate student development in the context of a transnational higher education partnership to deliver a foundation program between a Russell group university in the UK and a recently established university in Kazakhstan. In order to achieve this, there is an investigation of faculty perceptions of student development as well as the measurement of the development of graduate attributes. The research is limited to foundation year students and the development of non-academic or non-content related knowledge.

Significance of the study

The significance of the study is three fold. As has been argued above, there appears to be a need for universities to demonstrate that they deliver on the development of graduate attributes that they claim takes place over the course of a degree. This would allow for institutions to promote the value of a degree not merely as the means to the end of a higher salary or better job, but as an

end in itself. This focus on intrinsic motivation to study may justify the higher costs of higher education in an environment where the purely extrinsic economic value is, as has been demonstrated above, not a certainty. In order to promote this intrinsic value however, institutions need to actually develop these attributes and demonstrate that they do so.

In addition to the measurement of attributes, the location of the study is important. As has been demonstrated above, internationalisation is a growing phenomenon and transnational partnerships are one aspect of that phenomenon. Furthermore, the location of Kazakhstan, on the path of China's new 'belt and road' initiative means that the country occupies a position of strategic importance. The educational development of the population there may have an impact internationally as a result. It is of importance to understand whether the development undergone by students in such a partnership mirrors the development demonstrated in western institutions.

Finally, by understanding what factors impact on the development of graduate attributes, it may be possible to create a model which would enable universities to predict which students will struggle to develop graduate attributes and so intervene to support those students. This would possibly aid in issues relating to student satisfaction and retention.

Overview

In order to achieve this aim, this research is separated into three individual but complementary studies. The first study involves the quantitative analysis of the development of graduate attributes, capabilities and their predictors. The second study investigates the perceptions of student development from the perspective of staff (both academic and administrative) working on the foundation program. The third study is a qualitative analysis of students' experiences and perceptions of developing graduate attributes, capabilities and their predictors.

2: The Literature Review

The purpose of this section is to analyse the literature relating to the issues of student development and transnational education. The previous section argues that there is a crisis in the higher education (HE) sector connected with the purpose of universities and the value of a degree. One area where universities communicate with their stakeholders is through rankings and while these have been shown to be problematic, they are not the focus of this review. Instead, this review will focus on another method for universities to communicate their identity, graduate attributes (GAs).

This section begins by exploring the literature around student development. It will subsequently consider graduate attributes, and highlights some of the issues connected with their establishment and measurement. The context of the project involves a transnational partnership, and so the literature outlining the current state of internationalisation will also be reviewed. Finally, education research in Kazakhstan will be considered.

Student Development

The first part of this review considers the literature on student development. Although there is substantial literature on this topic, it will be argued that there is a gap relating to student development in the context of Kazakhstan.

There is considerable literature on student development, although most of that literature concerns western institutions with post-soviet central Asia featuring minimally in the English language literature at least. Overall, this literature suggests that students do indeed develop in the manner typically described by graduate attributes. In 1969, Feldman and Newcomb published a meta-analysis of 1500 studies conducted over the previous four decades. One of the many findings was that over the course of study, students typically unlearned certain behaviours while learning new ones. While it is difficult to categorically associate the impact of college with this development, a theme running throughout the literature, it does seem to be a consistently

occurring correlation. In 1972, Astin published the results of a longitudinal study running between 1966 and 1970 which followed 25000 students across 217 institutions in the USA. The study used self-administered questionnaires, and revealed that participants became increasingly independent, less influenced by religious ideas and more politically liberal (Astin, 1972). These effects were greater when participants lived on campus (Astin, 1972), which suggests the environment was important.

More recently, Pascarella and Terenzini published two meta studies, the more recent coming out in 2005. While there were substantial differences between these two studies, certain themes were present throughout. The second study showed a shift away from religion, cultural and aesthetic interests as the focus of research feeding into the meta study, which presumably reflected the shifting focus of educational research during that period. The second study still showed gains in participants' sense of there being an intrinsic value of education coupled with a decrease in the extrinsic value of education. Furthermore, the same impact was observed with attitudes to work, with there being gains in the perception of the intrinsic value of employment and decreases in the perception of the extrinsic value of employment experience (Pascarella & Terenzini, 2005). These results were consistent between different types of HE institutions and types of students experience (Pascarella & Terenzini, 2005).

However, a consistent issue that was raised was the extent to which the change measured in these studies was resulting from the impact of the university experience (Pascarella & Terenzini, 2005). Most studies measured only the change in students, and those that focused on the impact of college on the change were methodologically flawed (Pascarella & Terenzini, 2005).

A 2015 study by Buckley in the UK found similar results with regard to the UK HE context. The United Kingdom Engagement Survey (a survey based on a survey administered in the USA) administered in 2015, involved 24 HE institutions in the UK with 24,387 student respondents (Buckley, 2015). Participants indicated that the two areas of greatest development

they experienced were in the areas of independent learning and critical thinking, factors commonly found in lists of graduate attributes. Buckley observes that "these are arguably the two skills considered most definitive to higher education, and it is therefore a positive finding that students report the greatest development in those skill areas" (Buckley, 2015, p. 25). In addition, the survey considered motivation as a factor impacting on student development (Buckley, 2015). In this way, the issue raised by Pascarella and Terenzini (2005) regarding the connection between college and development was addressed.

The literature surrounding student development of this nature within the context of this study, Central Asia, is limited in the English language publications at least.

Graduate Attributes

The second part of this review will consider the literature around graduate attributes (GAs). It will argue that despite their ubiquity, there is a lack of consensus over the nature of GAs, the foundation from which they are developed and with the concept of their measurement.

What are graduate attributes?

Graduate attributes are one of the ways in which universities can communicate with students, industry, government and their other stakeholders. Simply put, graduate attributes are qualities that the graduates from any given institution of tertiary education are felt to demonstrate. Graduate attributes have been defined as follows.

> The qualities, skills and understanding a university community agrees its students should develop during their time with the institution. These attributes include but go beyond the disciplinary expertise or technical knowledge that has traditionally formed the core of most university courses. They are qualities that also prepare graduates as agents of social good in an unknown future (Bowden et al. 2000 as cited in Hughes & Barrie, 2010, p. 325).

GAs are not a new idea. Candy et al (1994), Barrie (Barrie, 2004) and Pitman and Broomhill (2009) all make reference to an address given by Cardinal Wooley at a speech given in 1862 at the University of Sydney.

> Our undergraduates...will, we may reasonably hope, possess a well-cultivated and vigorous understanding; they will have formed the habit of thinking at once with modesty and independence; they will not be in danger of mistaking one branch of science for the whole circle of knowledge, nor of unduly exaggerating the importance of those studies which they select as their own. Above all, they will have attained the truest and most useful result of human knowledge, the consciousness and confession of their comparative ignorance (Woolley, 1862, p. 21 as cited in Candy et al., 1994).

However, GAs have become formalised by HE institutions, especially in the UK, Australia and New Zealand in the last few decades. GAs manifest as the skills and capabilities that graduates of universities are supposed to have acquired as part of their study. Graduate attributes "seek to articulate the nature of the education the university offers to its students and through this an aspect of the institution's contribution to society" (Barrie, 2004). Broadly speaking, graduate attributes are concerned with transferable skills rather than vocational skills (Barrie, 2004; Bath, Smith, Stein, & Swann, 2004). Pitman and Broomhill go further stating that "the use of this phrase clearly situates the development of such skills within a formal tertiary educational setting: the implication being that such skills cannot be developed elsewhere" (2009, p. 443).

Although there are differences of opinion between countries and institutions (Bath et al 2004), there are some characteristics which arguably define graduate attributes. According to Barrie (2004) these are as follows.

> 1 Graduate attributes are not independent of disciplines but may be developed through multiple disciplines. That is to say critical thinking for example, can be developed through the study of Physics or English Literature. The important point is that the study of something is required to develop that skill.

2 Graduate attributes are not entry requirements. Rather they are outcomes and as such come about as a result of the process of studying at university.

3 They are referred to as attributes because they involve more than just skills.

4 They come about as a result of the process of HE. There should be no requirement for curriculum extension as these should emerge from notion of university as envisioned by Newman and Von Humboldt (Barrie, 2004).

Despite this, there appears to be no common theoretical background for the establishment of graduate attributes, but there are some common themes running through graduate attribute lists. These include areas that have been declared by industry to be desirable attributes for the workplace (critical thinking, professionalism, leadership, problem solving skills and so on) and those which are influenced by theories of what is involved in being a successful member of society (ethics, lifelong learning, global citizenship and so on). Strivens produced the following list of attributes common to institutions in the UK, USA and Australia.

- Global citizenship/international perspectives/cultural awareness
- Professionalism, ethics, values
- Social responsibility/service to the community
- Lifelong learning
- Technological literacy
- Initiative, problem-solving skills
- Leadership

(Strivens, 2011)

While the above appear to be common themes, it is notable that GAs differ from institution to institution and, as stated previously, lack a common theoretical underpinning. Barrie (Barrie, 2006; Barrie & Simon, 2005) challenges the idea that there is a universal conceptualization of what graduate attributes are. This idea is supported by Pitman and Broomhall (2009) whose research investigated the statements of graduate attribute in Australian institutions of higher education. In addition to a general observation that post 1970 institutions differed greatly from older institutions, they found that the institutions' attributes were also different. The one attribute that came close to universality was communication, which their study observed was mentioned in 33 out of 34 statements of graduate attributes of Australian universities (Pitman & Broomhall, 2009).

Why universities create graduate attributes

In recent years, there has been a shift away from graduate attributes as implicit consequences of university education, to explicit factors considered as outcomes. There have been a number of drivers of this change. Firstly, there seems to be a desire to manifest something which only universities can supply. Pitman and Broomhill comment that GAs allow universities to position themselves in contrast to vocational providers, noting that "a focus on generic skills is one way in which universities can counter this criticism, as it speaks of a liberal arts tradition and enabled them to articulate an edge over other, more technical, knowledge and skill providers" (2009, p. 441). They also note that the shift has in part to do with an attempt to "justify taxpayer and industry investments and emphasize the importance of higher education institutions in lifelong learning" (Pitman & Broomhall, 2009, p. 443). Finally, there is the pressure from external stakeholders. According to Barrie (2005 as cited in Green, Nelson, Martin, & Marsh, 2006), in Australia, universities published lists of graduate attributes in response to the government making it a condition of future funding.

As noted above, it is clear from the literature that different institutions develop different graduate attributes (Hager & Holland, 2006; Ipperciel & ElAtia, 2014; Pauli & Raymond-Barker,

2016; Pitman & Broomhall, 2009). The reasons for this include the nature of the institution and the influence of stakeholders.

One of the drivers of the differences in GAs is the nature of the institution. Different institutions have different stakeholders and this can lead to priorities being aligned in a variety of different directions. Hughes and Barrie (2010) observe that "the location of specific groups on a 'most to least' influential continuum will vary between different types of university and between different award programmes within a university" (Hughes & Barrie, 2010, p. 329).

It is possible that GAs may be viewed by institutions as a means of separating out themselves from other institutions. However, this does not seem to be a clear cut observation given the generic nature of most attribute lists. Despite this, it is possible that universities would like to imply that these are the sorts of attributes that only a university education could provide (Pitman & Broomhall, 2009). With reference to this idea, Hager (2006) lists five common mistakes in the conceptualisation of graduate attributes.

- That they are viewed as discrete or atomic entities, thus they can be acquired and transferred singly.
- That the learning of each of them is thought to be a relatively quick, once-off event. They are acquired complete and finished (this follows on from I).
- That they are thought of as being acquired by individual learners. So the learning is located within individuals. (This view is often linked with I, but is actually not at all entailed by it).
- It is thought that we can readily recognise them when we see them. (It is easy to conclude from I and II that if typical generic attributes are discrete entities and can be acquired readily, then it must be straightforward to identify when someone exhibits them).
- It is thought that they are readily and unequivocally describable in language. Hence it is straightforward to develop descriptive understandings of typical

> generic attributes and to convey these understandings to others in written form. (Hager & Holland, 2006, p. 18).

The influence of government and industry in the formation of graduate attributes

It is also clear that the drivers of these differences in GAs do not emerge only from within the institution itself, but from external stakeholders such as government and industry. This can lead to a variety of further issues, as Hager observes.

> It seems that different professions and occupations have somewhat different generic attributes profiles, particularly when they are practiced in many different sorts of contexts. Thus, the greater the number of generic attributes that are detailed and distinguished, the less likely it is that a proposed general profile will be suited to every university program (Hager & Holland, 2006, p. 42).

Both industry and government have had a role to play in the shaping of the modern university, and in both the UK, through the Dearing report and Australia, through the establishment of the Tertiary Education Quality and Standards Agency (TEQSA), the formation of graduate attributes has been a clear demonstration of this influence. For example, recent legislation in Australia, the Higher Education Standards Framework (Birmingham, 2015), notes that learning outcomes for each HE course should include "skills in independent and critical thinking suitable for life-long learning" (Birmingham, 2015).

The Australian prescription is more focused towards statements which explicitly point out the value to other aspects of life as well as the world of work (Barrie, 2004). Accordingly, graduates are supposed to be equipped to be "agents of social good" (Barrie, 2004). In general, however, it seems both the UK and Australia have in mind the idea of graduates becoming global citizens ((Barrie, 2004; Ennew & Fujia, 2009).

From a governmental perspective, a skilled workforce is desirable and perhaps even necessary with the advances of technology in manufacturing and the increasing importance of service industries. Also, the possession, as noted earlier, of world class HE institutions can be a

source of national esteem. This can be seen in Asia and the Middle East especially, where several states including, Singapore, Malaysia, the UAE, Qatar and Hong Kong are working to establish themselves as education hubs (Knight & Morshidi, 2011).

However, as universities receive less governmental financial support, so the influence of governments on the directions universities take is reduced. Pham (2012) points out that there has been a decrease in state control exercised over universities (Amaral, Jones, & Karseth, 2002; Braun & Merrien, 1999a; Henkel & Little, 1999 as cited in Pham, 2012). So, as universities rely less on government funding, it may well be argued that governments have less control of the HE sector.

This is not to say that government has no influence over the sector. Regulation, as exemplified by the 2012 ban on London Metropolitan University accepting non-EU international students, and the restrictions placed on universities by the government of India, illustrates that governments still have the ability to influence the HE sector. At the same time, there has been criticism of these interventions and in the long run it is possible that they may backfire. After all, this influence is limited to national operations. In the UK for example, the government decision to make entry for international students more difficult by including students in immigration quotas may lead to international students looking elsewhere for their higher education. If universities become truly transnational institutions, then even this level of influence may be lost as those international students could attend the same institution in a different location. It may be argued that home students would be lost in the event that an institution shifted its centre of operations, but as international student mobility and the instances of distance programmes increase, this may not be so strong an argument.

From the perspective of industry, a skilled workforce is essential. The less time a company spends training a new employee up, the more efficient its operations will run. In recent years, industry has had an increasing role in pointing out to the HE establishment what its needs and wants are. Since 1986, in the UK, the National centre for universities and businesses

(NCUB, formerly the Council for Industry and Higher Education, CIHE) has existed to facilitate this communication.

However, it is increasingly clear that in the UK at least, despite changes made since the Dearing report, employers continue to be dissatisfied with graduate performance. In the CIHE 2008 report, it is stated that around a third (30%) of employers have problems with graduates' generic employability skills (which include team working, problem solving, communication and so on). A quarter (25%) have issues with graduates' attitudes to work, almost a half (44%) are critical of graduates' business awareness and an even greater percentage (49%) are unsatisfied with graduates' foreign language abilities (Archer, Davison, Tim, Nick, & Greenhalgh, 2008). A 2016 NCUB report made similar points, observing that in a "Pearson (2015) survey, 54% of 310 respondent employers said they were not satisfied with this component of graduates' work-relevant attributes" (Wilson, 2016, p. 9). The report concludes the following, "despite this steady supply of and growing demand for graduates, employers continue to report that graduates lack particular work-relevant aptitudes" (Wilson, 2016, p. 4).

Waters (2009) points out that with the increase in access to HE, employers have sought new ways to differentiate between graduates which go beyond the degree award as these can be, on the surface, identical (the HEAR project discussed later in this section is an attempt to address this situation). Furthermore, two trends are causing problems for UK graduates in particular. Firstly, industry is increasingly becoming international while secondly, fewer UK students are obtaining overseas study experience. According to the CIHE report (Archer et al., 2008), the number of English students taking part in European study programmes has fallen from 9500 to 5500 in the 10 years up to 2008. Beyond study abroad, 65% of employers stated that it was desirable for graduates to have overseas professional experience (Archer et al., 2008).

Given the apparent issues that employers in the UK at least have with graduates, combined with their input into university degree programmes, it would perhaps be reasonable to assume that the demands of employers had changed. However, York and Harvey paint a

remarkably consistent picture of the skills expected by employers and state that apart from an increase in demand for IT skills, contemporary research demonstrates this continuity (Fergus, 1981; Caswell, 1983; Gordon, 1983; Wingrove and Herriot, 1984; Green, 1990; Harvey, Burrows, and Green, 1992; NBEET, 1992; Johnson and Pere-Vergé, 1993; British Telecom, 1993; Harvey and Green, 1994; Guirdham, 1995; Brennan, Kogan, and Teichler, 1996; Harvey, Moon, and Geall, 1997; Future Skills Wales, 1998; Conference Board of Canada, n.d.; Dunne, Bennett, and Carré, 2000 as cited in Yorke & Harvey, 2005). Perhaps this is indicative of what Bridgestock (2009) describes as the need for meta work skills, "the abilities required to continuously recognise and capitalise on employment and training related opportunities and integrate these with other aspects of the individual's life" (Bridgstock, 2009, p. 34) which are necessary due to the changing nature of employment.

Increasingly, industry is bridging the perceived skills gap between HE and the work place with work experience. Twenty eight of the businesses recently surveyed by the NCUB agreed or strongly agreed with the idea that the main purpose of work experience is to bridge this gap (Wilson, 2016). Work experience is seen to develop generic skills and the NCUB also notes that there is less of a need now for "employers to link work experience to the discipline of study" (Wilson, 2016, p. 9).

This idea of skills developed on courses of specific disciplines not matching the needs of the work place is a feature of a study into graduates of an Accounting course. According to the literature, the accounting industry is not satisfied with graduates (CPA Australia, 1996; 2005; and other commentators, Henderson, 2001; Mathews, Jackson and Brown, 1990; Birkett, 1993; ICAA, 1998a, 1998b; 2001 as cited in Jackling & De Lange, 2009, p. 370). It was felt that even in a situation where a specific vocational course is taught (in this case Accounting) generic skills are more important for employers than technical skills, which are assumed.

The findings from this study suggest that employers regard technical skills as presumed in accounting graduates and it is the generic skill development in graduates that are the

> more veiled quality for employability and career enhancement (Jackling & De Lange, 2009, p. 381).

Furthermore, students also observe differences between the skills they developed on the course, and the skills required by employers (Jackling & De Lange, 2009).

It seems clear that industry wants international experience and generic skills from university graduates and that these have been represented in the generic graduate attributes of universities internationally. However, it also seems clear that despite being able to input these requests to universities and the growing adoption of corporate methods by universities, employers are not getting the graduates they want.

Problems with industry and government influence on graduate attributes

There are a number of problems with the influence that external stakeholders have over the formation of GAs including an excessive focus on the human capital approach to education, question marks over how industry measures skills attainment and the tension between the international interests of institutions and the national interests of governments.

Firstly, too much of a focus on the human capital approach and the economic value of an education can lead to the charge that the value of education exists merely as a means to economic ends. While there seems to be an ethical mandate underpinning the establishment of generic university graduate attributes, it appears that business does not share such an ethical model. Instead of the mandate to do good, modern corporate thinking appears to be solely mandated to create wealth. The history of corporate scandals suggests a way of being that involves corporate self-interest over any notion of the good apart from financial gain. This has also manifested in university programs as Jackling and De Lange (2009) comment with regard to the mandate to promote ethical behaviour in accounting courses because of the 2008 financial crisis.

The lobbying of fossil fuel exploiting companies and funding of climate change denial research further illustrates the point that institutions which do not display ethical behaviour may not be the best placed to input into the values to be demonstrated by graduates. As Rhodes comments, the 2015 Volkswagen scandal illustrated "how established organizational practices of corporate business ethics are no barrier to, and can even serve to enable, the rampant pursuit of business self-interest through well-orchestrated and large-scale conspiracies involving lying, cheating, fraud and lawlessness" (Rhodes, 2016, p. 1). Soltani (2014) observes in a study of ethical failures in the USA and Europe including Worldcom, Enron and Parmalat that the scandals were compounded by "ineffective boards, inefficient corporate governance and control mechanisms, distorted incentive schemes, accounting irregularities, failure of auditors, dominant CEOs, dysfunctional management behaviour and the lack of a sound ethical tone at the top" (Soltani, 2014, p. 251). While business ethics is beyond the scope of this research, the point to be made is that industry opinion may not be a suitable bedrock for the establishment of personal developmental attributes.

There may be an argument that the involvement of industry with the setting of graduate attributes is about skills, not values. However, graduate attributes are not just about skills, they are about values and as noted above, business values as epitomised by scandals like Enron, Worldcom and Volkswagon, do not constitute an ethical foundation of any reasonable sort (Rhodes, 2016; Soltani, 2014). In fact, given the divergence of values, it may be argued that universities should be inputting their values on industry and not the other way around.

As noted above, in the UK, industry has had input into graduate attributes at least since the establishment of the CIHE in 1986. As also noted above, industry is still not satisfied with the performance of graduates. However, there are questions over how employers measure the skills of the graduates they receive. The literature (such as the NCUB reports) seems to be based on employer perceptions. These subjective judgements may not be the best vehicle for making decisions about skills development. Furthermore, it may be the case that the development that

occurs at university is not the same as the development that occurs in the workplace. Although once again beyond the scope of this review, a simple reason for this may be that students are normally paying to go to university while people are traditionally paid to go to work.

Finally, there may be a tension between the international ambitions of universities and the national imperatives of nation states. The role of government can result in attributes that have a distinctly nation centric feel rather than an international focus, which, given trends in the internationalisation of HE and the expansion of transnational education, opens up, for example, the possibility of charges of cultural imperialism and relevance for the countries in which international branch campuses (IBCs) are located. This appears to have been a consideration in the establishment of Kazakhstan University (the university at the centre of this research) with one participant in research on the establishment of the university noting 'we didn't want to get dwarfed and did not want to be a branch campus. We didn't want to be a branch of say Georgetown, in the shadow of one big name' (Mahon & Niklas, 2016, p. 99).

This example also leads to the problem as seen from the other side of the equation. Governments may use graduate attributes to enhance nationalism within the state in which the university is located. The Ministry of Education and Science (MoES) in Kazakhstan for example, defines the purpose of education as the formation of citizens of the country, and the Nazarbayev Intellectual Schools (NIS) have a mission to blend patriotism with other common human values (Fimyar, 2014). The international ambitions of some universities and the national imperatives of some countries would seem to be at least a potential cause of tension in the establishment of graduate attributes.

The influence of theories of human development in the formation of graduate attributes

In terms of other influences on the formation of GAs, it seems reasonable to turn next to theories of human development. However, with regard to many universities, it is not clear exactly how these lists have been composed or which principles underpin them. To begin with, it seems fair to claim that education plays an important role in human development. Higher education and the

university experience must then also play a role in human development. While it might be said that there is a fairly consistent message coming out of industry which has fed into the establishment of the graduate attributes related to skills, there does not appear to be a consistent theoretical foundation for those attributes connected with citizenship and human development. This in turn leads to problems in measurement and assessment, which will be addressed later. As Coetzee notes, "problems of implementing the graduate skills and attributes agenda in higher education are generally attributed to the lack of a clear theoretical foundation and how these skills and attributes should be taught, assessed, measured and evaluated" (Coetzee, 2014, p. 899).

A random sampling of university websites suggests that the input from industry and relevance for work is stressed, but that any other type of foundation is not explicitly listed. For example, the University of Leeds has on its website an interactive skills map which it states contains "the 13 skills that the University and employers regard as important to help you succeed in your academic study and career" (University of Leeds, 2017). Despite the claim that these are skills, included within the descriptors are "engagement with society and individuals, acknowledging and managing preconceptions or prejudice" (University of Leeds, 2017) and "honesty and openness and with a sense of academic and social responsibility"(University of Leeds, 2017). While these two attributes are no doubt worthy, they do not seem to fall into the category of skills, but rather appear to be values. Furthermore, there is no stated theoretical basis for why these are valuable attributes.

In New Zealand, the University of Canterbury lists global awareness as one of its attributes. In this instance, the university gives a justification stating, that global awareness is a trait "that builds and expands upon the knowledge and awareness of one's own culture, knowledge base and belief system. From this foundation, one can learn to recognise and appreciate differences both locally and globally" (University of Canterbury, 2017). However, the foundation of the value of this trait is not explicitly stated.

In compiling their lists of graduate attributes for example, Oxford Brookes considered a number of theoretical inputs especially with regard to citizenship including Nussbaum, Tagore, Sharma, the CRICK report into UK citizenship and the UNESCO Delors commission's four pillars of learning (Haigh & Clifford, 2010). A study at the University of Florida also used Nussbaum's (2000a) ideas by mapping her list of capabilities onto the university's generic graduate attributes (Landorf & Pineda, 2011). This study looked at the university's learning outcomes and found them to be aligned with Nussbaum's education related human capabilities (Landorf & Pineda, 2011). Landorf and Pineda found that "the university employed two key elements of the human capability approach in the processes it employed while developing and refining its global learning SLOs" (2011, p. 118). These were participatory dialogue and democratic deliberation. The authors conclude that the capabilities approach is "a promising conceptual framework for global learning in higher education (Landorf & Pineda, 2011, p. 121).

It appears then that some sort of theoretical foundation is needed and human capabilities (discussed at greater length later in chapter 4) has been used in several instances. There appears to be a general consensus concerning the sorts of things that should be included in, but no apparent consensus on the specific theoretical foundation for, graduate attributes. Also, the relationship between a particular institution and its graduate attributes is not always clear.

Whatever the purpose of a given university, it might be fair to conclude that that purpose be represented in the values associated with its graduate attributes. As universities develop brands, there may well be an influence of the brand values feeding into these attributes. Newman pointed out that he was addressing two criticisms when he wrote about the university, that there was a disconnection between what was studied and its relevance to working society, and that there was an exclusiveness associated with belief (Pelikan & Newman, 1992). Here it would seem that there is continuity with the issues connected with graduate attributes which go beyond content knowledge to encompass skills and values. The theme of the importance of the role of education in human development is also explored by Rogers (Rogers, 1994).

Altbach (2013b) argues that universities are undergoing a shift from being a public good, subsidised by the state and bearing a mandate to improve society, to a private good, expected to be paid for by the individual and manifestly for the benefit of the individual. This may be the case and certainly a look at institutions internationally reveals a scale of sorts on which institutions occupy places according to their relative public or private good mandates, with fully funded public intuitions like Kazakhstan University at one end of the scale and completely for profit private ventures like the University of Phoenix at the other end of the scale.

However, this distinction does not appear to be explicitly demonstrated in either institution. Both institutions feature reference to skills and values of a similar type. For example, Phoenix states "you will embrace diversity and treat others with respect" (University of Phoenix, 2017) while Kazakhstan states that graduates will be "cultured and tolerant citizens of the world while being good citizens of their respective countries" (Kazakhstan University, 2017). Where universities stand, in terms of their mission to be public or private goods, could be manifested through their graduate attributes. However, this does not appear to be common practice with GAs.

Problems with the acquisition of graduate attributes

As noted earlier, despite a degree of continuity in content, in practice there are differences of opinion as to what specifically graduate attributes are and how they are developed (Bath et al., 2004). This has fed into the confusion of how graduate attributes should be implemented. According to Barrie (2004) there is a lack of a clear conceptual or theoretical base for decisions about them and this has led to certain problems. Initiatives designed to promote the skills associated with graduate attributes have met with difficulties from staff who have differing opinions as to what their responsibilities to teach are (Barrie, 2004; Bath et al., 2004). It seems that some academics are of the opinion that these skills should come about via the study of any substantial academic discipline. In any case, these issues are found both in Australia, where teachers did not share a common notion of the outcomes, let alone the teaching and learning

processes that might lead to them (Marton and Booth 1997 as cited in Barrie, 2004) and the UK, where according to Bennett et al (1999 as cited in Barrie, 2004) initiatives failed due to scepticism amongst staff and a lack of clarity surrounding the process.

Further issues with graduate attributes include the relative weighting of the areas within them and assessment of those areas. At the University of Tasmania for example, there are suggestions to involve student reflection and self-assessment with regard to the extent that attributes are met. This could involve an on-going portfolio and would involve reflection as a method of assessing graduate attributes, with students taking responsibility for tracking their own achievement. Crebert, Bates, Bell, Patrick, and Cragnolini (2004) argue that until skills are part of formal assessment, students will not take them seriously. However, formal assessment constituents an external extrinsic motivation (discussed in greater length in chapter four) and may encourage a surface approach which would rather defeat the purpose. Despite the lack of formal assessment of skills, employers do make judgements on skills (Wilson, 2016), however as noted earlier, how these judgements are made apart from subjective observation on the part of the employer, is unclear.

Furthermore, it is difficult to see how values could be included in formal assessment. Oxford Brookes defines three levels of attributes connected with citizenship which correspond to foundation, undergraduate and post graduate degrees (Haigh & Clifford, 2010), yet this seems equally difficult to qualify if only because of the notion of citizenship at a foundation level being different from citizenship at a post graduate one.

The nature of learning in general is a contested concept. There appears to be a substantial difference between the way children learn a language and adults learn a second language for example. While a thorough analysis of the literature surrounding this is beyond the scope of this study, the proposition that how humans learn is a contested concept seems safe to assert. As Carl Rogers pointed out, learning even simple tasks or concepts is a complicated matter (Rogers,

1994). Given the diaphanous nature of graduate attributes, the notion of how they might be acquired seems surely to be at least as complicated if not even more complicated.

Hager points out the learning of the sorts of things that graduate attributes are concerned with constitutes learning as a process rather than the acquisition of a product (Hager & Holland, 2006).

> Some may be 'skills' of various types. Others are, strictly speaking, not so much skills as attitudes and dispositions. These might be more accurately thought of as relational complexes that connect persons and particular contexts, rather than as unitary 'things'. Hence, these attitudinal and dispositional qualities may be more accurately viewed as products of cultural, ethical and social circumstances that can be refined and modified by knowledge and reflection. In these circumstances, notions of acquisition and transfer of discrete entities by individual learners are simply misleading ways to think about what is happening here (Hager & Holland, 2006, p. 21).

Another concern is the nature of how knowledge is demonstrated. Polanyi's theory of the tacit dimension (discussed at greater length later) appears to apply here. With levels of knowledge above the basic, it is very difficult to describe understanding in ways other than demonstrating. While there are ways in which this can be achieved in terms of assessment, once the area of graduate attributes is considered, the articulation of or demonstration of, for example, world citizenship or critical attributes, is not straightforward. In the same way that Rogers argues that anything beyond the simplest of tasks cannot be taught without the desire or will of the learner, it seems that anything beyond the most straightforward types of knowledge cannot be easily assessed.

Furthermore, the skills and attributes concerned often have different meanings across different disciplines which must make their implementation more complicated still. A 2009 study by Jones investigated the role of disciplinary epistemology in the conceptualisation of graduate attributes. The study compared the teaching of GAs in five subject areas (physics, history,

economics, medicine and law) and found that critical thinking, analysis and problem solving are conceptualised in very different ways (Jones, 2009). Subsequently the GAs listed by an institution may actually differ according to the subject studied by the graduate.

Jones further investigated the role of disciplinary context in the establishment of GAs in an attempt to understand why there was such variation (Jones, 2013). A variety of factors in addition to subject discipline were found to have an impact. These included the traditions and pedagogy of the institution and the nature of the faculty community (Jones, 2009). Jones observes "higher order graduate attributes are in fact highly complex and worthy of more detailed scrutiny than they have received in the past" (Jones, 2013, p. 602). Jones concludes that "in order to understand teaching and to successfully implement graduate attributes, it is necessary to understand the culture in which this occurs" (Jones, 2013, p. 593).

Generic attributes may also be resisted by certain institutions and departments because they do not reflect, or are not implemented in such a way that corresponds to the epistemology of that department.

> Graduate attributes succeed when they are conceptualised as integral to the 'community', for example when they fit with the disciplinary and departmental culture, with the epistemic frames and with teaching practice. However, if they are considered as external to this they are treated as peripheral and largely ignored (Jones, 2013, p. 601).

This reinforces the idea that GAs need to be given more consideration by institutions if they are to reflect the development that students undergo and if they are going to be embraced by the faculty teaching those students. However, as noted early, the drivers behind the establishment of GAs are many and not limited to the institution itself but involve industry and government. In this sense, it may be difficult for institutions to properly consider their internal stakeholders (faculty, students) as well as their external stakeholders (industry and government). As Jones notes, GAs "are promoted through policy and enacted through pedagogy" (Jones, 2013, p. 602). Subsequently the implementation of graduate attributes is not a straightforward proposition.

Problems with the measurement of graduate attribute acquisition

Graduate attributes are clearly an important aspect of universities' missions (although as noted above, the approach differs from country to country and institution to institution). However, there are questions as to how these attributes are formulated, what the understanding of staff is towards these attributes, and how achievement of these attributes are measured. Bowden, Hart, King, Trigwell, and Watts (2000) recommend a multi-faceted approach involving implicit and explicit content related assessment as well as some sort of on-going reflective portfolio. Radloff, De La Harpe, Dalton, Thomas, and Lawson (2008) argue that the point made above regarding academics lack of enthusiasm to engage with graduate attributes, prevents any meaningful assessment. Hughes & Barrie (2010) argue that Institutions should explicitly embed GAs in institutional assessments.

> Though many claims are made with respect to the implementation of graduate attributes, there is growing acceptance of the proposition that the strongest evidence of their achievement is their explicit embedding in assessment (Hughes & Barrie, 2010, p. 325).

Still, if a university states that their graduates will display certain characteristics, it seems fair that there would be some form of assessment of this. However, this does not appear to be the case. The problem with assessment is brought into focus by the evidence (noted above with regard to the satisfaction of industry) that suggests graduates do not possess the attributes universities say that they do. Crebert et al (2004) comment that for universities to guarantee that students would graduate with all the specified attributes would be to open themselves to litigation. Instead Crebert at al (2004) argue that universities should guarantee that students will have the opportunity to develop the prescribed attributes.

However, from the perspective of students and employers, this may seem to be unsatisfactory. After all, there is a difference between having attributes and having had the opportunity to develop attributes. This may go some way to explain the fact that despite these lists of attributes being rather similar throughout HE, as the 2008 Council for industry and higher

education report points out, approximately a third of employers (30%) have issues with graduates' generic employability skills (Archer et al., 2008). These skills, including team work, communication and problem solving are almost perennial constituents of lists of graduate attributes, and many graduates don't appear to possess them. There appears to be a widespread dissatisfaction with the skills that graduates display (Wilson, 2016). However, what is not clear, is how employers evaluate these skills beyond the subjective opinions of individuals in industry as represented in survey responses. For example, Wilson's (2016) study involved a survey of HR departments. The results were derived from 34 respondents who all worked in HR departments. The results constitute only the opinions of those individuals, as there were no measures of performance other than whether the HR person was satisfied or not. It could be argued that data of this sort alone, may not constitute sufficient evidence to alter the course of graduate attribute development for universities.

So, it is claimed here that there are potentially some continuity problems between proposed graduate attributes and the actual attributes of graduates. There is a sense that universities don't really police the development of graduate attributes. That the universities have implemented their graduate attributes on the recommendation of industry, but in a rather half-hearted way. As noted earlier, students are said to graduate with the attributes, but employers fail to observe their presence (Wilson, 2016). This is perhaps not surprising as apart from the content assessment provided though the traditional phenomena of exams and course work, there is no real assessment of skills and values.

Skills can be difficult to measure. However, there are well documented examples of successful skills assessment. These include, but are not limited to, driving tests, examinations of musical instrument proficiency such as the UK's associated boards exams, various practical examinations in health sciences such as those of surgical competence or physiotherapy and so on. However, outside of certain vocational courses, such as physiotherapy, practical skills

assessment is uncommon, especially the assessment of those practical skills that appear in lists of generic GAs.

There have been a number of initiatives aimed at measuring skills attainment. Following on from the arguments that Jones (2009, 2013) makes about the nature of GAs changing according to context, it seems fair then to assume that these need to be assessed within their specific context, which adds a further layer to the problem of assessment.

The Australian government, for example, launched an initiative to measure skills attained by graduates. This involved a test designed to measure critical thinking, problem-solving interpersonal understanding and written communication (Hambur, Le, & Luc, 2002). The test can be used at the start or the end of studies or both offering students a longitudinal evaluation of their skills development. However, this initiative has not been universally acclaimed. Pitman and Broomhall for example, observe that "scholarly reaction to the GSA has been decidedly cool" (2009, p. 449).

Pitman and Broomhill also point out that there is something of an injustice in how graduate attribute like skills are considered for entry to HE institutions, in that they are not commonly recognised. In Australia, recognition of prior learning (RPL) is not taken into consideration for entry to universities, yet it is effectively an outcome for universities (Pitman & Broomhall, 2009).

> An analysis of the use of generic skills for admission to university programmes suggests much less uniformity within the tertiary sector about the place and extent of their contribution to the lifelong learning cycle as accreditors of skills developed elsewhere. In general, where the value of prior generic skills is recognized by institutions, these input skills are subject to a high degree of assessment. This runs counter to the argument the sector more consistently proposes for the generic skills that it develops in students, which are universally argued to be highly valuable but not able to be subjected to comparable assessment (Pitman & Broomhall, 2009, p. 454).

However, it is clear that the aim of this assessment initiative is the GAs related to skills. The values related GAs are not incorporated.

The Assessment of Higher Education Learning Outcomes (AHELO) is another project underway which is attempting to provide benchmarking for learning outcomes, which are normally connected with graduate attributes through the process of constructive alignment (Biggs & Tang, 2011). However, although one of the streams aims to test generic skills, the focus is on the skills aspect of the attributes alone, rather than those capabilities connected with values. Furthermore, it is clear that a satisfactory solution is yet to be reached. The 2013 AEHLO report concluded "a great deal of further work would be needed to develop a full evaluation of higher education outcomes at an international level" (Tremblay, Lalancette, & Roseveare, 2013, p. 182).

The UK Engagement Survey (UKES) (Buckley, 2015) addressed students' perceptions of their own skills development. This study involved a survey instrument which considered the following skills.

- Understanding people of other backgrounds (economic, racial/ethnic, political, religious, nationality, etc.)
- Developing or clarifying personal values or ethics
- Being an informed and active citizen
- Exploring complex real-world problems
- Working effectively with others
- Being innovative and creative
- Analysing numerical and statistical information
- Thinking critically and analytically
- Writing clearly and effectively
- Becoming an independent learner
- Acquiring employability skills

- Speaking clearly and effectively

(Buckley, 2015)

While this study moves closer to a measurement of graduate attributes, it utilized cross-sectional design. With regard to the measurement of GAs, both Coetzee (2014) and the author of the UKES survey (Buckley, 2015) recommend longitudinal design.

To summarise, skills related GAs are difficult to conceptualise and are context contingent. It seems fair to conclude that values related GAs are similarly difficult to conceptualise and measure. A 2013 study by Oliver investigated the assessment of GAs at Curtin University. The assessment had three elements, integrating GAs into the constructive alignment of course design, surveys to investigate graduate and employer perceptions of GA achievement and self and peer reporting systems (Oliver, 2013). However, it is clear that the issue of assessment of GAs remains a problem. As Oliver notes, "a substantial part of the challenge is finding evidence that improvement has occurred – there is no universally accepted way of measuring graduate achievement of attributes and capabilities" (2013, p. 458). Oliver further explains that generic measurement instruments, such as the Collegiate Learning Assessment and the Course Experience Questionnaire "fail to capture evidence of achievement of attributes that a university such as Curtin holds to be important" (Oliver, 2013, p. 458).

In general, graduate attributes have the feeling of something imposed on academics by university administrators in order to placate industry. This state of affairs is not a satisfactory one, and it is no surprise that the graduate attributes aren't really working in the way they were intended to. However, were graduate attributes to work properly, not only would they constitute a transparent form of communicating a university's mission and what distinguishes that institution from others, they may well also serve as a means of motivating students.

Problems with assessment in general

It is worth nothing that assessment can also be said to be problematic in the traditional sphere of HE. Universities award their own grades and this has led to the charge that there is a lack of

parity across subject areas and between institutions. As Robertson (2006) notes, "A 2.1 in one university does not indicate the same achievements as the same award at another. A 2.1 in one subject is not the same as a 2.1 in another." A series of reports into HE classification in the UK found that there were serious flaws with the system.

> A summative system, which gives the appearance of 'signing-off' a person's education with a simple numerical indicator, is at odds with lifelong learning. It encourages students and employers to focus on one final outcome and perceived 'end point', rather than opening them to the concept of a range of different types and levels of achievement, which are each part of an ongoing process of learning that will continue beyond the attainment of their degree (Universities UK, 2012, p. 34).

This conclusion is consistent with Rogers' belief that examinations and grades can measure only inconsequential forms of learning (Rogers, 1994). The Burgess report concluded that degree classifications should "be clearer in order to help students' understanding of what they are being awarded and what is being recognised by the institution" (Burgess Group, 2007, p. 8). These observations were made with regard only to the UK, but it seems fair to assume that the problem would not simply cease to exist when considered in an international context.

As a result of the Burgess reports in 2004 and 2007, the Higher Education Achievement Report (HEAR) project was established. The HEAR provides a response to the issue of making a degree classification more tailored to the individual graduate, as it is not clear what distinguishes one student with a second class degree from the thousands of others graduating at the same time with a second class degree. The HEAR takes steps to resolve this issue through producing annual reviews of students which are finalised into a single document upon graduation. As such it is a formative tool and provides students with an understanding of their progress over the course of their degree (Universities UK, 2012).

The HEAR project constitutes an innovative approach to the problem of parity, but still fails to capture the essence of graduate attribute assessment, especially with regard to the more

human developmental side. The HEAR is still dependent on external assessment, and as has been pointed out, it seems difficult to make assessments of others' achievements in this area. According to Rogers, education is an essential part of human development. However, the individual should take responsibility for that learning (Rogers, 1994).

> Individuals have within themselves vast resources for self-understanding and for altering their self-concepts, basic attitudes, and self-directed behaviour; these resources can be tapped if a definable climate of facilitative psychological attitudes can be provided (Rogers, 1980, p. 113).

Learning must involve the active rather than passive intake of information. Universities can and do provide the circumstances where learning is facilitated. However, as pointed out with regard to assessment in general, summative assessment can cause the focus to be incorrectly placed. The emphasis is pushed towards passing tests rather than learning. Following on from the theme of responsibility for learning coming from the learner, it could be argued that it would be fair in this area to pass assessment over to the learner as well.

In general, it seems reasonable that this assessment should take place within a framework relating to an appropriate line of enquiry. An open-ended question of the sort "what are you capable of" would not consistently produce the sorts of responses people would find useful. So, some sort of structured approach is needed. This would serve as a check to universities and students that they were both achieving what they set out to achieve. A more detailed document such as the HEAR would not be necessarily be required because the relevant skills would be detailed in the statement of generic attributes and the students' self-evaluation would act merely as a guide as to the extent to which those attributes had been achieved. This is not to say that there is no place for summative assessment. The degree classification serves a valid purpose. But, in order to amend the system to assess graduate attributes and especially those associated with individual human development, the individual human in question should be part of the assessment.

The internationalisation of higher education

The issues relating to graduate attributes discussed above are of particular relevance to universities engaged in transnational education such as those with off shore campuses or with programs running at overseas partner institutions. Transnational education as a sector appears to be in constant flux with new developments and initiatives occurring frequently.

Despite the decrease in university applications in the UK mentioned previously, there is clear evidence for the growth of HE globally. A UNESCO report (Altbach et al., 2009) describes the process as massification, with growth in the age cohort in HE from 19% in 2000 to 26% in 2007. In 2009, there were more than 2.5 million students living outside their home countries with predictions indicating that that number will rise to 20 million by 2020 (Altbach et al., 2009).

This process seems to be driven by a variety of factors. Amongst these firstly is the reality that universities are subject to changes in their methods of funding. International students typically pay higher fees than home students (in the UK approximately two or three times as much on average) and are seen as increasingly important as a source of revenue for universities. Between 2008 and 2009, international student fees comprised 8% of the income of UK universities (Shepherd, 2009). Secondly government initiatives such as the Bologna process have encouraged international movement of students in HE. Finally, the desire of countries such as China to expand their HE sector has led to the involvement of western universities in those countries. This final point is connected with the phenomenon of transnational education (TNE).

The literature surrounding TNE is inconclusive, although there is agreement that there is not enough information (Lane, 2011; Ziguras & Mcburnie, 2011). What data there is, however, indicates growth (Ziguras & Mcburnie, 2011). For example, according to Universities UK (2010 as cited in S Wilkins, 2011) in 2010 there were more international students taking UK HE courses outside the UK than in it.

There seems to be a number of related phenomena within the concept of transnational education (TNE) which itself sits within the notion of internationalisation. Ennew and Fujia

(2009) use the WTO's general agreement on trade in services (GATS) as a framework to categorise four different types of internationalisation. These are as follows.

1 Remote provision where the student and provider remain at home as it were. Examples include the Open University and the University of Liverpool.

2 The student moves to the country which hosts the institution they are studying at. Typically this involves students moving to the UK, USA and Australia with the greatest single contribution of students coming from China.

3 The provider institution is present in the country where the international students are based. Examples of this type of provision would be international branch campuses (IBCs) such as the RMIT campus in Vietnam and the Nottingham campuses in China and Malaysia.

4 The final variant involves partnership programs where providers fly in on a short term basis to provide programs or parts of programs.

The final two areas can be described as transnational education, which in turn can be defined as education programs where the learners study in a country different to that of the location of the awarding institution (Ziguras and McBurnie 2007 as cited in Wilkins, 2011).

There is uncertainty here as to whether there is a process involved or whether these different forms will exist simultaneously. Certainly partnerships programmes such as that of University of Nottingham with China existed before there were IBCs. The issue is whether partnership programs will be replaced by IBCs. For Ziguras and McBurnie (2011) and Skidmore and Longbottom (2011) this activity of replacement is taking place currently. It is clear that there is a great variety in terms of quantity and quality of provision where partnership programs are concerned (Ziguras & Mcburnie, 2011)

International branch campuses are the physical presences of universities overseas. Degrees awarded from IBCs are the same as those awarded from the home campus. IBCs can be either fully owned by the original university (such as the case with RMIT Vietnam) or

partnerships (as in the case of Middlesex University Dubai) (Wilkins, 2011). For the purposes of this paper, a transnational university (TU) will be defined as one which has at least one IBC. Examples include Nottingham University, RMIT and Monash University. However, transnational universities are not limited to coming from the traditional trio of university providing countries, the USA, UK and Australia. Middle East Technical University (METU) for example, has a branch campus in Northern Cyprus. There are many questions over the nature of Northern Cyprus as a state, yet this is an example of a university from outside of the western system expanding. A further interesting example is that of Bilkent University in Ankara which has started to expand overseas with a secondary school in Erbil. Bilkent was the first private university in Turkey, it follows the US system of HE and it has 100% instruction in English.

Since 2011 the number of home countries for TUs has expanded to include Belgium, Estonia, Japan, South Korea and Taiwan (Slaughter & Rhoades, 2000). Also, the number and range of host countries has expanded to include Egypt, Finland, Ghana, India, Malta, Nicaragua, Rwanda, and Saudi Arabia (Garrett, Kinser, Lane, & Merola, 2016).

Certainly there are a number of factors which explain the appearance of transnational universities such as the general trend of globalization, shifting trends in university funding and increased interest in a 'western' education from students not a product of that system. The TU could then be described as merely the next stage in the evolution of the university. As a subset of the TU, IBCs are expanding in number and scope. The number of IBCs grew from 24 in 2002 to 160 in 2009 (Ziguras & Mcburnie, 2011) to 249 in 2015 (Garrett et al., 2016).

Why host nations want to engage in TNE

There are several reasons why TNE is popular. Typically, there is a strong desire for states to enhance their own HE sector and in some cases to become education hubs (Lane, 2011; Pensky, 2005; Ziguras & Mcburnie, 2011), which is a particular draw of IBCs. According to Lane (Lane, 2011) this is the case with both Malaysia and Dubai. Another cause is to increase the capacity for higher education. A combination of greater demand for graduates from industry and an

increase in the number of students graduating from secondary school has led to a greater demand for HE (Ziguras & Mcburnie, 2011). Countries such as China, Vietnam and Malaysia lack the capacity to meet demand and so need to export students or import provision or both. China is the biggest importer of transnational education and the biggest source of internationally mobile students (Ziguras & Mcburnie, 2011). In many respects importing provision is more desirable than exporting students as this restricts the potential brain drain from those students studying abroad choosing to live and work abroad after graduation. A further cause comes from the conception that education contributes to economic growth. The human capital approach views education as a good thing because of this. As a result, countries hoping to expand economically look to expanding their HE sector to promote this growth (Lane, 2011) or diversify their economies (Wilkins, 2011).

However, there is no one thing that states want from IBCs. In fact, it is clear that there are a variety of needs that states want IBCs to fulfil. Subsequently, with regard to IBCs in particular, a singular narrow conception of the university is not a useful one. As Sadlak and Cai summarise.

> The majority of universities in the world are not directly concerned or affected by the world-class global competition yet there should be no doubt that such higher educational institutions remain vital as they serve a majority of students and communities present in any tertiary system. It is them who are performing these essential functions (such as serving the national needs of economic and social development by training qualified citizens and workers) among other functions. (Sadlak Liu Nian Cai et al., 2009, p. 7).

Problems with international branch campuses

While a 2012 study in the UAE found that students at IBCs were largely satisfied with the institutions (Wilkins, Stephens Balakrishnan, & Huisman, 2012) there remain a variety of problems associated with transnational education in general and IBCs in particular. Most of these involve charges connected with the commercialisation of HE in one form or another. Such charges, although also levelled at universities in general (see for example Readings, 1996), are

put into an even sharper focus with regard to IBCs. As Wilkins and Huisman observe, "generally, branch campuses are seen as revenue-generating activities of entrepreneurial higher education institutions" (Wilkins & Huisman, 2012, p. 628).

Pensky (2005) views the establishment of IBCs as a manifestation of the corporate model. While this may be a harsh evaluation, it is certainly true that great inequalities in access still remain (Altbach et al., 2009) and there is a strong association between the development of HE internationally and a focus on economic growth as justification for this (Walker, 2012). The cost of HE is still prohibitive to poorer students even with the provision of loans and grants for tuition fees. "If current trends of internationalization continue, the distribution of the world's wealth and talent will be further skewed" (Altbach et al., 2009, p. viii).

According to Ziguras and McBurnie (2011) a common charge against TNE in general is that it is basically a commercial operation focusing only on the human capital aspect of HE rather than the broader benefits of HE. The idea that TNE has led HE to become a commodity to be sold for commercial gain is a common one, (Altbach 2001; 2004; 2010; Naidoo 2003; 2007; Becker 2009; Romani 2009; Donn & Al Manthri 2010; Wilkins 2010 as cited in Wilkins, 2011). As a result it may be of even greater interest to IBCs and other institutions engaging in TNE to assert their value independently of human capital.

In addition, IBCs may actually harm the existing local HE system rather than enhancing it. Local staff may be tempted away by higher salaries and better working conditions offered at IBCs (Ziguras & Mcburnie, 2011). IBCs are also in a position to offer only the low cost high demand courses, such as IT and Business. This may have a further negative effect by removing that revenue stream from existing local providers who are then left to offer the more expensive to run courses such as Engineering and Nursing (Ziguras & Mcburnie, 2011). This was the situation in Malaysia which has attempted to establish itself as an educational hub partly through encouraging IBCs to establish themselves there. With regard to Malaysia, Wilkins and Huisman observe the following.

> As the branch campuses of the Australian and British universities have grown, the competition for students has intensified and many of the 400 smaller private colleges feel they are unable to compete with their newer, larger rivals, which have the powerful brand names that attract students and the finances to invest in premises, equipment, and high-quality staff (Wilkins & Huisman, 2011b, p. 301).

Furthermore, in a situation where a state has a particular vision for its HE system, as in the case of Qatar, an IBC may in fact create tension between the values of that state and the values of the IBC (Vora, 2014).

Staff working at IBCs may be treated differently to those in equivalent positions at the home campus, perhaps even as "semi-skilled workers in a teaching factory" (Ziguras & Mcburnie, 2011, p. 13). While the semi-skilled worker charge may be somewhat of an exaggeration, it is certainly true that institutions such as RMIT Vietnam, which operates on a trimester timetable and where staff have not until recently been given the opportunity to engage in research, have different expectations of their staff according to which campus they work on.

This point feeds into a further charge against IBCs, that the student experience may not be the same as that offered on the home campus (Merola, 2011). Donn and Al Manthri (2010 as cited in Wilkins, 2011) argue that while the quality of courses offered at IBCs may be equivalent to that offered at the home campus, these products do not transfer well. Naidoo (2007 cited in Wilkins, 2011) points out that off the shelf generic content produced by the home campus may not be appropriate or relevant in the context of the IBC. Altbach (2007) points out that a diverse student body such as may be the case in the home campus is unlikely to be replicated by an IBC. Finally, Altbach (2009) suggests that entrance standards between home and IBCs may not be equivalent, with some students accepted by IBCs being unlikely to be accepted by the home campus. It is worth noting that, at present, universities home and branch campuses typically share the same generic attributes.

Risks facing international branch campuses

The establishment of IBCs is not without risk, as Altbach notes.

> Branch campuses may be the "flavor of the month," but the pitfalls, with resulting damage to academic reputations, financial losses, and of course poor service to students, loom as significant prospects (Altbach, 2010).

As stated earlier, there are questions over the parity of provision between parent institution and IBC. Poor quality programs offered at IBCs will ultimately do more harm to the university than good (Pensky, 2005). There are already a variety of examples of failed IBCs. These include RMIT Malaysia which failed due to the financial collapse of its local partners, Sylvan University which failed to gain accreditation in India and the University of New South Wales which pulled out of Singapore because of low student enrolments (Lane, 2011). Also, Wilkins and Huisman point out that there is a belief that opening an IBC would divert resources from the home campus and have a negative impact on those studying there (Wilkins & Huisman, 2012).

There is no one reason why these institutions failed. Presumably these factors have led to the decision of a number of high profile institutions including Cambridge, St Andrews and Yale electing not to initiate an IBC (Wilkins & Huisman, 2012). With regard to the case of Tufts university, Wilkins and Huisman observe that "of particular concern to the university was its ability to ensure the quality of an overseas branch operation" (Wilkins & Huisman, 2012, p. 639).

A further potential long term threat is the idea that students value a degree from the home campus more highly than one from the branch campus (Merola, 2011). In the lead up to the opening of Duke Kunshan (a campus in China) the fees were projected to actually be higher than those at the home campus. However, as Merola (2011) points out, this suggests that the experience of studying overseas is an important aspect of acquiring a degree abroad and students are prepared to pay more for it. If IBCs cannot match this experience, at least in terms of

providing an English speaking environment, they may not be able to expect students to pay as much for tuition.

However, it seems that IBCs may be more popular than home grown institutions. According to Wilkins (2011) in the Gulf States at least, IBCs are more popular than local universities. Iacopini and Hayden (2017) also found that in Vietnam, RMIT's IBC was a more popular choice for families who could afford the fees. Whatever the case in terms of the value students ascribe to the varying hierarchy of qualifications, the claims TUs make about parity of qualifications from campus to campus appear to be called into question. This is problematic, even if it only exists from the perspective of their customer's perceptions rather than any actual difference in provision. At the end of the day, if a major part of a degree is perceived to be international experience, how are IBCs addressing that? This point comes into sharper focus when the expansion of online degrees (such as those at the University of Phoenix) are considered. As online provision becomes more sophisticated, this may lead to reduced demand for IBCs (Barnes, 2013). Finally, given that one of the main drivers for the establishment of IBCs is the current lack of capacity in the host countries, as noted earlier, questions must surely be asked as to what happens when the local HE system is in a position to cope with demand without external assistance?

Internationalisation in Kazakhstan

As noted in the previous section, Kazakhstan has undergone rapid and wide ranging change since its conception in 1991. The internationalisation of education has been a substantial part of that change. While there are other areas where internationalisation has impacted on education in the country (for example the Nazarbayev Intellectual Schools) the development of the new university is the focus of this review. The overall principle behind the internationalisation of the HE sector is to transform "Kazakhstan into a strong player in the global economic and educational arenas" (Fimyar, 2014, p. 180). How this principle lead to the establishment of the university can be broken down into several factors. These factors include the influence of

government, the state of HE in the country, the cost of the Bolahak program and influence from industry.

The government of Kazakhstan clearly played a leading role in the development of the university, which still, as of 2017, receives the vast majority of its funding from the government (Saniyazova, 2017). In 2014 the Minister of Education wrote that the education sector faced four challenges.

> An increase in demand for early childhood education and schooling as the population increases; the need to introduce a modern student-centred inquiry-based curriculum; the need to strengthen the Kazakh language and culture in school; and the need to meet the aspiration and broaden the opportunities for young people in Kazakhstan (Ruby & Sarinzhipov, 2014, p. 330).

The university at the centre of this research is a key part of the overall education policy of the country. From this statement of challenges, it seems that the university has a mission to develop both the individual and society.

The state of HE in Kazakhstan was another influence in the university's creation. As noted in the previous sections, there were several institutional issues such as a legacy of corruption and the need for more knowledge of English language which the new university was supposed to mitigate. In addition, there was a problem of student attrition rates. In the 2013/14 academic year, 25,500 students dropped out of HE institutions (Saniyazova, 2017). Of these students, those in their first year of study comprised the greatest cohort (Saniyazova, 2017).

Furthermore, prior to 2010, the situation was such that there were private and public universities that had low standards for entry (Saniyazova, 2017) and from which students considered acceptance to a degree program to automatically result in the award of that degree at the end of the course (S. P. Heyneman, 2011; Saniyazova, 2017). As Saniyazova notes, "there is a rooted assumption, which is fortunately changing now, that once you are admitted you will graduate" (Saniyazova, 2017, p. 7).

These flaws with the HE sector were presumably at least in part responsible for the perception among industry in Kazakhstan that graduates were not satisfactory. A poll of Kazakhstani employers revealed that 63% were not satisfied with graduates' skills and that 32% struggled to find appropriate personal to hire (Kurmanov, Yeleussov, Aliyev, & Tolysbayev, 2015). As noted in the previous section, employers were often satisfied with the skills of Bolashak graduates, but the cost associated with that program prevented it from being a long-term solution to the problem (Saniyazova, 2017).

As with the case of Malaysia (Wilkins & Huisman, 2011b), the solution to the problems facing the education sector were thought to lie in cooperation with respected foreign universities. Initially the idea of creating a branch campus was considered but was rejected, for the reasons mentioned earlier.

> It was felt that the branch campus model would not offer a guarantee of sustainability into the future. Furthermore, it was felt that a new institution needed to be built rather than adapting an existing university….This concept was the foundation for the idea of developing partnerships with multiple universities, one university for each department (Mahon & Niklas, 2016, p. 99).

While the foundation year was partnered with London University, the other schools of the university had strategic partners as well, such as the School of Humanities and Social Sciences which was partnered with the University of Wisconsin-Madison. However, London University was the first partner to sign up to the unusual program because of the experience this institution had had with Kazakhstani students through the Bolashak program and also because the university did not want a satellite campus (Mahon & Niklas, 2016). The foundation is also of particular interest given the fact noted earlier that attrition among students is a particular problem in the first year.

As noted above, the purpose of the institution was quite clearly to develop society (Fimyar, 2014; Mahon & Niklas, 2016; Saniyazova, 2017). In this sense the university in

question can be seen as falling into the conception of the university as a public good. However, there are two issues connected with this. Firstly, despite the institution having a mission to expand good practice to the wider HE sector and the adoption of the universities model by 10 other Kazakhstani universities (Mahon & Niklas, 2016) this model of internationalisation has led to a stark disparity in educational provision (Fimyar, 2014). Secondly, because the foundation year was delivered exclusively by London University, it is unclear whether the attributes of that institution map onto the attributes of Kazakhstan University. There is no mention of strengthening the Kazakh culture in the London University GAs for example.

There does appear to be at least a potential tension between the promotion of national "Kazakh" values and the sorts of attributes (critical thinking, international outlook) promoted in generic attributes. In fact, there may be said to be a tension between the attributes of the two intuitions in partnership (see table 2.1).

Table 2. 1

Graduate Attributes

London University Graduate Attributes graduates	**Kazakhstan University Graduate Attributes**
• Look beyond their individual and local interests and see the complexity of an interconnected world. • Understand the nature of the challenges that face that world. • Are aware of their social, ethical and political responsibilities. • Are ready to display leadership and work together to change the world for the better. • Are able to solve problems through innovation and entrepreneurship. • Prosper in a global jobs market that values the skills London University provides	• Possess an in-depth and sophisticated understanding of their domain of study • Be intellectually agile, curious, creative and open-minded. • Be thoughtful decision makers who know how to involve others. • Be entrepreneurial, self-propelling and able to create new opportunities. • Be fluent and nuanced communicators across languages and cultures. • Be cultured and tolerant citizens of the world. • Demonstrate high personal integrity. • Be prepared to take a leading role in the development of their country.
(London University, 2017)	(Kazakhstan University, 2017)

The Nazarbayev Intellectual Schools (NIS) strategy 2020 describes the NIS student as an "intellectual individual, who perfectly combines patriotism with common human values and ethnic-cultural values" (NIS 2011, p5 as cited in Fimyar, 2014, p. 182). While the sentiment expressed in the Kazaksthan University GAs is not as explicit as this, it does seem that they continue the general theme, and are in line with the Minister of Education's comments mentioned earlier. There is a sense that the goal is to develop education through the university to serve both a public good in respect of the country of Kazakhstan and a private good in respect of the individual. It could be argued that this is clear in the GAs of Kazakhstan University but not those of London University. Tension of this variety was also observed at IBCs in the UAE where it was observed that the values of the institution did not complement the values of the state (Vora, 2014).

There is a question then as to whether the students in the foundation year develop the attributes of either or both or neither institution. The foundation year is of particular importance again because the first year of HE is where many habits and values are established (Morris, Cranney, Jeong, & Mellish, 2013). The first graduates of the university emerged in 2015 and the impact they have had on society is yet to be observed. The extent to which the graduate attributes of either partner institution were considered when the partnership was established is unclear. The students of the foundation year are enrolled as students of London University who are taught in Kazakhstan and then, should they pass the foundation year, go on to study at Kazakhstan University. While the attributes of each institution are similar, they are not the same (see table 2.3). Subsequently, there are questions as to which attributes, if any, the students develop.

Conclusion

To conclude, one of the principle causes of the crisis in HE is the growing internationalisation of the sector. The value of a degree is not transparent and students' motivations to obtain a degree appear to be largely extrinsic. At the same time, institutions ability to communicate the value of a degree through league table positions appears to lend itself to an extrinsic motivation to attend

those institutions. The other means of communication, graduate attributes, are typically designed more to the extrinsic again in that they are heavily influenced by governments and industry rather than theories of human development.

The institution at the centre of this research has an explicit mission to develop the state of Kazakhstan. This mission is reflected in the GAs of that institution. It is unclear however whether the students and staff at that institution are motivated by that mission or whether the pursuit of a degree there is motivated by personal development or indeed extrinsic motivations such as obtaining a job. It is also unclear the extent to which the students at the institution develop over the course of their first, and likely most formative, year of study; whether they develop in the way proscribed by the GAs of either or both institutions or the extent to which they develop in their capabilities.

3: Methodology

The previous section reviewed the literature surrounding student development, graduate attributes, their formation and issues with their measurement. The following section will set out the methodological approach adopted by this research. Firstly the social constructionist epistemology underpinning this study will be explained. It will be argued that this epistemology complements the methodology of mixed methods used in the research. The specific methods used in the research will be covered in each of the individual studies.

Research Questions:

The overall research question:

In the context of a transnational HE partnership in Kazakhstan, is student development consistent with the graduate attributes of the institutions involved?

In order to address this question, the project is divided into three studies. Creswell and Plano Clark (2007) argue that the mixed methods approach can be applied to both single and multiple studies.

Study 1 research question:

How do students develop graduate attributes, capabilities and their predictors?

Study 2 research question:

What do teaching and administrative staff working on the foundation program perceive as student development?

Study 3 research question:

What are students' experiences and perceptions of developing graduate attributes, capabilities and their predictors?

The epistemology behind the research

Given that research involves investigating and expanding knowledge, a necessary first step in the process involves what it means and how it is possible to know something. This research is informed by the work of the later Wittgenstein, as epitomised in the Philosophical Investigations (Wittgenstein, Anscombe, G, E, Hacker, P, M, & Schulte, 2009), and Searle's (Searle, 1996) ideas concerning the social construction of reality. Subsequently the epistemological position is social constructionist, holding that knowledge is contingent on an unconscious understanding of the social construction of reality. Moving forward from this, the methodological design is mixed methods, for the following reasons.

According to Searle, facts can be separated into different categories. Broadly speaking, these are brute facts and social and institutional facts. Brute facts are those things which would exist independently of people. Examples of these sorts of facts would include horses, helium, trees and mountains. Social (for example tables, hats, buildings) and institutional facts (for

example, law, economics, and history) are the constructions of humans. Put simply, brute facts would exist independently of humans. If the human race disappeared tomorrow, social facts would exist for as long as natural forces took to decompose them and institutional facts would not exist at all (Searle, 1996). To further illustrate, if the human race disappeared tomorrow, religion would cease to exist, a wooden church would slowly decompose over a number of years but trees would continue much as they were. Brute reality constitutes the foundation for social reality. Without the physical, the socially constructed could not exist.

Searle argues that human institutions (such as religion, law and so on) are dependent on constitutive rules. The formula that explains the relationship is x counts as y in c. So for example, saying the words “I do” (x) counts as getting married (y) in the context of a wedding ceremony (c). Demanding payment (x) counts as a crime (y) in the context of a bank robbery (c) while demanding payment (x) counts as a reward (y) in the context of returning lost property to someone (c).

However, it is of significance that the humans that operate within these institutional rules are typically unaware of them. Searle overcomes this objection by presenting a theory of ‘background’ knowledge which allows people to operate according to the rules of an institution by having learned the rules through experience of living in society, without explicitly being aware that this process was going on or that that particular knowledge had been acquired. For example, if someone buys a newspaper in a shop, it doesn’t seem likely that they are aware that they are conforming to rules associated with money, private property and so on, and yet they act according to these rules. Searle gives the following situation as an example of the complicated sets of rules that we navigate with regularity.

> Consider a simple scene like the following. I go into a café in Paris and sit in a chair at a table. The waiter comes and I utter a fragment of a French sentence. I say, "un demi, Munich, à pression , s'il vows plait." The waiter brings the beer and I drink it. I leave some money on the table and leave. An innocent scene, but its metaphysical complexity

> is truly staggering, and its complexity would have taken Kant's breath away if he had ever bothered to think about such things. Notice that we cannot capture the features of the description I have just given in the language of physics and chemistry. There is no physical-chemical description adequate to define "restaurant," "waiter," "sentence of French," "money," or even "chair" and "table," even though all restaurants, waiters, sentences of French, money, and chairs and tables are physical phenomena. Notice, furthermore, that the scene as described has a huge, invisible ontology: the waiter did not actually own the beer he gave me, but he is employed by the restaurant, which owned it. The restaurant is required to post a list of the prices of all the boissons, and even if I never see such a list, I am required to pay only the listed price. The owner of the restaurant is licensed by the French government to operate it. As such, he is subject to a thousand rules and regulations I know nothing about. I am entitled to be there in the first place only because I am a citizen of the United States, the bearer of a valid passport, and I have entered France legally (Searle, 1996, p. 3).

In this sense, the theory shares ground with the concept of tacit knowledge, as advanced by Polanyi in Personal Knowledge (Polanyi, 1958). According to Polanyi, there are many things which are known but which are difficult to communicate. For example, it is simple enough to convey the information that Paris is the capital city of France. However, the knowledge of for example, how to play the piano, or indeed the sort of deep understanding of the institutions we use every day such as money, are things that we know but which we can only properly communicate our understanding of through our actions not by mere description. We show that we know how to play the piano by playing the piano, that we understand currency by using money.

Validity and reliability in mixed methods research

There are however, a number of considerations that need to be addressed when engaging in mixed methods research. With regard to the quantitative elements, internal validity concerns the extent to which the conclusions drawn from the data can be attributed to the variables measured (Eeva-Mari & Lili-Anne, 2011). In this research internal validly was addressed through the use of principle components analysis (Conway & Huffcutt, 2003), internal consistency through use of Cronbach's Alpha (Creswell, 2012) and regression analysis.

With regard to the qualitative elements, the related issue is credibility, which is the extent to which the evidence gathered supports the conclusions drawn (Eeva-Mari & Lili-Anne, 2011). It was felt that the sample of participants in the qualitative elements of this research represented an authentic source of data. The questions were not leading and the researcher was careful in interactions to maintain an open perspective and not allow personal bias to influence the direction of discussions or the analysis of data (data collection and analysis is discussed in greater depth in the methods sections of studies two and three).

In quantitative research, external validity is also a concern. The three areas broadly contained within this concept are population (whether the sample represents the population), time (whether the results can be generalised to other times) and environment (whether the results are generalizable into other settings) (Eeva-Mari & Lili-Anne, 2011). With regard to this research, the sample size was adequate for the statistical testing reported (sampling methods are described in detail in subsequent chapters). The nature of the foundation program having fixed goals indicates that the time validity is mitigated. The environmental issue will need to be investigated with further research in a different setting.

With regard to the qualitative elements, generalisability is also an issue (Creswell, 2012; Eeva-Mari & Lili-Anne, 2011). As a result there is a need to locate the results in the literature (which takes place in the discussion sections of this project) and again further investigation in a different setting should take place.

Finally there is the issue of reliability. In quantitative research, this is connected with the consistency of the values of the measures, and issues of clarity in instruction and question design (Eeva-Mari & Lili-Anne, 2011). In this project, the survey instrument was composed from existing instruments which have been the subject of analysis (further details are discussed in the literature review of study 1) and a set of questions composed by the researcher. The survey was piloted with a similar population to the test population (discussed in methods section of study one) and no issues with comprehension or general clarity were uncovered.

In qualitative research, the related issue concerns the consistency of the results (Eeva-Mari & Lili-Anne, 2011). In order to ensure that the conclusions drawn from the data were consistent, this research involved the careful recording and transcription of qualitative data and the use of independent parallel coding (Stemler & Colors, 2001; Thomas, 2006)

Methods

The implications of such an epistemological position are that this research will involve mixed methods. As noted earlier, the social constructionist epistemological viewpoint holds that reality is made up of institutional and brute facts, but that the institutional facts are contingent for their existence on the brute facts. A court of law is much more than just a building, however, there at the same time needs to be bricks, mortar and the other bits of hard reality for the socially constructed idea to rest upon. So, in order to best understand reality, it seems reasonable to harness aspects of both quantitative methods with its focus on positivism and hard facts, and qualitative methods which focus on interpreting reality.

In other words, we can best understand how people construct reality by understanding the facts from which those constructions are made. In this sense, the brute facts to be measured are the people themselves. The only evidence for the existence of institutional facts is the way in which people interact with them. Measuring perceptions through qualitative investigation will reveal how participants perceive an institution. However, how people interact with and develop as a result of that interaction, may not be the same as those perceptions. For example, people

may report their perception of the government of their country in one way, but then actually interact with that institution in a different way. Similarly, the way that people perceive the institution of the university, may differ from the manner with which they interact with it. Subsequently, it seems a logical step to blend qualitative and quantitative approaches.

Beyond the epistemological reasons, mixed methods is increasingly being used in social scientific research. As Creswell and Plano Clark note, "the use of quantitative and qualitative approaches in combination provides a better understanding of research problems than either approach alone" (2007, p. 5). Furthermore, the approach is becoming increasingly popular in a variety of fields, not just the social sciences where it has been observed "to produce a superior product" (Johnson & Onwuegbuzie, 2004, p. 17). In the area of health research, mixed methods approaches are used to address a wider range of questions than quantitative methods alone (O'Cathain, Murphy, & Nicholl, 2007). In general, the literature appears to indicate that by adopting a mixed methods approach, the weakness of adopting a quantitative or qualitative approach can be mitigated.

> Researchers should collect multiple data using different strategies, approaches, and methods in such a way that the resulting mixture or combination is likely to result in complementary strengths and nonoverlapping weaknesses (Johnson & Onwuegbuzie, 2004, p. 18).

Furthermore, with regard to the specific mission of this research, the evaluation of the effectiveness of a 'capability-based curriculum', the literature recommends data collected from a range of stakeholders involving both quantitative and qualitative methods (Leathwood & Phillips, 2000 cited in Oliver, 2013). Finally, a 2016 study which investigated graduate attribute attainment also used a mixed methods approach and recommended that future studies did so as well.

> It is recommended that further mixed-method longitudinal studies are conducted across disciplines to establish more clearly the extent to which SaP pedagogies impact on

> personal development, as well as the acquisition of subject specific graduate attributes (Pauli & Raymond-Barker, 2016, p. 42).

While the study at the centre of this research was actually conducted prior to the Pauli et al study, it is interesting to note that the recommendations made by that study match the methods of this one. Firstly, the goals of the Pauli et al study and this research are similar. As with that study, here quantitative elements are used to measure student development and change. Furthermore, the perceptions of stakeholders are investigated using qualitative means in much the same way as that study.

Language

The language of all aspects of this project was English. The administrative and teaching staff who participated in study two, were either native speakers of English or had as a requirement of their employment the capability to work in an English speaking environment. With regard to the students who participated in the study, the requirement for entry to the foundation program was a minimum IELTS score of 5.5 (a level of language proficiency sufficient for admission to some but not all UK universities for undergraduate study). The admission exams were also conducted entirely in English. Furthermore, the pilot study of the survey instrument was conducted with students of the same level and no language related issues were discovered.

Ethics

Ethics approval was received from the ethics committee of the Education department at the University of Nottingham. In order to avoid harm, all participants in this research have confidentiality. However, the longitudinal nature of the survey required that participants be contacted after completion of the first round of data collection. As a result email addressed were collected but stored securely. In addition, the institutions featured in the research have not been named.

Before participating, consent was sought from participants (see appendix A for the consent forms for participation in both the qualitative and quantitative aspects of this research). The survey was conducted online and the results held anonymously in a secure location. Responses were treated with full confidentiality and no research participants are identifiable from any publications. Transcripts from individual and group interviews were also confidential and held anonymously in a secure location. Participants had the right to withdraw from the project at any point.

While there has been an attempt to conceal the identity of the institutions involved, the researcher acknowledges that the identity of those institutions could be discerned with relative ease. It should be pointed out that the research was conducted with the permission of London University. At that point in time, all students were enrolled at London University with only the location of study being KU.

Conclusion

This section has established the research questions at the centre of this project. It has argued that the appropriate approach for addressing these questions is with mixed methods. For this project those methods are in-depth interviews with staff, a longitudinal survey of students with two data collection points at the beginning and end of the foundation year and follow up group interviews with student participants of the survey.

4: Study One: Quantitative analysis of the development of graduate attributes, capabilities and their predictors.

The aim of this section is to investigate student development quantitatively. To achieve this, an instrument was developed that measured graduate attributes, capabilities, personality and motivation. Personality and motivation have been observed to be important variables in student development, and it is expected that these variables may act as important predictors of student development in this area. The instrument was administered at the beginning and the end of the foundation year at Kazakhstan University and thus the longitudinal nature of the study was intended to reveal changes in these areas.

In the following chapter, the literature surrounding the capabilities approach will be explored and the case for the potential of this system to be used as a measure of graduate attributes made. As noted in the literature review, there is an issue with many studies in that the impact of the university experience on student development is difficult to separate from other variables. Motivation and personality are potentially important variables influencing student development and subsequently the literature surrounding these factors will also be explored.

Literature review

The Capabilities Approach

A means of reaching a consensus about the composition of graduate attributes and a solution to the problem of their assessment may lie in the area of human capabilities. As noted above, human capabilities are aligned with the developmental aspect of at least generic graduate attributes, and have influenced the creation of lists of graduate attributes (Haigh & Clifford, 2010).

The term ‘capability’ may be useful as an overarching concept to reflect the clustering of attributes and skills. The various combinations of attributes and skills that a graduate deploys in a series of different situations can be called capabilities (Hager & Holland, 2006, p. 42).

What are human capabilities?

The capabilities approach, as set out by the economist Amaryta Sen (Sen, 1985), is a method of approaching social welfare that focuses on what people are capable of potentially rather than how much money or possessions people have. The focus is on potential rather than actual activities. Advancing this idea, Nussbaum (2000b) has formulated a list of these capabilities.

1. *Life*. Being able to live to the end of a human life of normal length; not dying prematurely, or before one's life is so reduced as to be not worth living.

2. *Bodily Health*. Being able to have good health, including reproductive health; to be adequately nourished; to have adequate shelter.

3. *Bodily Integrity*. Being able to move freely from place to place; to be secure against violent assault, including sexual assault and domestic violence; having opportunities for sexual satisfaction and for choice in matters of reproduction.

4. *Senses, Imagination, and Thought*. Being able to use the senses, to imagine, think, and reason—and to do these things in a "truly human" way, a way informed and cultivated by an adequate education, including, but by no means limited to, literacy and basic mathematical and scientific training. Being able to use imagination and thought in connection with experiencing and producing works and events of one's own choice, religious, literary, musical, and so forth. Being able to use one's mind in ways protected by guarantees of freedom of expression with respect to both political and artistic speech, and freedom of religious exercise. Being able to have pleasurable experiences and to avoid non-beneficial pain.

5. *Emotions.* Being able to have attachments to things and people outside ourselves; to love those who love and care for us, to grieve at their absence; in general, to love, to grieve, to experience longing, gratitude, and justified anger. Not having one's emotional

development blighted by fear and anxiety. (Supporting this capability means supporting forms of human association that can be shown to be crucial in their development.)

6. *Practical Reason.* Being able to form a conception of the good and to engage in critical reflection about the planning of one's life. (This entails protection for the liberty of conscience and religious observance.)

7. *Affiliation.*

    1. Being able to live with and toward others, to recognize and show concern for other humans, to engage in various forms of social interaction; to be able to imagine the situation of another. (Protecting this capability means protecting institutions that constitute and nourish such forms of affiliation, and also protecting the freedom of assembly and political speech.)

    2. Having the social bases of self-respect and non-humiliation; being able to be treated as a dignified being whose worth is equal to that of others. This entails provisions of non-discrimination on the basis of race, sex, sexual orientation, ethnicity, caste, religion, national origin and species.

8. *Other Species.* Being able to live with concern for and in relation to animals, plants, and the world of nature.

9. *Play.* Being able to laugh, to play, to enjoy recreational activities.

10. *Control over one's Environment.*

    1. *Political.* Being able to participate effectively in political choices that govern one's life; having the right of political participation, protections of free speech and association.

> *2. Material.* Being able to hold property (both land and movable goods), and having property rights on an equal basis with others; having the right to seek employment on an equal basis with others; having the freedom from unwarranted search and seizure. In work, being able to work as a human, exercising practical reason and entering into meaningful relationships of mutual recognition with other workers
>
> (Nussbaum, 2000a, p. 223).

Of these, there are three capabilities that seem of particular relevance to the field of education. These are senses, imagination and thought, practical reason and affiliation (Nussbaum, 2000a). With regard to describing the development of society, Anand notes "the capabilities approach has been successful in part because it provides a technically coherent theory which draws on conventional economic analysis but is also conceptually attractive by its engagement with modern concerns about fairness and equality of opportunity" (Paul Anand, Durand, & Heckman, 2011, p. 854).

There is a substantial body of literature that advocates the use of the capabilities approach in HE (Lanzi, 2007; Tikly & Barrett, 2011; Walker, 2006, 2008, 2012). Use of the capabilities approach can avoid the problem noted previously of the focus on relating HE to market forces. A move towards social justice as a reason for engaging in HE can refocus conceptions of what good education is away from economic development (Lanzi, 2007; Tikly & Barrett, 2011; Walker, 2006, 2012).

According to Balakishnan et al (2010 as cited in Walker, 2012) the 2008 global financial crisis, the effects of which are still being felt in 2018, is evidence of the failure of neo liberal economic policies and unregulated markets. The economic growth experienced in the decade preceding that crisis was unequally distributed, a fact borne out by the contemporary 1% movement. As Walker (Walker, 2012) points out, there is no reason to assume that the human capital model will promote social justice in education. However, in moving the focus of development away form human capital, the capabilities approach could promote social justice

(Paul Anand, Durand, et al., 2011; Walker, 2012). It should be noted however, that Lanzi (2007) suggests there can be a synergy between human capital and capabilities approaches.

In addition to moral arguments about the problems of evaluating income with success or happiness and indeed the inadequacies of instruments such as GDP as a measure of development, there are two quite practical reasons why universities should not market a degree purely on the basis of its economic benefits. Firstly, the cost of university tuition is rising faster than average earnings in most countries (the UK is an extreme example of this). As noted in Chapter 1, for many graduates, the cost of obtaining a degree involves years of loan repayments and no guarantee of a job. With many students doing the same job after graduation as they were while they studied, the economic argument may suggest that people are financially better off without a degree. The second point relates to this in that as more and more people become graduates, there aren't enough jobs that require graduates and so actually having a degree doesn't guarantee a job, or more accurately, doesn't guarantee a job that will pay a high wage.

Furthermore, there is strong evidence that education has an impact on capabilities. While there are authors who write of the developmental potential of education for capabilities (Vaughan, 2007; Walker, 2007), in a 2003 study of female school children in South Africa Unterhalter (2003), discovered that the capabilities of those children actually reduced as a result of the conditions at the school (sexual harassment, risk of HIV infection) (Unterhalter, 2003). So the measurement of capabilities can demonstrate development in either a positive or negative direction.

The relationship between graduate attributes and human capabilities

On the surface at least, it is still fair to say that there is a substantial overlap between capabilities and GAs (see Table 4.1).

Table 4. 1

Comparison of education related capabilities and generic graduate attributes

Capabilities related to Education	Generic graduate attributes common to UK, USA and Australia
Senses, Imagination, and Thought.	
Being able to use the senses, to imagine, think, and reason – and to do these things in a ‘‘truly human’’ way, a way informed and cultivated by an adequate education, including, but by no means limited to, literacy and basic mathematical and scientific training.	Technological literacy Leadership
Being able to use imagination and thought in connection with experiencing and producing self-expressive works and events of one’s own choice, religious, literary, musical, and so forth.	Initiative, problem-solving skills
Being able to use one’s mind in ways protected by guarantees of freedom of expression with respect to both political and artistic speech, and freedom of religious exercise.	
Being able to search for the ultimate meaning of life in one’s own way. Being able to have pleasurable experiences, and to avoid non-necessary pain….	Lifelong learning
Practical Reason.	
Being able to form a conception of the good and to engage in critical reflection about the planning of one’s life. (This entails protection for the liberty of conscience).	Professionalism, ethics, values
7. Affiliation. A.	

Being able to live with and toward others, to recognize and show concern for other human beings, to engage in various forms of social interaction; to be able to imagine the situation of another and to have compassion for that situation; to have the capability for both justice and friendship. (Protecting this capability means protecting institutions that constitute and nourish such forms of affiliation, and also protecting the freedom of assembly and political speech.)	Global citizenship/international perspectives/cultural awareness Social responsibility/service to the community
7. Affiliation. B.	
Having the social bases of self-respect and non-humiliation; being able to be treated as a dignified being whose worth is equal to that of others. This entails, at a minimum, protections against discrimination on the basis of race, sex, sexual orientation, religion, caste, ethnicity, or national origin. In work, being able to work as a human being, exercising practical reason and entering into meaningful relationships of mutual recognition with other workers.	Global citizenship/international perspectives/cultural awareness Social responsibility/service to the community
(Nussbaum, 2000b, pp. 78–80)	(Strivens, 2011)

However, Walker (2008) argues that capabilities and graduate attributes are not synonymous. That although there are similarities, the language of graduate attributes and that of capabilities is distinct.

> Capabilities might appear similar on the surface to graduate attributes (for example Bowden et al. 2000; Fallows and Steven 2000) and the comprehensive employability skills and attributes subject profiles recently developed by the Higher Education Academy (HEA 2006), but the language of human capabilities is very different (Walker, 2008, p. 477).

It may be that the argument here is that graduate attributes have a fixed connotation whereas capabilities, as discussed above, are more fluid. However, this seems to be more of a problem with oversimplified formations of graduate attribute lists rather than the conflation of capabilities to GAs. It was noted earlier that GAs are heavily context dependent (Jones, 2009). In addition, common sense dictates that not everyone would develop the same attributes in the same way, unless universities are in the business of character education.

It does seem however, that given the influences on the formation of GAs as noted above, it is understandable why there is a focus on human capital notions. In fact, Walker appears to be arguing that GAs serve the purpose of employability rather than personal development. That GAs do not necessarily promote equality.

> It is not that all these things are unimportant; it is that they do not necessarily inflect towards equality, nor do they take account of difference and diversity in acquiring and being able to use these skills and attributes. The danger is that privileging employability above other goods of higher education is to reduce individuals to economic units, and to equate material property with well being and having a good life, even though we increasingly understand that this link between satisfaction and well being has broken down in the case of developed countries (Walker, 2008, p. 486).

However, while this may be true of certain institutions and certain GAs, it seems a reasonable assertion that ultimately an institution' GAs are the responsibility of that institution, and can encompass much more than this.

Flores Crespo argues that capabilities can only be enhanced through a liberal education that encourages self-reflection and a critical attitude (Flores–Crespo as cited in Vaughan, 2007). Walker goes further and argues that education ought to contribute to an increase in capabilities.

> Sen's capability approach and Nussbaum's capabilities are concerned with well being, how well a life is going for each person and quality of life. Learning and learning achievements in higher education ought then to contribute to well being and quality of life in some way. If this is not happening, or if it is for some students and not for others, then we ought to raise questions about equality of desirable capabilities for each and every student, and to understand these as a social commitment (Walker, 2008, p. 479).

It seems that the language of liberal education associated with the development of capabilities is similar to that of many GAs. The characteristics identified by Flores-Crespo were for example seen "as entailing a critical examination of oneself, conceiving of ourselves as world citizens, and a capacity for narrative imagination and empathy" (Vaughan, 2007, p. 113). So this and other literature suggests that education can increase (or decrease) capabilities and further that education ought to increase capabilities. It also seems fair that to suggest that the capabilities approach could form the foundation of an institutions list of GAs (although in the most part currently they do not). Walker's functioning capabilities (Walker, 2008) may be such a basis, however, that is beyond the scope of the current research.

To sum up, capabilities could be the basis for the formation of GAs and should be developed by education. It is possible then that a focus on capabilities as a justification for the composition of graduate attributes would be beneficial for a number of reasons.

To begin with, the claims for social justice related to the capabilities approach can be said to be universal. This avoids the nation centric focus that appears in many graduate attributes and

runs contrary to the idea that universities are developing into entities that exist and have relevance across national boundaries. As mentioned earlier, in Kazakhstan in particular, there is a tension between the national and international. Education has a mission to build citizenship at an international and national level.

Furthermore, discipline related attributes as well as skills and attitudes could all potentially be justified universally by reference to the capabilities approach thus mitigating the disciplinary context issues posed by Jones (2009).

Additionally, were graduate attributes to be successful in communicating the wide variety of benefits of higher education from a strong theoretical base, not only would they constitute a transparent form of communicating a university's mission, they may well also serve as a way of motivating students. As will be discussed at greater length, given the popularity of essay writing websites, parental pressure (Iacopini & Hayden, 2017) and a focus on employment opportunities after graduation (Gallagher & Garrett, 2012) student motivation appears often to be largely extrinsic. By making clear the value of study via graduate attributes, students may develop motivation closer to the intrinsic rather than the extrinsic end of the scale.

The measurement of capabilities

The capabilities measurement project aims to create a means to measure capabilities internationally. Headed up by Professor Paul Anand and funded by, amongst others, the Leverhulme trust, the project has investigated measuring capabilities in a variety of contexts including the UK and Argentina (Paul Anand et al., 2009; Paul Anand, Krishnakumar, & Tran, 2011; Paul Anand & van Hees, 2006). A variety of instruments have been developed and tested and results have been positive. Anand (2009) for example compared results with a variety of other measures of happiness indicating that the instrument produced consistent results.

However, the majority of these surveys were cross sectional and some of their limitations have been connected with the cross-sectional nature of the data collection methods, as Pauli and Raymond-Barker observe.

> It would be advisable to conduct longitudinal investigations into the impact of SaP pedagogies. This is particularly pertinent as we were unable to demonstrate measurable effects in personal development. The improvements in skills confidence were quite small over the three years of study and there were no differences in critical thinking disposition, global citizenship, self-determination in learning, ethical thinking (integrity) or interactional diversity related to year of study. Given that all these are qualities, which students-as-partners approaches seek to address, it was unexpected to find that these do not change during the course of three years of study. It may well be that the cross-sectional approach taken in this study masked individual developmental effects. This could be addressed by conducting appropriate longitudinal studies (Pauli & Raymond-Barker, 2016, p. 41).

A study in Florida by Landorf and Pineda (2011) used grounded theory in order reveal the interrelationships of the processes used in the foundation of their global learning outcomes. This information was gathered through interviews, observations and focus groups and was then compared with Nussbaum's (2000a) list of core education related capabilities. This approach constitutes qualitative research into the issue. However, no attempt was made in this study to assess the extent to which graduates demonstrated the attributes the University had formulated. . Subsequently, there is a strong argument that the measurement of capabilities in the context of educational development should be longitudinal.

Graduate attributes and motivation

There are multiple motivations for students to enrol in tertiary education. These include, but are not exclusive to future job prospects, personal development and parental influence. It is interesting to consider to what extent students are motivated by the sort of development promised by lists of GAs as they may also have a role to play in student motivation.

The relationship between motivation and academic achievement is well documented (Dev, 1997; Meece, Anderman, & Anderman, 2006; Morris et al., 2013; Zimmerman, Bandura,

& Martinez-Pons, 1992). According to a recent study in the UK, motivation to do a degree differs according to gender, age, social and ethnic background (Davies, Mangan, Hughes, & Slack, 2012). It seems reasonable to assume that motivations may differ culturally too and this would have an impact on degree choice and motivation in general. While there are several theories of motivation, this review will consider self-determination theory (SDT) formulated by Deci and Ryan (Deci & Ryan, 1985; Ryan & Deci, 2000). Although released after the research in this project was conducted, a 2016 project to measure graduate attributes by Pauli, Raymond-Barker and Worrell used motivation as one of the outcomes measured. SDT was the theory which formed this study (Pauli & Raymond-Barker, 2016).

Deci and Ryan have written extensively on the topic of motivation over the last 30 years. As a result of their research they formulated SDT, which holds that the two principle types of motivation are intrinsic and extrinsic, and that the quality of both performance and experience itself are greatly enhanced when the motivation is intrinsic (Ryan & Deci, 2000).

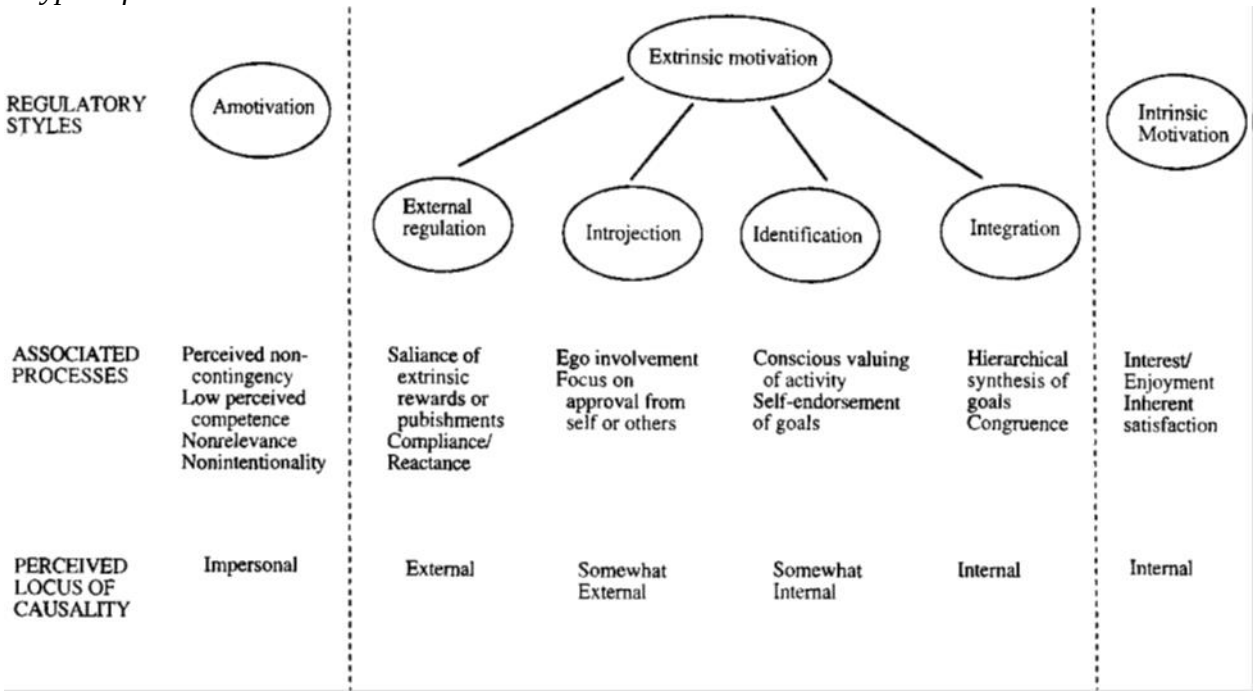
Intrinsic motivation covers those activities which are performed for their inherent pleasure. As noted above, in terms of achieving goals, intrinsic motivation produces the best results (Deci & Ryan, 1985; Ryan & Deci, 2000). Unfortunately, intrinsic motivation is comparatively rare in the adult world as most people work out of need rather than desire. There are of course exceptions to this rule. Some students are intrinsically motivated, and these students enjoy the activity of study and learning.

However, for many students, study is a means to an end rather than an end in itself. In other words, many students are extrinsically motivated. Ryan and Deci (Ryan & Deci, 2000) illustrate the levels of extrinsic motivation by means of a scale (see Table 4.2). At one end there is external extrinsic motivation. This is when motivation is completely external and derives solely from forces outside the individual (parents, peers, a grade or merely passing a course and so on). It is the least effective in terms of achievement (Ryan & Deci, 2000). At the other end of the scale there is internal extrinsic motivation. This occurs when some long-term value to the

individual is perceived and this value acts a motivating force. The individual acts in such a way that is perhaps not enjoyable in and of itself, but which may lead to some future desirable condition. Healthy eating or going to the gym regularly might fall into this category.

Table 4. 2

Types of motivation



(reproduced from Ryan & Deci, 2000).

As noted above, there is a strong link between achievement and motivation (Ryan & Deci, 2000). On one end of the motivation scale there is intrinsic motivation which is the most effective in terms of achievement and on the other end there is external extrinsic motivation which is the least effective. It is clear from the literature that students typically have a mixture of intrinsic and extrinsic motivations but that the majority fall into the extrinsic category.

Student motivation to attend HE

In the UK, the 2015 NCUB report draws a clear relationship between students' decisions on what and where to study and employment opportunities with 86% of student respondents stating that earning potential was an important part of their decision making (National Centre for

Universities and Business, 2015). This appears to constitute an extrinsic motivation to obtain a degree.

Related to this, an additional key factor for students when choosing an institution was the opportunity to work, with those studying more vocational subjects putting more emphasis on the opportunity to work whilst at university. It is clear students carry out in-depth research when choosing what and where to study, with these seemingly extrinsic factors having a large influence over their choices (National Centre for Universities and Business, 2015).

A 2002 study by Mazzarol and Soutar investigated the motivation for students to study abroad. The study, which involved 2,485 students across four different countries, isolated eight main factors. These were in turn divided into push and pull factors.

Push factors included the perception that the quality of education was better and a desire to migrate at some later date (Mazzarol & Soutar, 2002). It may be argued that the first of these constitutes an intrinsic motivation, but it is not clear what the participants considered the education to be better for. It could be that it was seen to be better for their personal development, or it could be that it was better in terms of job opportunities which would often constitute an extrinsic motivation.

The pull factors separated into the pull of the country and the pull of the institution. The appeal of the country is connected primarily to the reputation of the education sector there and the knowledge the student has of that country with additional factors including the cost of living and tuition fees there (Mazzarol & Soutar, 2002). These factors once again appear to be largely extrinsic in nature. The institutional attraction, which includes the reputation of the staff and courses, the recognition of the qualifications of that institution by employers are also seemingly not intrinsic.

With regard to the post-Soviet states, the motivation to travel abroad for study appears to be extrinsic as well. In a study of study mobility in post-Soviet states based on regression analysis of secondary numeric data, Chankseliani (2016) argues that students are motivated to a

great extent by future employment opportunity. Chankseliani observes that students "seek to acquire human capital, as they are aware that educational investments result in economic benefits" (2016, p. 308). Such motivation to engage in HE appears to be extrinsic in nature.

Mazzarol and Soutar (2002) predicted that the development of IBCs would lead to a reduction in the importance of push factors. This prediction was born out by a study by Wilkins and Huisman(Wilkins & Huisman, 2011a) which investigated the reasons why international students at a leading UK university had chosen to study there and whether they would consider studying at an IBC. This research compared push and pull factors for students to attend an international institution and found that pull factors far outweighed push factors (Wilkins & Huisman, 2011a).

The factors coming out of this research were very similar to those coming out of the 2002 Mazzarol and Soutar study and appear to be largely extrinsic in nature. Once again, the appeal of the country and the institution was largely connected to reputation. An addition for this study was the importance of study and improving English language, which was again connected to employment opportunities. "The most popular reasons given by students for wanting to undertake higher education overseas were to improve employment prospects, to experience a different culture, and to improve their English." (Wilkins & Huisman, 2011a, p. 308). It may be argued that the desire to experience a new country is an intrinsic motivation, however, this would not seem to be one connected exclusively with education. An interesting additional point coming from this study was the fact that the reputation of the university was more important for Chinese and Indian students than the quality of the institutions programs (Wilkins & Huisman, 2011a).

Within this study, the motivation to potentially study at an IBC was connected with the perception that it would be a cheaper option both in terms of fees and living costs, but also in terms of the costs of travelling home. While this motivation appears extrinsic in nature, it fits in with the rationale put forward by the Observatory on Borderless Higher Education (OBHE).

With the increase in the number of international branch campuses (IBCs), the OBHE lists the following motivations for students to choose an IBC.

- an opportunity to obtain a foreign degree without having to move abroad,
- (normally) lower tuition fees than those charged at the provider's home campus,
- lower living expenses than in a foreign country,
- lack of visa restrictions on ability to work while studying

(Lawton & Katsomitros, 2012).

A 2017 study by Iacopini and Hayden based in Vietnam also investigated motivating factors for students to attend an IBC. However, in this study the parents of students were the subjects. Once again, extrinsic motivation seems to be prevalent with results that indicated that parents were influenced by the quality of qualifications and the extent to which, on graduation, the qualification would contribute to employment opportunities. In addition, the appeal of an IBC (in this case RMIT Vietnam) was the perception that the foreign institution would be free from corruption. As the authors note, "it was possible to see that those parents with the financial capacity to send their child to RMIT Vietnam justified their decision in part on the reputation of this institution for being free of corruption" (Iacopini & Hayden, 2017).

The influence of parents was also explored by the 2002 Mazzarol and Soutar study. This influence was of particular importance with reference to students from Indonesia and Taiwan. In this case, parents had persuaded their children to study in Australia rather than the USA because of a perceived notion that "Australia was 'safe' and less like to offer the girls 'undesirable influences' that might be found in California" (Mazzarol & Soutar, 2002, p. 89). Once again, this does not appear to be an intrinsic motivation.

It seems possible then that students in general and international students in particular may have a tendency to select degrees because of status or perceived rewards in terms of future employment (on the external extrinsic end of the scale) rather than because of an interest in the

subject itself (closer to the intrinsic end of the scale). As Gallagher and Garrett (2012) point out, international students, especially those from Asia, value status very highly.

> Asian students are attracted by what major US colleges offer. Despite tough academic entry hurdles, the reward is high. From outstanding education to safe residential communities to first class facilities to an extraordinary network of influential alumni and to holding a degree from a university with a global brand, the total package is probably often perceived as of higher quality than the value proposition offered by Australian universities. And Asian Students are influenced in their education choices by the US---dominated World university league tables (Gallagher & Garrett, 2012, p. 14).

McBurnie and Ziguras (2007) point out that the student participants in their research also valued reputation very highly with 98% of respondents stating this was either important or very important in their decision making process (McBurnie & Ziguras, 2007). In this research 94% of respondents cited the ranking of the university or department were important or very important considerations in their decisions about the reputation of a university (McBurnie & Ziguras, 2007). This point is supported by Wilkins and Huisman (Wilkins & Huisman, 2011a) who argue that IBCs can improve their reputation for research excellence, a factor in most rankings systems.

From this the authors conclude that rankings are important areas for institutions, especially IBCs, to focus on. As noted earlier, rankings are one method of institutions to communicate their worth. Graduate attributes are another. However, there has seemingly been no research into the extent to which, if at all, students are motivated by their personal development as predicted by institutional graduate attributes.

In terms of the university at the centre of this research, the motivation recorded to date for students to attend falls largely into the extrinsic category. Since 2015, Kazakhstan University has conducted a survey part of which focuses on student motivation to attend that institution. Data compiled by the university for 2015 to 2017 reveals that the most commonly cited reason to

attend Kazakhstan University is the fact that English is the language of instruction. 73.5% of the students commented that this factor was "very important" (Kazakhstan University 2017). In second position with 65.2% was the institution's academic reputation and in third position was the quality of the facilities with 64.7% (Kazakhstan University 2017). This data is collected at three points, upon entry to the university, at the end of the foundation, and immediately prior to graduation. It is worth noting that the perceptions participants had of the concept of academic reputation is not clear. If the perception is that the developmental mission of the university is the major contributing factor to its reputation, then that would be towards the intrinsic end of the scale. If it is the case that the appeal is that the reputation is connected to employment opportunities, then that would be towards the extrinsic end of the scale.

Taken as a whole, most of these motivations to engage in HE appear to sit on the extrinsic end of the scale (however, a possible result of the niche campus growth may be more intrinsically motivated students). The focus of this review has been international students, and there is a perception that international students are motivated in an extrinsic external manner more often than home students. Typically, issues connected with insufficient English language skills and the need to write within a different cultural rhetorical styles (Kaplan, 1966) (the idea that Chinese students for example, have learned to structure an argument in a manner very differently to that learned by UK students) have been seen to account for the different levels of achievement between home and international students (Foster, 2012). However, it seems possible that variances in motivation may also be responsible for these differences in performance.

However, as noted in the previous section, Li's 2012 study found that while international students were indeed motivated by economics they were also motivated by soft currencies such as those associated with graduate attributes (communication skills, teamwork and so on) and the experience of living abroad which would seem to fit in more with an intrinsic motivation

It must be pointed out of course, that in the area of questionable motivation, it is not only international students that come into focus. The increase in incidents of plagiarism and the popularity of essay writing websites such as unemployedprofessors.com indicate that the problem of motivation is not only an issue for international students. As noted above, students associate obtaining a degree with getting a highly paid job, or at least a job of some sort. When it becomes clear that graduate employment is no longer a guarantee, the whole value of a graduate education becomes called into question. This, plus the importance of status and incidents of plagiarism, hints that a degree is seen primarily as a means to an end.

Developing the argument made in chapter 1, it is conceivable that more transparent communication of the value of a degree and the benefits of a particular institution from universities, might serve to shift student motivation in a more positive direction and graduate attributes may serve as a means of doing this. Given the benefits of enhanced motivation to performance, this would most likely be beneficial for students.

As noted earlier in this section, motivation was one of the variables measured in the Pauli at al (2016) study on the measurement of graduate attributes. In that study, the justification for measuring motivation was the impact of motivation on performance, the authors note “research has supported the notion that intrinsic motivation, internalization of values and self-regulation leads to high quality learning as well as personal development (Deci et al. 1991 cited in Pauli & Raymond-Barker, 2016, p. 11).

Subsequently, it is of interest to consider student motivation to attend the university in a transnational context, whether it is aligned with the personal development aspects of graduate attributes and the extent to which that motivation changes or whether it changes at all.

Measuring Motivation

The Academic Motaivation Scale (AMS) is a 28 item measurement spread across seven subskills (three related to intrinsic motivation, three to extrinsic motivation and one to amotivation) which has been used widely as a means of assessing motivation and is informed by the work on

motivation (self-determination theory) by Ryan and Deci (Vallerand et al., 1992). While originally written in French, the AMS is a robust instrument that has been translated into English and a number of other languages including Spanish (Stover, de la Iglesia, Boubeta, & Liporace, 2012) and Turkish (Sozbilir & Kutu, 2010). More than 3000 participants were involved in validation of the original version of the AMS. Results indicated high levels of temporal stability as demonstrated through a test retest correlation revealing a mean of .75 and a satisfactory mean alpha of .80 (Vallerand et al., 1992).

Measuring personality

An important variable in measuring capabilities is personality (P Anand, Roope, & Gray, 2014). The ten item personality inventory (TIPI) (Gosling, Rentfrow, & Swann, 2003) is often used and results are consistent in indicating the reliability of the measure. A study by Jonason et al (2011) for example, compared the TIPI with instruments measuring self-esteem and sociosexualty which they argue map onto the outcomes of the TIPI. Their results indicated consistency between the instruments (Jonason et al., 2011). Gosling's instrument has been combined with others in several other studies at tertiary education institutions such as Bunevicius et al's 2008 study of anxiety and depression amongst medical and humanities students and Sanchez-Ruiz et al's 2012 study of the impact of personality on academic performance.

The instrument is reported to be reliable and, because it is short, is less of an inconvenience to participants especially when combined with other instruments (Anand, et al., 2011; Bunevicius, Katkute, & Bunevicius, 2008; Sánchez-Ruiz, Hernández-Torrano, Pérez-González, Batey, & Petrides, 2011). However, Gosling (2003) points out that the brevity of the test and validity were the primary concerns in the instrument design, and that to achieve good confirmatory factor analysis (CFA) fits and appropriate alphas would have involved a different sort of design. Furthermore, Woods and Hampson (2005) point out that "coefficient alpha reliabilities are extremely difficult to interpret in scales of two or three items" (Woods & Hampson, 2005, p. 375).

Conclusion

As noted earlier, there are substantial problems with the measurement of GAs. Walker (2008) used detailed analysis of focus group data to establish student development. However, this may not be something that matches the pre-post mass evaluation suggested in papers on graduate attributes. Not every institution is going to want to conduct focus groups to discover whether graduate attributes have been attained. Research indicates that capabilities can be measured using appropriate statistical indicators applied to surveys (Paul Anand et al., 2009; Paul Anand, Krishnakumar, et al., 2011; Paul Anand & van Hees, 2006). This may mean a more manageable approach that would allow testing of the sort used at the University of Queensland and would demonstrate whether progression had occurred over the course of the study of the degree. It would also serve the purpose of making students aware of the change in capabilities.

Research question:

How do students develop and what factors predict that development?

Methods

In order to investigate this question, a survey instrument was developed combining the capabilities measurement instrument (CMI) (P Anand et al., 2014; Paul Anand, Krishnakumar, et al., 2011) the ten item personality inventory (TIPI) (Gosling et al., 2003) the academic motivation scale (AMS) (Vallerand et al., 1992) and a short graduate attribute measurement instrument (GAMI) developed by the researcher from Striven's (2011) list of generic graduate attributes.

The instrument was first administered at the beginning of the foundation year, in September 2014 and towards the end of the academic year in May 2015. As the population of the foundation was comparatively small (n=550), total population sampling was used as this is appropriate for such a small number (Etikan, 2016). All of the population were given the opportunity to take part.

Longitudinal design was chosen because the research aimed to capture how students develop and change over the course of the foundation year (Creswell, 2012). Oliver (2013) argues that the evaluation of HE curricula should be longitudinal. As noted in the literature review, both Buckley (2015) and Coetzee (2014), whose research was into the quantitative measurement of student development, recommended that future research be longitudinal.

In order to look at the measurement of graduate attributes though the capabilities approach, a questionnaire was based on Anand at al's 2011 study of happiness and capabilities in Argentina. That study aimed to investigate the relationship between capabilities and life satisfaction. This study however, focuses on the impact of the university experience on capabilities. While Nussbaum (2000) does identify certain capabilities that are specifically related to education, the instrument used measured all the capabilities, not just those concerned with education and which appear to be more directly aligned with generic graduate attributes.

The key variable in Anand et al's 2011 study was self-reported life satisfaction, which was arrived at through responses to the question "How satisfied or dissatisfied are you with your life as a whole?" (Anand et al., 2011, p. 208). However, as this study is longitudinal, the influence of multiple variables will be analysed over the course of the study. Capabilities were compared with motivation, graduate attribute attainment, academic performance and personality.

The actual capabilities instrument used was received from Prof Anand after email communication and was the version distributed by the YOUGOV organisation in 2013. Permission to use and adapt the instrument subject to the normal conventions of academic citation was obtained from Prof Anand directly. As stated in the literature review, the aim of using this instrument is to discover whether student capability changes over the course of the foundation year, and if so, how. Table 4.3 illustrates how the capabilities specifically related to education (Nussbaum, 2000a) map to the graduate attributes of the institutions involved in the research and the generic graduate attributes as specified by Strivens (2011).

Table 4. 3

Graduate attributes and capabilities

Capabilities related to education	Kazakhstan University GAs	London University GAs	Generic graduate attributes common to UK, USA and Australia
4. Senses, Imagination, and Thought.			
Being able to use the senses, to imagine, think, and reason – and to do these things in a ‘‘truly human’’ way, a way informed and cultivated by an adequate education, including, but by no means limited to, literacy and basic mathematical and scientific training.	Possess an in-depth and sophisticated understanding of their domain of study	prosper in a global jobs market that values the skills this university provides	Technological literacy
Being able to use imagination and thought in connection with experiencing and producing self-expressive works and events of one’s own choice, religious, literary, musical, and so forth.			
Being able to use one’s mind in ways protected by guarantees of freedom of expression with respect to both political and artistic speech, and freedom of religious exercise.	Demonstrate high personal integrity		

Being able to search for the ultimate meaning of life in one's own way. Being able to have pleasurable experiences, and to avoid non-necessary pain….	Be entrepreneurial, self-propelling and able to create new opportunities.	are able to solve problems through innovation and entrepreneurship	Lifelong learning Initiative, problem-solving skills
6. Practical Reason. Being able to form a conception of the good and to engage in critical reflection about the planning of one's life. (This entails protection for the liberty of conscience.)….	Be intellectually agile, curious, creative and open-minded.		Professionalism, ethics, values
7. Affiliation. A. Being able to live with and toward others, to recognize and show concern for other human beings, to engage in various forms of social interaction; to be able to imagine the situation of another and to have compassion for that situation; to have the capability for both justice and friendship. (Protecting this capability means protecting institutions that constitute and nourish such forms of affiliation, and also protecting the freedom of assembly and political speech.) 7. Affiliation. B.	Be thoughtful decision makers who know how to involve others. Be cultured and tolerant citizens of the world. Be prepared to take a leading role in the development of their country.	Look beyond their individual and local interests and see the complexity of an interconnected world understand the nature of the challenges that face that world are ready to display leadership and work together to change the world for the better	Global citizenship/international perspectives/cultural awareness Social responsibility/service to the community Leadership

Having the social bases of self-respect and non-humiliation; being able to be treated as a dignified being whose worth is equal to that of others. This entails, at a minimum, protections against discrimination on the basis of race, sex, sexual orientation, religion, caste, ethnicity, or national origin. In work, being able to work as a human being, exercising practical reason and entering into meaningful relationships of mutual recognition with other workers.	Be fluent and nuanced communicators across languages and cultures.	are aware of their social, ethical and political responsibilities	Global citizenship/international perspectives/cultural awareness Social responsibility/service to the community
(Nussbaum, 2000a, pp. 231–233)	(Kazakhstan University, 2017)	(London University, 2017)	(Strivens, 2011)

Graduate attributes questions

However, while there was a seemingly strong alignment between the capabilities of affiliation and the graduate attributes of the institutions involved, there were gaps in terms of the graduate attributes of those institutions. Furthermore, it is important to understand if there is a correlation between self-reported change in capabilities and self-reported development of graduate attributes. As a result in addition to the capabilities related questions, questions were designed to attempt to capture information more directly about graduate attributes. These questions were influenced by the list of common themes related to graduate attributes (Strivens, 2011) the graduate attributes of the two institutions involved and research into skills evaluated by employers considered by Trung and Swierczek (2009) which asked respondents to rate their skills (see table 4.4).

Table 4. 4

Generic graduate attributes and employability skills

Generic graduate attributes	Employability skills
Global citizenship/international perspectives/cultural awareness	Understanding cultural differences
Professionalism, ethics, values	Active listening
	Flexibility
	Reading comprehension
Social responsibility/service to the community	Self-esteem
Lifelong learning	Career developing planning
Technological literacy	Basic software using
Initiative, problem-solving skills	Gathering information
	Prioritizing
	Decision-making
	Critical thinking

	Negotiating
	Idea evaluating
	Idea generating
	Quantitative analysing
	Identifying key causes
	Synthesizing/Reorganizing
	Organizing information
	Creative thinking
	Active learning and growth
Leadership	Motivating
	Conflict management
	Written communicating
	Teamwork
	Coaching
	Goal setting
	Oral communicating
	Time management
	Self-confidence
(Strivens, 2011)	(Trung & Swierczek, 2009, p. 586)

From the overlap between the employability skills (although most of the employability skills fall into the categories of problem solving and leadership) and the graduate attributes of the two institutions and the gaps in the capabilities questions, the following three areas were discerned.

- Self-expression
- Skills acquisition
- Reflection

Subsequently the following questions were added to the questionnaire in order to allow for a further comparison between skills related attributes and capabilities.

1. I challenge my ideas about the world regularly.

2. I question the ideas of others, even my friends and family.

3. When I get new information, my opinions can change, even about important issues.

4. I am able to express myself though activities I undertake in my free time.

5. I feel free to express my ideas, even when I know that those around me might disagree with me.

6. I will continue to learn after I graduate from university.

7. The skills I have acquired from university will be applicable in my working life after I graduate.

8. The skills I have acquired from university will be applicable outside my working life after I graduate.

9. I have the ability to learn well even when not directed by someone else.

10. I value learning as an end in itself, not just as a means to an end.

11. I am capable of recognizing the skills I need and acquiring them.

12. To what extent do you agree with the following statement 'I view all people as having equal rights independent of race, gender, religion and sexual identity'.

These covered the areas of self-expression (questions 4, 5, 11), skills acquisition (questions 6, 7, 8, 11) and reflection (questions 1, 2, 3, 9). It was also considered necessary to include an explicit question related to the perception of race, gender religion and sexual identity (question 12). While leadership is a feature of the generic attributes, it was concluded that a question on leadership could not properly be answered in a self-reporting survey. However, a

future study should look to overcome this problem as leadership is clearly an important consideration in the field of graduate attributes.

While this study was published after this research was conducted, it seems that there is a degree of consistency between the skills addressed in the UKES survey and the graduate attribute questions element of this study (see table 4.5).

Table 4. 5

Overlap of UKES skills areas and graduate attribute questions

Graduate Attribute Questions	Skills areas UKES
1. I challenge my ideas about the world regularly.	Thinking critically and analytically Being an informed and active citizen Exploring complex real-world problems
2. I question the ideas of others, even my friends and family.	Thinking critically and analytically Being an informed and active citizen Exploring complex real-world problems
3. When I get new information, my opinions can change, even about important issues.	Thinking critically and analytically Being an informed and active citizen Exploring complex real-world problems
4. I am able to express myself though activities I undertake in my free time.	Being innovative and creative
5. I feel free to express my ideas, even when I know that those around me might disagree with me.	Working effectively with others
6. I will continue to learn after I graduate from university.	Becoming an independent learner
7. The skills I have acquired from university will be applicable in my working life after I graduate.	Acquiring employability skills
8. The skills I have acquired from university will be applicable outside my working life after I graduate.	Being an informed and active citizen
9. I have the ability to learn well even when not directed by someone else.	Becoming an independent learner
10. I value learning as an end in itself, not just as a means to an end.	Becoming an independent learner
11. I am capable of recognizing the skills I need and acquiring them.	Becoming an independent learner
12. To what extent do you agree with the following statement 'I view all people as having equal rights independent of race, gender, religion and sexual identity'.	Understanding people of other backgrounds (economic, racial/ethnic, political, religious, nationality, etc.)

(Buckley, 2015)

Motivation

In order to measure motivation, the academic motivation scale (AMS) (Vallerand et al., 1992) was used both by Pauli et al (2016) and this study. As with the capabilities instrument, permission to use the AMS was sought and received directly from Prof Vallerand, the author of the instrument. Once again, this study aims to measure change and as such is longitudinal in nature. It was anticipated that, given the evidence of the importance of motivation for academic and performance in general as noted in the literature review, that changes in motivation may shed light on other aspects of student development.

Personality

The final aspect of the survey involved a measurement of personality. This was measured using the ten item personality inventory (TIPI) (Gosling et al., 2003). This measure was included by Anand et al (2011) in their capabilities measurement study in order to avoid the endogeneity problem of self-reported satisfaction being related to personality more than capability. While the problem of endogeneity is less of an issue given the longitudinal nature of this study, it was felt that information on personality, and how that my change and influence other variables, may be of value.

Pilot Study

Given the second language learner nature of the students in question, the survey was piloted with a small group of students (n=12) to ensure that the questions were appropriately constructed and comprehensible for participants whose first language was not English. Following the recommendations of Lancaster, Dodd, and Williamson, (2004) a similar population to the actual participants (but not the actual population to be tested) was used. Thus, pilot participants were selected from the foundation cohort of the year previous to the actual study cohort (the 2013/14 academic year). Students were asked to complete the survey in April 2014.

The sample size for a pilot recommended by Lancaster et al (2004) is 30. Each group of English for Academic Purposes (EAP) is approximately 15 students in size and is composed of students from across all subject pathways. Subsequently two EAP groups were approached by email to complete the survey pilot. Of the 29 students approached, 12 completed the survey and gave feedback.

Lorimer, Lorgelly, Fenwick, and Briggs, (2007) used focus groups as a means of checking the appropriateness of the questions in adapting Anand's survey to a public health context. However, as this pilot was conducted towards the end of the academic year when students were busy (a factor in the low response rate to the pilot) and as the instruments used to make up the instrument had been used and tested on multiple occasions, a focus group was not initially arranged to discuss the pilot. In order to ascertain participant impressions of the survey instrument, four questions were added to the end of the survey (See table 4.6).

Table 4. 6

Pilot Survey Results

Pilot Survey Feedback Question	Responses	
Were the questions in this survey easy to understand?	Extremely easy 1 (8.3%) Very easy 4 (33.3%) Fairly easy 6 (50%) Neither easy nor difficult 1 (8.3%) Fairly difficult 0 Very difficult 0 Extremely difficult 0	
If there were any questions you did not understand, please enter the numbers below	No responses	
How much time (in minutes) did you spend answering the questions?	15 20 15	Mean: 21.33333333 Median: 20 Standard Deviation: 9.7

	11
	20
	30
	20
	45
	10
	20
	30
	20
Please make any general comments here about the survey	Too long :)
	This survey made me think about myself, about what is going on in my life. In my busy life, I have noticed, that I did not spend at least 5 minutes to think about 'Am I satisfied with my life?' Taking this survey was interesting for me and I found some knew things to think about.
	Interesting survey.
	Interesting stuff. I'm glad I participate.

The results of the pilot revealed that participants did not seem to have comprehension issues. Subsequently a focus group was not organised to discuss issues with the instrument. The median time taken to complete the survey was 20 minutes, and therefore this informed the participant information, which sheet was revised to suggest that instead of 20 minutes, the survey may take up to 40 minutes to complete.

Data Analysis

Factor analysis was used to establish clusters of variables within the data set. As the sample size was small (less than 300) principle components analysis (PCA) was used. Shapiro Wilk tests revealed that much of the data demonstrated a non-standard distribution. Subsequently non-parametric tests (Wilcoxon Signed Ranks tests) were used to explore the difference

between the groups. Where significant differences between groups were revealed, Cohen's d was calculated to reveal effect size.

Pearson correlations were conducted to investigate relationships between variables. Where correlations were significant, regression analysis was used to reveal how much variance could be attributed to predictor variables. In order to investigate causation, cross lagged correlations were also conducted.

Finally, mitigating and moderating variables were explored within the dataset, and structural equation modelling was performed to investigate the relationships between variables and the latent constructs, which by their nature cannot be measured directly.

5: Results of the Longitudinal Student Survey

This section will describe the results of the longitudinal survey. The results indicate that capabilities do change significantly, but that this change involves a reduction in capability in the areas of stress and affiliation. This finding constitutes an obstacle that students need to overcome. The survey also indicates that the majority of students entering the foundation year (55%) are extrinsically motivated. Furthermore, it indicates that there is a significant decrease in students' intrinsic motivation over the course of the year. Student personality also changes over the year, with a significant increase in the characteristic of conscientiousness. Intrinsic motivation is seen to have the most important impact on student development. Finally, there is a correlation between growth in capabilities, and growth in graduate attributes.

The analysis of results in this section is organised in the following way.

- Background and demographic data
- Factor reduction (Principle Components Analysis)
- Longitudinal analysis
- Correlations within the dataset
- Regression analysis
- Moderating and mediating variables
- Structural equation modelling (SEM)

Background and demographic data

The study was carried out at the Foundation programme of Kazakhstan University in the 2014/15 academic year. That year there were 550 students enrolled.

The first round of the survey was administered in September 2014 (from here on referred to as time 1). In order to publicise the research and recruit participants, all of the induction meetings organised by the university administration were visited and a short presentation given to introduce the research. Students were then given a URL to follow to take part in the online survey. 195 participants (35% of the total potential sample) took part in

this stage of the research. Each participant was assigned a unique identifier. 101 (18% of the total potential sample) participants took part in the second stage of the research (time 2) which took place in June 2015.

Results at both times 1 and 2 were analysed with SPSS. Shapiro Wilk tests for normal distribution (Shapiro & Wilk, 1965) revealed that the majority of the variables returned significant results, meaning that the distributions were not normal. As a result, non-parametric tests were used to analyse the data.

Nationality

The majority of the participants (184, 94.4%) were Kazakhstani (see table 5.1 for a full break down of participant nationalities).

Table 5. 1

Breakdown of participants by nationality

Nationality	Number of participants Time 1	Number of participants Time 2
Kazakhstan	184	97
Russian Federation	6	4
Democratic Republic of Korea	2	0
Uzbekistan	1	0
Total:	195	101

Subject pathway breakdown

Students follow one of three pathways in the foundation year. These are International Relations and Economics (IRE), Maths and Physics (MP) and Biology and Chemistry (BC). No participants changed their subject stream over the course of the year.

The pathway breakdown among participants at time 1 was IRE 36, MP 105 and BC 54. At time 2 there was some change with IRE 22, MP 54 and BC 25. While the proportion of participants studying the MP pathway remained almost exactly the same (53.8% at time 1 and 53.5% at time 2) the proportion on the IRE pathway increased from 18.5% at time 1 to 21.7% at time 2. Finally, the proportion of participants on the BC pathway decreased from 27.7% at time 1 to 24.8% at time 2.

Gender

There was an almost equal distribution amongst participants in terms of gender at time 1 with 101 (51.8%) respondents being male and 91 (46.7%) being female. Three respondents (1.5%) preferred not to say. At the second point of data collection, there were 55 male respondents (54.4%) and 46 female respondents (45.6%).

The survey itself was broken into four discrete parts. Part one featured questions intended to measure capabilities (adapted from Anand et al., 2014). Part two looked at questions specifically designed to address graduate attributes. Part three was a reproduction of the ten-item personality inventory (TIPI) (Gosling et al., 2003) and part four was an adaption of the academic motivation scale (AMS) (Vallerand et al., 1992).

All previous participants were contacted by email and given a URL linked to their unique identifier to follow to retake the survey. The survey instrument was unchanged. Of the 195 contacted, 101 (52%) retook the survey.

Age

All of the participants were aged between 17 and 19 at the time of the first data collection point.

Participant motivation at time 1

The first data collection point was at the beginning of the academic year in the induction week. At this time, the results of the Academic Motivation Scale (AMS) indicated that 55% (n=107) of participants demonstrated majority extrinsic motivations to participate in HE. 34.5% (n=67) demonstrated majority intrinsic motivations and 1.5% (n=3) demonstrated amotivation. The remaining 9% (n=18) produced tied scores demonstrating no dominant motivation.

Factor reduction (Principle Components Analysis)

In order to reduce the number of variables and understand the latent structure of this set of variables (Conway & Huffcutt, 2003) Principal Component Analysis (PCA) was conducted on the various components of the survey instrument. These analyses were all conducted with the respondents at time 1 (n= 195).

Recoding of variables

Because of the nature of the Likert scales, some variables were recoded to properly express the participants intended outcome. For most questions, 1 on the Likert expressed the most positive response and 5 the most negative. However, the design of the instrument inverted this convention for a number of questions with 5 for these items being the most positive response and 1 being the most negative. In these instances, and also where “don’t know’ was an option, the variables have been recoded. The recoded items were questions 23 26 28 30 31 32 40 41 5 and 2.

PCA 1 Capabilities Questions

Internal Consistency.

The first part of the survey was adapted from the capabilities questionnaire. In this section, 49 items featured and received a Cronbach’s Alpha of .837 indicating that the items had good

internal consistency (Streiner, 2003). Internal consistency illustrates that participants responses broadly didn't contradict themselves in the survey (Creswell, 2012).

Suitability for Factor analysis.

Kaiser-Meyer-Olkin (KMO) (a measure of the extent to which the variance among variables is common) and Bartlett's Test of Sphericity indicated that the data was suitable for factor analysis (see Table 5.2).

Table 5. 2

KMO and Bartlett's Test (Capabilities Items)

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.671
Bartlett's Test of Sphericity	Approx. Chi-Square	3115.798
	Sig.	.000

Bartlett's test returning a significance of .000 indicates that the hypothesis that there are as many factors as variables is rejected (Dziuban & Shirkey, 1974). A KMO of .6 (relating to the degree of common variance) or above is considered adequate for factor analysis (Dziuban & Shirkey, 1974) (see table 5.3).

Table 5. 3

KMO Values

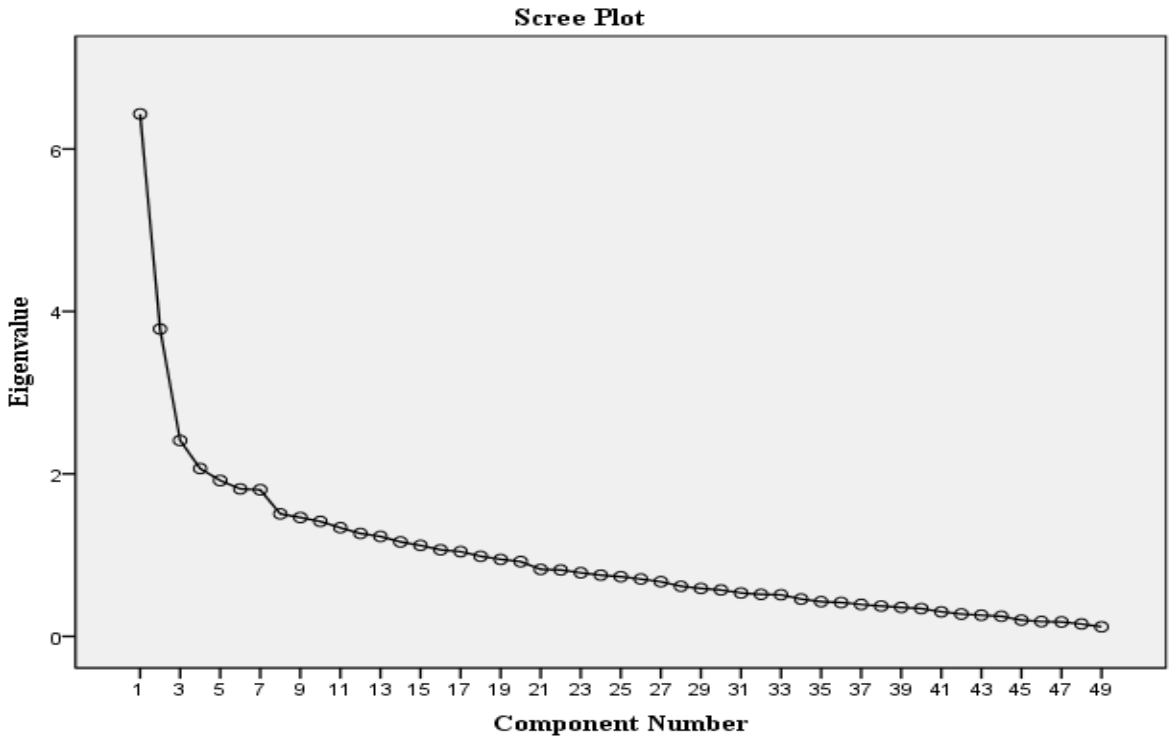
KMO	Description
0.90 to 1.00	Marvelous
0.80 to 0.89	Meritorious
0.70 to 0.79	Middling
0.60 to 0.69	Mediocre
0.50 to 0.59	Miserable
0.00 to 0.49	Unacceptable

(adapted from Dziuban & Shirkey, 1974)

A factor analysis of the results of the first round of the survey revealed seven factors. This was decided through observation of the Scree distribution, which displays a clear drop off after the seventh factor (see Figure 5.1).

Figure 5. 1

Scree Plot (Capabilities items)



As this number of factors was less than the expected 10 factors associated with the capabilities approach, this number was confirmed through the use of a Monte Carlo parallel analysis to calculate the equivalent number of eigenvalues using random data (see Table 4). This use of computer simulation to generate random objects is becoming an increasingly important method in contemporary statistics (Kroese, Brereton, Taimre, & Botev, 2014). There is consistency between the drop off after the seventh factor on the scree plot (Figure 5.1) and where the randomly generated eigenvalue (1.5958) is greater than the eigenvalue emerging from the factor analysis (1.508) (see Table 5.4). For subsequent PCAs the Monte Carlo method was used to calculate the appropriate number of factors.

Table 5. 4

Monte Carlo parallel analysis capabilities factors

Eigenvalue #	Random Eigenvalue	Standard Deviation	Eigenvalue from factor analysis
1	2.1161	.0655	6.431
2	2.0070	.0482	3.783
3	1.9163	.0418	2.411
4	1.8422	.0429	2.066
5	1.7733	.0348	1.918
6	1.7046	.0338	1.815
7	1.6454	.0305	1.804
8	1.5958	.0323	1.508

The design of certain items prevented them from being entered into the PCA. These items featured a root question with a yes or no response. If participants selected one response they moved onto the next question whereas if they selected the other response further sub questions were revealed. Given that not all the candidates answered the sub questions, they were omitted. These items were the sub questions from questions 4, 5, 23, 35, 36, 38 and 39. Additionally question 6 was omitted as it involved sub questions the last of which was “any of the above” which resulted in overlap.

It should be noted that in the original literature there are 10 capabilities. However, the analysis of this data (after varimax rotation) revealed only 7 factors (see Table 5.5), some of which correspond to the original capabilities (factors 1 and 7). Rotation allows loadings’ patterns to be represented in a clearer manner than unrotated results allowing for clearer interpretation (J. D. Brown, 2009; Roche, 2008). Roche (2008) used both orthogonal (varimax) and oblique (direct oblimin) in their capabilities based study into inequalities

between social groups. Both rotations revealed the same factors with a difference in ordering (Roche, 2008). Given that Roche points out that "varimax might be better as a synthetic measure, since it completely reduces redundancy between dimensions" (Roche, 2008, p. 437) and that IBM observe that varimax "simplifies the interpretation of the factors" (IBM, 2012) varimax was the rotational method chosen for these results. For further clarity, coefficients of less than .3 were suppressed (Green, 2013), and as a result questions 23 and 36 did not feature in the subsequent analysis (see Appendix B table B.1 for factor loadings).

In addition, the items which make up the new categories did not match the original 10 factor breakdown. For example, questions that were associated with the capability of affiliation, ended up clustering with questions related to different capabilities in the new 7 factor model. This is reflected in the labels given to the 7 factors.

The decision to use the new factors was made because of the nature of the population being addressed. There are a number of versions of the capabilities measurement instrument that have been used in recent years (Paul Anand, Hunter, & Smith, 2005; Paul Anand, Krishnakumar, et al., 2011; Lorgelly, Lorimer, Fenwick, Briggs, & Anand, 2015). It seems that different contexts have led to different manifestations of the survey instrument. As noted in the methodology chapter, alterations to questions were made in response to pilot testing. The pilot was conducted with participants from a similar population (Kazakhstani students at the same institution and of similar age) and this may have resulted in the effect mentioned. Lorimer et al. (2007), in a study conducted in Glasgow noted that capabilities differed significantly with age, and multiple studies conducted by Anand (2005; 2016; 2011) observe differences according to location. Furthermore, when the analysis was forced to resolve in 10 factors in SPSS, the items still did not align with the original 10 factors (see appendix B table B.2 for the factor loadings).

The new factors have been renamed to reflect the extent to which they merge capabilities (see table 5.5)

Table 5. 5

7 factors and related questions

Factors	Questions
1 Reactive/passive affiliation (self respect and fear of discrimination)	• 40b Outside of any employment or work situation, have you ever experienced discrimination because of your sexual orientation? (aff b) • 41 a Outside of any work or employment situation, how likely do you think it is that in the future you will be discriminated against because of your sexual orientation? (aff b) • 41 b Outside of any work or employment situation, how likely do you think it is that in the future you will be discriminated against because of your gender? (aff b) • 41 c Outside of any work or employment situation, how likely do you think it is that in the future you will be discriminated against because of your religion? (aff b) • 41 d Outside of any work or employment situation, how likely do you think it is that in the future you will be discriminated against because of your age? (aff b) • 41 e Outside of any work or employment situation, how likely do you think it is that in the future you will be discriminated against because of your race? (aff b)
2 Senses, species and practical reason. (Ability to express oneself freely work and general life)	• 7 I am free to express my political views (senses) • 8 I am able to participate in the political activities that affect my life if I want to (senses) • 9 I am free to practice my religion as I want to (senses) • 10 My idea of a good life is based on my own judgement (practical reason) • 11 I respect, value and appreciate other people (aff a)

	• 12 At present how easy or difficult do you find it to enjoy the love care and support of your immediate family? (emotions) • 13 Please indicate to what extent you agree or disagree with the following statement: I appreciate and value plants, animals and the world of nature? (species) • 34 Please indicate how strongly you agree or disagree with the following statement; 'I have a clear plan of how I would like my life to be' (practical reason) • 42 To what extent does your work at university make use of your skills and talents? (life control) • 40d Outside of any employment or work situation, have you ever experienced discrimination because of your religion? (aff b)
3 Active affiliation. (How you relate to those around you)	• 14 How difficult do you find it to make friendships which last with people outside university? (emotions) • 17 Have you recently been able to enjoy your normal day-to- day activities? (senses) • 18 At university, have you recently felt that you were playing a useful part in things? (life control) • 19 Outside of university, have you recently felt that you were playing a useful part in things? (practical reason) • 20 Have you recently been enjoying your recreational activities? (play) • 21 Have you recently been thinking of yourself as a worthless person? (aff b) • 22 Is your current accommodation adequate or inadequate for your current needs? (bodily health) • 35 Do you normally have at least a week's (seven days) annual holiday away from home? (aff b) • 44 At university are you treated with respect? (life control) •
4 Fear and emotional stress.	• 15 Have you recently lost much sleep over worry? (emotions)

	• 16 Have you recently felt constantly under strain? (emotions)
	• 43 Do you tend to find it easy or difficult to relate to other students at university? (life control)
	• 31 How likely do you think it Is that you will be a victim of violent assault or attack in the future? (bodily integrity)
	• 32 How likely do you think it is that within the next 12 months you will be stopped and searched by the police when it is not warranted? (life control)
	• 30 Have you ever been the victim of some other form of violent assault or attack -- i.e. an assault other than sexual or domestic? (bodily integrity)
5 Imagination and affiliation. (Your perception of yourself within the world around you)	• 33 How often do you use your imagination and or reasoning in your day to day life? (senses)
	• 37 Do you tend to find it easy or difficult to imagine the situation of other people? (i.e. 'to put yourself in others' shoes') (aff a)
	• 38 Have you ever sought employment? (life control)
	• 39 Are you likely to seek employment in the future? (life control)
	• 40a Outside of any employment or work situation, have you ever experienced discrimination because of your race? (aff b)
	• 40c Outside of any employment or work situation, have you ever experienced discrimination because of your gender? (aff b)
	• 40e Outside of any employment or work situation, have you ever experienced discrimination because of your age? (aff b)
6 Fear of future violence.	• 27 Please indicate how vulnerable you feel to sexual assault or attack -- using a scale of 1 to 7where 1 means "not at all vulnerable" and 7 means "very vulnerable"? (bodily integrity)
	• 29 Please indicate how vulnerable you feel to domestic violence in the future -- using a scale of 1 to 7 where 1 means "not at all vulnerable" and 7 means "very vulnerable"? (bodily integrity)

7 Bodily health and integrity.	• 24 Please indicate how safe you feel walking alone in the area near your home DURING THE DAY time (bodily integrity) • 25 Please indicate how safe you feel walking alone in the area near your home AFTER DARK (bodily integrity) • 28 Have you ever been a victim of domestic violence? (bodily integrity) • 26 Have you ever been a victim of sexual assault? (bodily integrity) • 2 Does your health in any way limit your daily activities compared to most people of your age? (bodily health) • 4 Do you eat fresh meat, chicken or fish at least twice a week? (bodily health) • 5 Are you able to have children? (bodily health)

PCA 2 Graduate Attribute Questions

Internal Consistency.

In order to investigate the development of characteristics related directly to generic graduate attributes, 12 questions were included in the second part of the survey. These 12 items received a Cronbach's Alpha of .781 indicating that the items had good internal consistency (Streiner, 2003).

KMO and Bartlett's Test indicated that the data was suitable for factor analysis (see table 5.6 and table 5.2).

Table 5. 6

KMO and Bartlett's Test (Graduate Attribute Questions)

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.800
Bartlett's Test of Sphericity	Approx. Chi-Square	560.935
	Sig.	.000

A Monte Carlo parallel analysis revealed two factors (see Table 5.7).

Table 5. 7

Monte Carlo parallel analysis (Graduate attribute questions)

Eigenvalue #	Random Eigenvalue	Standard Deviation	Eigenvalue from factor analysis
1	1.4312	.0675	3.829
2	1.3055	.0383	1.389
3	1.2128	.0350	1.183

These were subsequently named Practical Application and Critical Application on the basis of the groupings of the items making up those factors (see Table 5.8). These factors broadly align with the UKES survey results which divided their factors into the practical "skills focused on values, interpersonal relationships, emotional intelligence and other areas that, while of fundamental importance, are often seen as less 'academic' in nature" (Buckley, 2015, p. 8) and the critical "skills traditionally deemed more 'academic', in the sense of receiving explicit focus within programmes: speaking and writing clearly, thinking critically, etc." (Buckley, 2015, p. 8).

Table 5. 8

Graduate attribute factors and related questions

Factor	Questions
1 Practical application	• 50 I will continue to learn after I graduate from university. • 51 The skills I have acquired from university will be applicable in my working life after I graduate. • 52 The skills I have acquired from university will be applicable outside my working life after I graduate. • 53 I have the ability to learn well even when not directed by someone else. • 54 I value learning as an end in itself, not just as a means to an end. • 55 I am capable of recognizing the skills I need and acquiring them. • 56 To what extent do you agree with the following statement 'I view all people as having equal rights independent of race, gender, religion and sexual identity'.
2 Critical application	• 45 I challenge my ideas about the world regularly. • 46 I question the ideas of others, even my friends and family. • 47 When I get new information, my opinions can change, even about important issues. • 48 I am able to express myself though activities I undertake in my free time. • 49 I feel free to express my ideas, even when I know that those around me might disagree with me.

PCA 3 Personality Questions

Internal Consistency.

The questions in the survey relating to personality were reproduced exactly from the TIPI. The questions produced a Cronbach's Alpha of .623, indicating that the internal consistency was acceptable (Streiner, 2003).

KMO and Bartlett's Test indicated that the data was adequate for factor analysis (see Table 5.9). According to Dziuban and Shirkey (1974) a score of .6 is the minimum acceptable value (see Table 5.2).

Table 5. 9

KMO and Bartlett's Test (TIPI)

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.624
Bartlett's Test of Sphericity	Approx. Chi-Square	282.614
	Sig.	.000

Factor analysis and Monte Carlo parallel analysis revealed 3 factors (see table 5.10).

Table 5. 10

Monte Carlo analysis (TIPI)

Eigenvalue #	Random Eigenvalue	Standard Deviation	Eigenvalue from factor analysis
1	1.3668	.0647	2.462
2	1.2520	.0413	1.447
3	1.1725	.0364	1.288
4	1.0944	.0337	1.049

The TIPI typically has 5 factors corresponding to the following personality traits: Extraversion, Agreeableness, Conscientiousness**,** Emotional Stability and Openness to

Experience. The original five factors were retained despite the fact that the factor analysis did not reveal these factors. As noted earlier, coefficient alpha reliability is difficult to interpret in small scales. Subsequently, the original 5 items were retained for analysis.

PCA 4 Motivation questions

Internal Consistency.

The final section of the survey involved an adaptation of the academic motivation scale (AMS). This section produced a Cronbach's Alpha of .927 indicating that the items had excellent internal consistency.

KMO and Bartlett's test revealed that the data was appropriate for factor analysis (see Table 5.11).

Table 5. 11

KMO and Bartlett's Test (AMS)

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.926
Bartlett's Test of Sphericity	Approx. Chi-Square	3249.300
	Sig.	.000

An initial factor analysis revealed five factors with Eigen values above 1. As there are three motivation types a subsequent Monte Carlo parallel analysis was conducted to see if the number of factors could be reduced. This led to the number of factors being reduced to three (see Table 5.12).

Table 5. 12

Monte Carlo parallel analysis (AMS)

Eigenvalue #	Random Eigenvalue	Standard Deviation	Eigenvalue from factor analysis

1	1.7903	.0636	11.428
2	1.6650	.0524	2.209
3	1.5718	.0404	1.934
4	1.4961	.0413	1.493
5	1.4301	.0369	1.020

A factor analysis of the responses at time 1 revealed a clear division among the three broad categories of motivation: Intrinsic motivation, extrinsic motivation and amotivation. Caleon et al (2015) explored various goodness of fit indices for the seven factor model and alternative models including the three factor model manifested here in a study of Singaporean students' motivation. An issue raised by that study was the appropriateness of the AMS and SDT across cultural boundaries. While the seven factor model was the best fit in that study, the same three factor model as manifested here was found to be the best fit by Baker (2004) in a study of UK university students.

To summarise, principle components analysis of the three components of the survey instrument adapted or reproduced from pre-existing instruments, revealed factors that, while similar to those found in previous studies, were not the same. The one component of the instrument that was designed specifically for the research, revealed factors broadly aligned with the division of skills along practical and academic or critical lines.

Longitudinal analysis

The second round of the survey was administered towards the end of the foundation year (June 2015). All of the participants (n=195) from the first round were approached to complete the survey again. Of those contacted 101 participated in the survey at time 2. As noted earlier, the second survey was unchanged from the original.

To test whether there had been a significant change in the scores in capabilities between Time 1 and Time 2, Wilcoxon signed ranks tests were used (see table 5.13) due to the related samples. The software program "G*Power" was used to calculate the minimum sample size for this test. That number, assuming a medium effect size, was n=88. Subsequently the sample n=101 was sufficient for the test to have validity.

Table 5. 13

Test Statistics[a] capabilities items 7 factor model

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7
Z	-2.811[b]	-.123[c]	-.438[b]	-2.946[b]	-.955[c]	-.354[b]	-.922[c]
Asymp. Sig. (2-tailed)	.005	.902	.662	.003	.340	.723	.357

a. Wilcoxon Signed Ranks Test
b. Based on negative ranks.
c. Based on positive ranks.

It is clear that the capabilities of reactive/passive affiliation and fear and emotional stress both changed significantly and decreased over the time period for the survey.

Effect Size

In addition to providing significance, it is considered good practice to provide an indication of the magnitude of the effect reported (Kotrlik & Williams, 2003). This was achieved by the use of Cohen's d to calculate effect size. Despite displaying significant decreases in capability (.005 for factor 1 and .003 for factor 4) the effects sizes for both these results fall into the minimal effect band which spans .2 to .49 (Cohen 1988 cited in Kotrlik & Williams, 2003). Factor 1 (affiliation) has a Cohen's d of -0.27 and factor 4 (stress) has a Cohen's d of -0.28.

Considering the 10 Factor Model

Although, as noted above, the 10 factor model did not manifest when forced through PCA, it may be useful to consider if a similar decrease of capabilities was present. When the data was

analysed using the original 10 factor model, a similar picture of overall decrease in capabilities emerged. The capabilities of affiliation, emotions and life all demonstrate a significant decrease. However, the capability of bodily health has a significant increase (see table 5.14).

Table 5. 14

Capabilities items 10 factor model

10 capability factors	Questions
1 Bodily health (significant increase .009)	4, 5, 22, 2, 23, 3
2 Bodily integrity (not significant)	24, 25, 27, 29, 28, 26, 30
3 Senses ,imagination and thought (not significant)	7, 8, 9, 17, 33
4 Practical reason (not significant)	10, 19, 34
5 Affiliation (significant decrease .007)	11, 35, 36, 37, 21, 40, 41
6 Emotions (significant decrease .035)	12, 15, 16
7 Life control (not significant)	38, 39, 42, 43, 44, 32
8 Play (not significant)	20
9 Other species (not significant)	13
10 Life (significant decrease .011)	3

With regard to the questions concerning the graduate attribute questions, there was no significant change between the first and second round responses. However, there was considerable, if not significant development in factor 2 (critical application) where the ranks indicate growth in positive responses from 34 to 57 (see table 5.15).

Table 5. 15

Graduate attribute factors ranks

		N	Mean Rank	Sum of Ranks
Graduate attributes factor 1 round 2 - Graduate attributes factor 1 round 1	Negative Ranks	43[a]	43.70	1879.00
	Positive Ranks	51[b]	50.71	2586.00
	Ties	7[c]		
	Total	101		
Graduate attributes factor 2 round 2 - Graduate attributes factor 2 round 1	Negative Ranks	57[d]	43.05	2454.00
	Positive Ranks	34[e]	50.94	1732.00
	Ties	10[f]		
	Total	101		

a. Graduate attributes factor 1 round 2 < Graduate attributes factor 1 round 1
b. Graduate attributes factor 1 round 2 > Graduate attributes factor 1 round 1
c. Graduate attributes factor 1 round 2 = Graduate attributes factor 1 round 1
d. Graduate attributes factor 2 round 2 < Graduate attributes factor 2 round 1
e. Graduate attributes factor 2 round 2 > Graduate attributes factor 2 round 1
f. Graduate attributes factor 2 round 2 = Graduate attributes factor 2 round 1

The third part of the survey was concerned with personality. Wilcoxon signed ranks tests were administered according to the distribution of the original factors. Scores for extraversion, agreeableness, emotional stability and openness to experience did not change significantly. However, the results for conscientiousness did increase statistically significantly (p = .008). This increase recorded a Cohen's d of -0.24 which once again constitutes a small but meaningful effect size.

The final part of the survey concerned motivation. A Wilcoxon signed ranks test comparing responses between the first and second times found no significant difference in either amotivation or extrinsic motivation. However, there was a statistically significant reduction in levels of intrinsic motivation (p = .007). In terms of effect size, the reduction in intrinsic motivation recorded a Cohen's d of 0.31, which indicates a medium effect. It is subsequently clear that of all the changes recorded over the course of the research, the reduction in intrinsic motivation is statistically the most significant effect.

Perceived life satisfaction (Q1 and Q101)

Finally, there was no significant change between participants overall perception of their life satisfaction between the first and second times. The first and the last questions of the survey at both time 1 and time 2 were identical and asked participants to rank their overall life satisfaction. The results for the first time were very nearly significant (p = .052) and indicated that people were more satisfied at the end of the survey than when they began. This may indicate that answering questions about capabilities makes one more appreciative of those capabilities. At time 2 participants did not display a significant difference in responses. Furthermore, there was no significance difference between the results of the first and second times including when the responses to the two questions were averaged out. This raises questions about the impact of an apparent decrease in capability having no significant impact on perceived life satisfaction.

One of the major questions for Anand, Krishnakumar and Tran (2011), when they conducted the survey in Argentina, was whether personality was more responsible for perceived life satisfaction than capabilities. In the 2011 study there were statistically significant correlations between life satisfaction and the items measuring empathy (question 37), life autonomy (question 10), self-worth (question 21) and stress (question 15). However, correlations in the current study showed significance only with items 15 and 21 at time 1 and 10, 15 and 21 at time 2. Furthermore, no significant correlations were discovered between times 1 and 2 and so causality through cross lagged correlation (Baron & Kenny, 1986) was not pursued.

Correlations between life satisfaction and the personality traits were also limited, with openness to experience being the only trait that correlated at times 1 and 2 and emotional stability at time 1. These findings match the 2011 study and a similar conclusion, that the personality traits may not play so important a role in life satisfaction, can been reached.

> Among the five different personality traits that were included in the capability–happiness equation, being open to experiences and being emotionally stable have significant impacts on life satisfaction. This suggests that while the five different traits do describe distinct dimensions of personality, it is not necessary that all of them play an important role in life satisfaction (Anand, Krishnakumar & Tran, 2011, p. 211).

In terms of the grouped capabilities 7 factor model, there were correlations with life satisfaction. When cross lagged correlation analysis was performed (Baron & Kenny, 1986), it became apparent that there is no causal relationship between life satisfaction and the changes observed in the longitudinal analysis described above (see table 5.16).

Table 5. 16

Cross lagged Correlations involving Life Satisfaction

Time 1	Time 2	Pearson Correlation	Z score	P value (2 tailed)
F3	Life Satisfaction	.273	-0.2213	0.8248
Life Satisfaction	F3	.302		
Life Satisfaction	F2	.432	-1.5379	0.1240
F2	Life Satisfaction	.238		
Op Experience	Life Satisfaction	.370	1.0722	0.2836
Life Satisfaction	Op Experience	.231		
GAF1	Life Satisfaction	.335	0.4329	0.6650
Life Satisfaction	GAF1	.279		

Correlations within the dataset

Correlations were considered at time 1, time 2 and between time 1 and 2. The statistically significant correlations were as follows. To calculate a Pearson's r with no common index (the indices of the correlation matrix) G*Power suggests a minimum sample size of 100. Once again, n=101 indicating the test is appropriate for the data set.

Table 5. 17

Correlations at Time 1

	Factor 1 round 1	Factor 2 round 1	Factor 4 round 1	Intrinsic motivation round 1	Openness to Experience round 1	Conscientiousness round 1	Gender
Factor 1 round 1							
Factor 2 round 1	.329**						
Factor 4 round 1	.321**	.379**					
Intrinsic motivation round 1	-.185	-.398**	-.259**				
Openness to Experience round 1	.271**	.531**	.469**	-.480**			
Conscientiousness round 1	.007	.216*	.207*	-.247*	.210*		
Gender	.145	-.236*	-.065	.075	-.129	-.104	

**. Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

Table 5. 18

Correlations at time 2

	Factor 1 round 2	Factor 4 round 2	Intrinsic motivation round 2	Openness to Experience round 2	Conscientiousness round 2
Factor 1 round 2					
Factor 4 round 2	.287**				
Intrinsic motivation round 2	-.192	-.207*			
Openness to Experience round 2	.238*	.236*	-.368**		
Conscientiousness round 2	.070	.066	-.236*	.258**	

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table 5. 19

Correlations at Times 1 and 2

	Factor 1 round 2	Factor 4 round 1	Intrinsic motivation round 1	Intrinsic motivation round 2	Openness to Experience round 1	Openness to Experience round 2	Conscientiousness round 1	Conscientiousness round 2
Factor 1 round 2								
Factor 4 round 1	.345**							
Intrinsic motivation round 1	-.156	-.259**						
Intrinsic motivation round 2	-.192	-.287**	.633**					
Openness to Experience round 1	.318**	.469**	-.480**	-.365**				
Openness to Experience round 2	.238*	.229*	-.232*	-.368**	.465**			
Conscientiousness round 1	.055	.207*	-.247*	-.180	.210*	.298**		
Conscientiousness round 2	.070	.034	-.236*	-.236*	.235*	.258**	.481**	

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

As noted earlier, a high score in the factors indicates a low level of capability, whereas a high score for the motivation and personality variables indicates high levels of those traits. Subsequently the negative correlation between, for example, intrinsic motivation and factor 1 indicates that when intrinsic motivation is high, a sense of belonging and affiliation is also high. Whereas the negative correlation between, for example, intrinsic motivation and openness to experience indicates that when intrinsic motivation is high, openness to experience is low.

Causality and cross-legged correlation

In order to asses if any of the variable correlations indicated causation, cross lagged correlation (Baron and Kenny 1986) was conducted on the variables that correlated with themselves and another variable at times 1 and 2. The analysis reveals no potential causal relationship (see table 5.20).

Table 5. 20

Cross-legged correlations

Time 1	Time 2	Pearson Correlation	Z score	P value (2 tailed)
Openness to experience	Conscientiousness	.235	-0.47	0.6384
Conscientiousness	Openness to experience	.298		
Openness to experience	Intrinsic motivation	-.365	1.02	0.3077
Intrinsic motivation	Openness to experience	-.232		
Conscientiousness	Intrinsic motivation	-.180	0.41	0.6818
Intrinsic motivation	Conscientiousness	-.236		

Additional variables

Two additional variables were created to measure the change in graduate attributes and capabilities. The capabilities growth score (CGS) was calculated as the absolute difference between Time 1 and Time 2 by subtracting the total capabilities score at time 2 from the total capabilities score at time 1. The graduate attribute growth score (GAGS) was calculated in the same way, by subtracting the total graduate attributes score at time 2 from the total graduate attributes score at time 1. As both a high capabilities score and a high graduate attributes score indicate low capabilities and low attributes, the higher the result for these new variables the greater the growth in capabilities and attributes there is represented over the course of the year. In both cases the mean score was positive (GAGS had a mean of .2871 and CGS had a mean of 2.6337).

It is important to note that there was a significant correlation between CGS and GAGS, indicating that capabilities and graduate attributes develop in correlated ways (see table 5.21).

Table 5. 21

Correlations between capabilities and graduate attributes

	GAGS (graduate attributes growth score)	CGS (capabilities growth score)
GAGS (graduate attributes growth score)		
CGS (capabilities growth score)	.464**	

**. Correlation is significant at the 0.01 level (2-tailed).

Academic performance and motivation

As noted above, participants in the research represented different subject streams within the foundation year. The only course that all participants took was English for Academic Purposes (EAP). There were a number of coursework requirements for this course and students were required to achieve a passing grade in these in order to proceed into the university. Failing EAP would result in students failing to gain entrance to undergraduate study. As such, it is assumed that the course was taken seriously by all participants. In total, EAP accounted for 25% of each student's overall grade for the year and as such this course represents academic achievement for the purposes of this research.

There was a significant negative correlation between amotivation at times 1 and 2 and academic performance, in that higher levels of amotivation correlated with lower levels of academic achievement. Similarly, there was a significant positive correlation between extrinsic motivation at time 2 and academic performance whereby higher levels of extrinsic motivation correlated with higher academic achievement. Of note is the fact that there was no correlation between intrinsic motivation at any point and academic performance (see table 5.22).

Table 5. 22

Correlations between academic performance and motivation

	Academic performance	Intrinsic motivation round 1	Extrinsic motivation round 1	Amotivation round 1	Amotivation round 2	Extrinsic motivation round 2	Intrinsic motivation round 2
Academic performance							
Intrinsic motivation round 1	.023						
Extrinsic motivation round 1	.111	.601**					
Amotivation round 1	-.270**	-.117	-.192				
Amotivation round 2	-.231*	-.230*	-.243*	.289**			
Extrinsic motivation round 2	.277**	.306**	.548**	-.271**	-.268**		
Intrinsic motivation round 2	.078	.633**	.448**	-.207*	-.268**	.618**	

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Academic performance and personality type

There were no significant correlations between personality type at time 1 and academic performance. However, it is worthy of note that contrary to the literature (Higgins et al 2007), there was no significant correlation between conscientiousness and academic performance (see table 5.23).

Table 5. 23

Correlations between conscientiousness and academic performance

	Conscientiousness round 1	Conscientiousness round 2	Academic performance
Conscientiousness round 1			
Conscientiousness round 2	.481**		
Academic performance	.005	-.192	

**. Correlation is significant at the 0.01 level (2-tailed).

Total capabilities and motivation

There was a correlation between intrinsic motivation and overall capability score in that a higher intrinsic motivation indicates greater capability (here represented as the lower score on the capability scale) (see table 5.24).

Table 5. 24

Correlations between total capabilities and motivation

	Intrinsic motivation round 1	Intrinsic motivation round 2	Total capabilities round 1	Total capabilities round 2
Intrinsic motivation round 1				
Intrinsic motivation round 2	.633**			
Total capabilities round 1	-.396**	-.246*		
Total capabilities round 2	-.307**	-.382**	.603**	

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Of note however, is the result that there appears to be no correlation between overall academic performance and capabilities.

Total capabilities and personality type

Extraversion and openness to experience at time 1 correlate with a high capabilities score at time 1, indicating that the higher the rate of these personality types, the less capable people feel at time 1 (see table 5.25).

Table 5. 25

Correlations between total capabilities and personality type

	Total capabilities round 1	Total capabilities round 2	CGS	GAGS	Extraversion round 1	Agreeableness round 1	Conscientiousness round 1	Emotional Stability round 1	Openness to Experience round 1
Total capabilities round 1									
Total capabilities round 2	.603**								
CGS	.494**	-.397**							
GAGS	.349**	-.058	.464**						
Extraversion round 1	.382**	.177	.246*	.094					
Agreeableness round 1	.193	.088	.125	.028	.181				
Conscientiousness round 1	.147	.205*	-.054	.026	.078	.021			
Emotional Stability round 1	.193	.274**	-.077	.084	-.157	.196*	.086		
Openness to Experience round 1	.634**	.418**	.274**	.189	.440**	.095	.210*	.121	

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

At time 2, there is no significant correlation between extraversion and capabilities score, however, there is still significant correlation between openness to experience and a limited feeling of capability (see table 5.26).

Table 5. 26

Correlations between total capabilities and openness to experience

	Total capabilities round 1	Total capabilities round 2	CGS (capabilities growth score)	Openness to Experience round 1	Openness to Experience round 2
Total capabilities round 1					
Total capabilities round 2	.603**				
CGS (capabilities growth score)	.494**	-.397**			
Openness to Experience round 1	.634**	.418**	.274**		
Openness to Experience round 2	.325**	.477**	-.146	.465**	

**. Correlation is significant at the 0.01 level (2-tailed).

There is a potentially confusing result here. When openness to experience is compared to the CGS (the difference between capabilities scores between time 1 and time 2) there is a significant positive correlation (see table 5.25). A positive score from the time 1 minus time 2 equation would indicate an increase in capability (as a high score in capability indicates a low level of capability). This may suggest that those displaying a high level of openness to experience who increase their capability, are likely to do so by a greater amount. However, there is still a strong correlation between openness to experience and low capabilities.

Graduate attributes and capabilities and EAP

There was a negative correlation between intrinsic motivation and GA score. There was also a positive correlation between GA score and capabilities score. There was no correlation with academic performance (see table 5.27). Once again, it bears pointing out that a low score reflects higher performance in both capabilities and GA and as such the negative correlation between intrinsic motivation and GA score suggests that the more intrinsically motivated a participant was, the better that participant's performance in terms of graduate attributes. This also explains the positive correlation with overall capabilities.

Table 5. 27

Correlations between graduate attributes, capabilities and academic performance

	Total GA round 2	Total GA round 1	GA factor 1 round 1	GA factor 1 round 2	GA factor 2 round 1	GA factor 2 round 2	Intrinsic motivation round 1	Intrinsic motivation round 2	CGS (capabilities growth score)	Total capabilities round 1	Total capabilities round 2	Academic performance
Total graduate attributes round 2												
Total graduate attributes round 1	.533**											
Graduate attributes factor 1 round 1	.573**	.865**										
Graduate attributes factor 1 round 2	.886**	.541**	.668**									
Graduate attributes factor 2 round 1	.272**	.773**	.350**	.166								
Graduate attributes factor 2 round 2	.778**	.322**	.229*	.398**	.312**							
	-.449**	-.582**	-.623**	-.503**	-.299**	-.206*						

Intrinsic motivation round 1											
Intrinsic motivation round 2	-.547**	-.368**	-.437**	-.574**	-.135	-.304**	.633**				
CGS (capabilities growth score)	-.132	.316**	.217*	-.102	.316**	-.123	-.121	.133			
Total capabilities round 1	.331**	.668**	.576**	.315**	.519**	.229*	-.396**	-.246*	.494**		
Total capabilities round 2	.471**	.415**	.409**	.426**	.258**	.355**	-.307**	-.382**	-.397**	.603**	
Academic performance	-.181	.086	-.027	-.101	.196*	-.220*	.023	.078	.024	.049	.030

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Academic performance and capabilities

There were no significant correlations between academic performance (as measured by EAP score) and any of the capabilities factors at time 1 or 2.

The impact of variables

The variables of gender and subject pathway were measured to discern their impact on student development. For gender, the Mann Whitney U test was used as only two genders were reported by participants. For subject pathway, the Kruksal-Wallis test was used as there were three pathways. Age was not considered as participants all fell within the 17 to 19 age group.

Gender and academic performance

There was no significant difference in academic performance according to gender. However, it is noticeable that the mean ranks for female candidates are higher than those for male participants (see table 5.28).

Table 5. 28

Ranks gender and academic performance

	Gender	N	Mean Rank	Sum of Ranks
Academic performance	male	55	48.80	2684.00
	female	46	53.63	2467.00
	Total	101		

Gender and Graduate attributes

There was a significant difference between the genders with regard to graduate attributes at time 2 (p = .007). In this situation, female participants indicated a greater growth in attributes than male students. Furthermore, there was a significant difference between the genders with regards to GAGS (p = .046) Once again, female participants demonstrated greater growth in this area. However, there was no significant difference between the CGS and gender.

Gender and motivation

Overall female participants demonstrated greater levels of Intrinsic and extrinsic motivation and lower levels of amotivation over male students. The greatest difference appears to be in extrinsic motivation where the difference between male and female at time 1 is significant (p = .017). At time 1, female participants demonstrated higher levels of extrinsic motivation (58.59 as opposed to 44.65). However, at time 2 this situation had reversed with male participants scoring 56.00 and female participants scoring 45.02. Although there was no significant difference, the growth in extrinsic motivation is higher amongst male participants. However, the growth in intrinsic motivation is higher among female participants (although the difference once again is not significant).

Subject Pathway and academic performance

There was a significant difference (p = 0.16) between the academic performance of students on the IRE pathway and the students on the MP and BC pathways. IRE students scored higher than their counterpoints.

Subject pathway and the change in graduate attributes and capabilities.

There was no significant difference between the different pathways in terms of capabilities or graduate attributes. However, when the CGS is considered, there is a significant difference between the subject pathways (p = .042). As noted earlier, a high capabilities score indicates low capabilities, and subsequently a higher result for the CGS variable indicates greater growth in capability over the course of the year. Subsequently it is clear then that the MP cohort experienced the greatest growth in capability over the course of the year.

Interestingly, when the growth of graduate attributes is considered, a different picture emerges. Although the difference between pathways is not significant, the mean ranks indicate that the greatest growth in GAs is with the IRE cohort (see table 5.29).

Table 5. 29

Ranks pathway with academic performance, capabilities and graduate attributes

	Subject Stream	N	Mean Rank
Academic performance	IRE	22	66.32
	MP	54	48.45
	BC	25	43.02
	Total	101	
CGS (capabilities growth score)	IRE	22	41.59
	MP	54	57.60
	BC	25	45.02
	Total	101	
GAGS (graduate attributes growth score)	IRE	22	54.11
	MP	54	50.20
	BC	25	49.98
	Total	101	

Subject pathway and motivation

There were no significant differences in motivation or motivation growth according to subject pathway.

Regression analysis

In order to further examine the correlations described above, regression analysis was conducted.

Stress predicts Affiliation

Regression analysis demonstrates that Factor 4 (fear and emotional stress) at time 1 predicts factor 1 (passive affiliation) at time 2. In other words, initial stress results predict future affiliation, accounting for 11% of the variance in affiliation at time 2 (see table 5.30).

Table 5. 30

Model Summary stress and affiliation

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.345[a]	.119	.110	5.20742

a. Predictors: (Constant), Factor 4 round 1

In addition, stress (factor 4) at time 1 predicts stress at time 2 accounting for 12.5% of the variance and, as noted previously, stress increases significantly between time 1 and time 2 (see table 5.31).

Table 5. 31

Model Summary stress at time 1 and time 2

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.365[a]	.134	.125	3.08152

a. Predictors: (Constant), Factor 4 round 1

The final element that stress predicts is intrinsic motivation. As noted earlier, high levels of stress reported at time 1 cause a reduction in levels of intrinsic motivation at time 2, accounting for 7.3% 0f the variance (see table 5.32).

Table 5. 32

Model Summary stress and intrinsic motivation

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.287[a]	.082	.073	.96281837

a. Predictors: (Constant), Factor 4 round 1

Personality type is a predictor of stress (Factor 4) at time 1, accounting for 21% of the variance (see table 5.33).

Table 5. 33

Model Summary personality (all types) and stress at time 1

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.505[a]	.256	.216	3.40992

a. Predictors: (Constant), Openness to Experience round 1, Agreeableness round 1, Conscientiousness round 1, Emotional Stability round 1, Extraversion round 1

However, personality type at time 1 does not predict stress at time 2 (see table 5.34), which may suggest that other factors have more of an impact over the course of the year.

Table 5. 34

Model Summary personality (all types) and stress at time 2

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.312[a]	.098	.050	3.21039

a. Predictors: (Constant), Openness to Experience round 1, Agreeableness round 1, Conscientiousness round 1, Emotional Stability round 1, Extraversion round 1

Openness to experience at time 1 predicts intrinsic motivation at time 2, accounting for 12.5% of the variance (See table 5.35).

Table 5. 35

Model Summary openness to experience and intrinsic motivation

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.365[a]	.133	.125	.93556804

a. Predictors: (Constant), Openness to Experience round 1

It is clear that intrinsic motivation has an important role to play in the foundation year experience. Intrinsic motivation at times 1 and 2 account for approximately 14% in the variance of overall capabilities score (see table 5.36).

Table 5. 36

Model Summary intrinsic motivation and capabilities

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.391[a]	.153	.136	.92973929

a. Predictors: (Constant), Intrinsic motivation round 2, Intrinsic motivation round 1

Cross lagged correlation (see table 5.37) reveals that the impact of intrinsic motivation on capabilities is not statistically significant (p = .64).

Table 5. 37

Cross lagged Correlations involving Intrinsic motivation and overall capabilities

Time 1	Time 2	Pearson Correlation	Z score	P value (2 tailed)
Intrinsic motivation	Total capabilities	-.307	-0.46	0.64
Total capabilities	Intrinsic motivation	-.246		

Intrinsic motivation and GA score

Furthermore, it is clear that intrinsic motivation at time 1 accounts for 25% of the variance in factor 1 GA score at time 2 (see table 5.38).

Table 5. 38

Model Summary intrinsic motivation and factor 1 GA score

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.503[a]	.253	.246	4.19998

a. Predictors: (Constant), Intrinsic motivation round 1

However, while the relationship is significant, it seems that Intrinsic motivation has much less of an effect on the factor 2 GA score, accounting for only 3% of the variance at time 2 (see table 5.39).

Table 5. 39

Model Summary intrinsic motivation and factor 2 GA score

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.206[a]	.042	.033	3.51629

a. Predictors: (Constant), Intrinsic motivation round 1

Cross lagged correlation (see table 5.40) reveals that the causal impact of intrinsic motivation on GA factor 1 is not statistically significant.

Table 5. 40

Cross lagged Correlations involving Intrinsic motivation and GA factors

Time 1	Time 2	Pearson Correlation	Z score	P value (2 tailed)
Intrinsic motivation	GA Factor 1	-.503	-0.59	0.55
GA Factor 1	Intrinsic motivation	-.437		
Intrinsic motivation	GA Factor 2	-.206	-0.51	0.61
GA Factor 2	Intrinsic motivation	-.135		

When taken as a whole, it seems that motivation accounts for approximately 20% of the variance in overall GA score (see table 5.41).

Table 5. 41

Model Summary intrinsic motivation and overall GA score

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.449[a]	.201	.193	.89817699

a. Predictors: (Constant), Intrinsic motivation round 1

Cross lagged correlation (see table 5.42) reveals that the causal impact of intrinsic motivation on overall GA score is not statistically significant.

Table 5. 42

Cross lagged Correlations involving intrinsic motivation and overall GAs

Time 1	Time 2	Pearson Correlation	Z score	P value (2 tailed)
Intrinsic motivation	Overall GAs	-.499	-1.13	0.26
Overall GAs	Intrinsic motivation	-.368		

Regression total capabilities and openness to experience

Openness to experience at time 1 accounts for approximately 17% of the variance in overall capability score at time 2 (see table 5.43).

Table 5. 43

Model Summary openness to experience and overall capability at time 2

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.418[a]	.175	.166	.91312888

a. Predictors: (Constant), Openness to Experience round 1

Cross lagged correlation reveals that the causal impact of openness to experience on overall capabilities score is not statistically significant (see table 5.44).

Table 5. 44

Cross lagged Correlations involving openness to experience and overall capabilities

Time 1	Time 2	Pearson Correlation	Z score	P value (2 tailed)
Openness to Experience	Overall capabilities	.418	0.76	0.45
Overall capabilities	Openness to Experience	.325		

Motivation types and academic performance

When the results for all motivation types are combined they account for approximately 10% (adjusted R Square) of the variance in academic performance (as measured by overall EAP score) (see table 5.45).

Table 5. 45

Model Summary combined motivation and academic performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.395[a]	.156	.102	.94754616

a. Predictors: (Constant), Amotivation round 1, Intrinsic motivation round 1, Amotivation round 2, Extrinsic motivation round 2, Extrinsic motivation round 1, Intrinsic motivation round 2

Changes in stress and intrinsic motivation as predictors of CGS

Finally, as the role of stress and intrinsic motivation have been shown to be of relevance, the change in these two variables was considered in relation to their combined effect on the growth of capabilities. As stress is considered a negative and intrinsic motivation a positive the variables were calculated by subtracting the score for stress at time 2 from the score at time 1 and the score for intrinsic motivation at time 1 from the score at time 2. There were very strong correlations between these variables and CGS (see table 5.46).

Table 5. 46

Correlations between changes in intrinsic motivation and stress with CGS

	CGS (capabilities growth score)	Stress (factor 4) change	Intrinsic motivation change
CGS (capabilities growth score)			
Stress (factor 4) change	.629**		
Intrinsic motivation change	-.296**	-.007	

**. Correlation is significant at the 0.01 level (2-tailed).

Regression analysis illustrates that when taken together, these two variables account for almost 50% of the variance in CGS (see table 5.47).

In order for a causal relationship to be explored, there would have needed to be correlations between the combined scores for intrinsic motivation and factor 4 at times 1 and 2 and overall capabilities scores at times 1 and 2. There wasn't and so it can be concluded that there is no causal relationship between these factors.

Table 5. 47

Model Summary combined changes in intrinsic motivation and stress applied to CGS

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.693[a]	.480	.469	.72843554

a. Predictors: (Constant), Stress (factor 4) change, Intrinsic motivation change

Moderating variables

Subsequently moderation and mediation was considered. Calculations were made with the PROCESS plugin for SPSS designed by Andy Hayes.

Intrinsic motivation at time 1 is a moderating factor between stress at time 1 and overall capabilities (see table 5.48). The interaction (Int_1) has a P value of less than .05 which indicates significance and the confidence interval (LLCI and ULCI) does not include zero. In other words, the relationship between stress at time 1 and capabilities changes as a function of intrinsic motivation at time 1.

Table 5. 48

Model Summary intrinsic motivation at time 1 as a moderating variable between stress at time 1 and overall capabilities at time 2

R	R-sq	MSE	F	df1	df2	p
.5453	.2974	.7244	13.6845	3.0000	97.0000	.0000
Model						
	coefficient	se	t	p	LLCI	ULCI
constant	-1.3388	.3043	-4.3993	.0000	-1.9427	-.7348
Intrinsic motivation time 1	.5310	.3040	1.7466	.0839	-.0724	1.1343
Stress time 1	.1005	.0230	4.3689	.0000	.0548	.1462
Int_1	-.0559	.0222	-2.5140	.0136	-.1000	-.0118

The nature of the moderation is that at low and medium levels of intrinsic motivation there is a significant relationship between stress and overall capabilities (see table 5.49). However, where levels of intrinsic motivation are high, there is no significant relationship between stress and overall capabilities.

Table 5. 49

Conditional effect of X on Y at values of the moderator(s) (one standard deviation above and below the mean)

Zintmr1	Effect	se	t	p	LLCI	ULCI
-1.0000	.1564	.0302	5.1714	.0000	.0964	.2164
.0000	.1005	.0230	4.3689	.0000	.0548	.1462
1.0000	.0446	.0337	1.3249	.1883	-.0222	.1114

Intrinsic motivation at time 1 is also a moderating factor between overall capabilities at time 1 and time 2 (see table 5.50).

Table 5. 50

Model Summary intrinsic motivation at time 1 as a moderating variable for overall capabilities at times 1 and 2

R	R-sq	MSE	F	df1	df2	p
.6361	.4046	.6138	21.9761	3.0000	97.0000	.0000
Model	coefficient	se	t	p	LLCI	ULCI
constant	-.0835	.0852	-.9793	.3298	-.2526	.0857
Intrinsic motivation time 1	-.0544	.0860	-.6327	.5284	-.2251	.1163
Overall capabilities time 1	.5729	.0853	6.7149	.0000	.4036	.7423
Int_1	-.2129	.0878	-2.4248	.0172	-.3872	-.0386

The moderating effect is significant at all levels of the relationship (see table 5.51).

Table 5. 51

Conditional effect of X on Y at values of the moderator(s) (one standard deviation above and below the mean)

Zintmr1	Effect	se	t	p	LLCI	ULCI
-1.0000	.7858	.1231	6.3818	.0000	.5415	1.0302
.0000	.5729	.0853	6.7149	.0000	.4036	.7423
1.0000	.3600	.1217	2.9578	.0039	.1184	.6016

Mediating Variables

Stress at time 1 is a mediator for passive affiliation between times 1 and 2. Regression analysis illustrates that passive affiliation at time 1 is a predictor of the mediator (stress at time 1) (see table 5.52).

Table 5. 52

Model summary passive affiliation at time 1 as a predictor of stress at time 1

R	R-sq	MSE	F	df1	df2	p
.3206	.1028	13.4465	11.3453	1.0000	99.0000	.0011

Model

	coefficient	se	t	p	LLCI	ULCI
constant	9.9440	.9155	10.8614	.0000	8.1274	11.7606
Passive affiliation time 1	.2204	.0654	3.3683	.0011	.0906	.3503

It is also clear that stress and passive affiliation at time 1 predict passive affiliation at time 2. The relationships are significant (see table 5.53).

Table 5. 53

Model Summary passive affiliation at time 1 and stress at time 1 as predictors of passive affiliation at time 2

R	R-sq	MSE	F	df1	df2	p
.5333	.2844	22.2569	19.4780	2.0000	98.0000	.0000

Model

	coefficient	se	t	p	LLCI	ULCI
constant	5.0983	1.7437	2.9238	.0043	1.6379	8.5587
Stress at time 1	.2978	.1293	2.3035	.0234	.0413	.5544
Passive affiliation at time 1	.4227	.0889	4.7560	.0000	2.463	.5991

Outcome: Passive affiliation at time 2

Finally, it can be observed that stress is indeed a mediating variable between passive affiliation at times 1 and 2 (see table 5.54). The bootstrapped confidence interval is positive (it does not include zero) and so it can be concluded that the indirect effect is present.

Table 5. 54

Indirect effect of passive affiliation at time 1 on passive affiliation at time 2 via stress at time 1

Mediator	Effect	Boot SE	BootLLCI	BootULCI
f4R1	.0656	.0354	.0140	.1586

Openness to experience is a mediating variable between stress at time 1 and overall capabilities at time 2. Regression analysis illustrates that stress at time 1 is a predictor of the mediator (openness to experience at time 1) (see table 5.55).

Table 5. 55

Model summary stress at time 1 as a predictor of openness to experience at time 1

R	R-sq	MSE	F	df1	df2	p
.4690	.2200	.7879	27.9243	1.0000	99.0000	.0000
Model						
	coefficient	se	t	p	LLCI	ULCI
constant	-1.5553	.3073	-5.0614	.0000	-2.1650	-.9456
Stress at time 1	.1218	.0230	5.2843	.0000	.0760	.1675

It is also clear that openness to experience and stress at time 1 predict overall capabilities at time 2, as the relationships are significant (see table 5.56).

Table 5. 56

Model summary stress at time 1 and openness to experience at time 1 as predictors of overall capabilities at time 2

R	R-sq	MSE	F	df1	df2	p
.5155	.2658	.7492	17.7349	2.0000	98.0000	.0000
Model						
	coefficient	se	t	p	LLCI	ULCI
constant	-1.1339	.3362	-3.3728	.0011	-1.8011	-.4667
Openness to experience at time 1	.2574	.0980	2.6260	.0100	.0629	.4519
Stress at time 1	.0888	.0254	3.4893	.0007	.0383	.1393
Outcome: Overall capabilities score at time 2						

It can be observed that openness to experience at time 1 is indeed a mediating variable between stress at time 1 and overall capabilities at time 2 (see table 5.57). The bootstrapped confidence interval is positive (it does not include zero) and so it can be concluded that the indirect effect is present. However, the effect while positive and therefore significant is also small in that it lies between .0093 and .0555.

Table 5. 57

Indirect effect of stress at time 1 on overall capabilities at time 2 via openness to experience at time 1

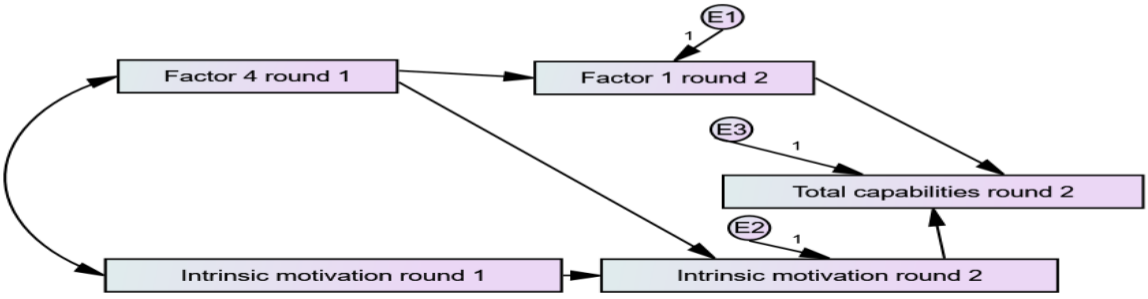
Mediator	Effect	Boot SE	BootLLCI	BootULCI
ZOExR1	.0313	.0116	.0093	.0555

Structural equation modelling (SEM)

Given the clear importance illustrated above in the relationships of stress, intrinsic motivation and overall capabilities score, structural equitation modelling was conducted to discern whether the relationships could be mapped (see figure 5.2). The Chi-square of 8.989 with a p value of .061 indicates that there is no significant difference between this model and the notional computer generated perfect model. However, the p value is close to significance.

Figure 5. 2

Model 1: Path stress and intrinsic motivation to overall capabilities



The GFI (goodness of fit index) is greater than .9 and is subsequently a good fit (see table 5.58).

Table 5. 58

Model 1: RMR and GFI

Model	RMR	GFI	AGFI	PGFI
Default model	.232	.966	.873	.258
Saturated model	.000	1.000		
Independence model	2.244	.598	.397	.398

The baseline comparisons are mostly a good fit as they are above .9. However, the RFI (Rho 1) is .864 which falls short of the .9 cut off (see table 5.59).

Table 5. 59

Model 1: Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.945	.864	.969	.920	.968
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

Furthermore, the error term as represented by the RMSEA **(**Root Mean Square Error of Approximation) is .112 is unfortunately greater than .05 (see table 5.60).

Table 5. 60

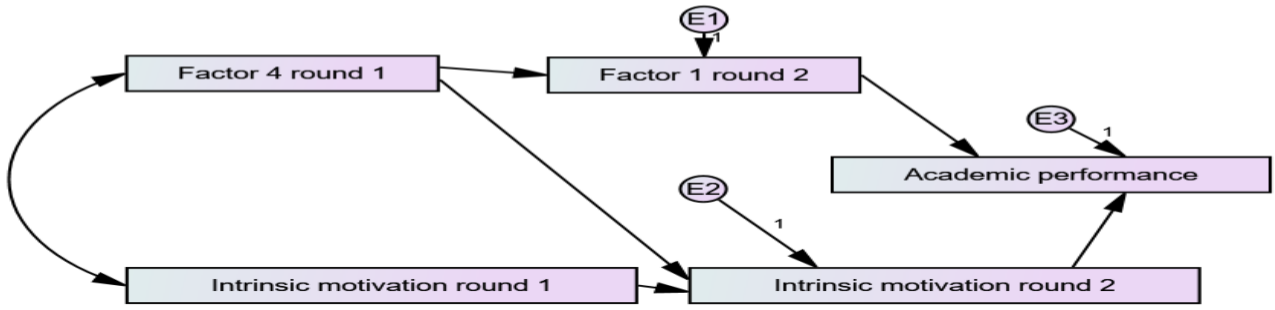
Model 1: RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.112	.000	.211	.124
Independence model	.394	.342	.448	.000

There is a better model fit when the relationships between stress, intrinsic motivation and academic performance as represented by EAP coursework score are considered (see figure 5.3). The Chi-square of 4.236 with a p value of .375 indicates that there is no significant difference between this model and the notional computer generated perfect model.

Figure 5. 3

Model 2: Path stress and intrinsic motivation to academic performance



The GFI is greater than .9 and is subsequently a good fit (see Table 5.61).

Table 5. 61

Model 2: RMR and GFI

Model	RMR	GFI	AGFI	PGFI
Default model	.225	.983	.938	.262
Saturated model	.000	1.000		
Independence model	1.964	.765	.647	.510

The baseline comparisons are mostly a good fit as they are above .9. However, the RFI (Rho 1) is .866 which falls short of the .9 cut off (see table 5.62).

Table 5. 62

Model 2: Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.947	.866	.997	.991	.997
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

However, the RMSEA is below .05, which is a further indicator that the model is a good fit (see table 5.63).

Table 5. 63

Model 2: RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.024	.000	.155	.500
Independence model	.263	.211	.318	.000

Discussion

The aim of this study was to investigate how students develop and what factors predict that development. This discussion will proceed by considering the negative developments that were observed in the areas of affiliation, stress and intrinsic motivation. It will then move to the positive developments in the areas of graduate attributes and conscientiousness. Finally it will consider the predictors of development.

Negative developments

Capabilities.

A substantial part of the survey instrument comprised questions designed to assess participants' capabilities. Principle components analysis led to a reduction in the number of factors to seven. Of these seven factors, the only significant change registered as a negative result in two areas, stress (factor 4) and affiliation (factor 1). The remaining five factors did not register a significant change in either direction.

The changes in stress and affiliation registered as having small effect sizes, however these changes were still significant statistically. While both effects were small it seems fair to say that they are still meaningful. Cohen points out that a small effect "is the order of magnitude of the difference in mean IQ between twins and nontwins (sic), the latter being the larger (Husen, 1959). It is also approximately the size of the difference in mean height between 15- and 16-year-old girls" (Daly & Cohen, 1978, p. 26). While that may still seem negligible, in terms of education research the effects are meaningful. As Hattie, author of multiple meta analyses concerning the impact of educational interventions concludes.

> There are many examples that show small effects may be important. A vivid example comes from medicine. Rosenthal and DiMatteo (2001) demonstrated that the effect size of taking low dose aspirin in preventing a heart attack was d = 0.07, indicating that less than one-eighth of one percent of the variance in heart attacks was accounted for by using aspirin. Although the effect size is small, this translates into the conclusion that 34 out of every 1,000 people would be saved from a heart attack if they used low dose aspirin on a regular basis. This sounds worth it to me (Hattie, 2009, p. 9).

In terms of capabilities these changes can be considered to be a reduction in life quality and subsequently not a desirable phenomenon. However, while stress is part of the total set of

human capabilities, it isn't one of those specifically associated with education (Nussbaum, 2000a). Even so, it seems an undesirable, if not uncommon, development for students in undergraduate programs.

Growth in stress amongst undergraduate students internationally is the subject of substantial literature. Studies in Canada, the USA, Turkey and the UK all report high levels of stress among university students (Bewick, Koutsopouloub, Miles, Slaad, & Barkham, 2010). Interestingly, and perhaps worryingly, it was observed in one study that "at no time during university did psychological distress fall to pre-admission levels" (Regehr, Glancy, & Pitts, 2013, p. 2).

The growth in stress is noteworthy in the context of this research because the university in question operated on a model of full scholarships for all students at the time the research was conducted. Studies, such as Bewick et al's UK research, link stress in undergraduate students with the pressure of paying fees.

> Changes in UK higher education, namely the abolition of student grants in favour of student loans and the introduction of tuition fees, have resulted in students' lives becoming increasingly pressurised (Bewick et al., 2010, p. 633).

It seems reasonable to conclude that the stress of affording fees is not an issue for students on full scholarships. While financial difficulties may still be a variable it seems fair to say that scholarship students are free of the burdens that many students elsewhere face in that their fees, accommodation and living costs are covered by the grant. Despite the absence of this financial burden, these students still register a significant growth in stress levels which suggests that other aspects of the university experience may be at play.

Affiliation.

The decrease in affiliation experienced by participants also appears to constitute an undesirable result. That a sense of belonging decreases over the course of the foundation year

was unexpected. While the arrival at university may understandably cause disruption and a sense of not belonging, a year into the university experience for that sense to increase seems confusing. However, in a study at a university in the USA, Chambliss and Takacs (2014) observed that a sense of belonging was not achieved until the middle of the second year of undergraduate study, a year and half beyond the experience of the participants in this study.

It is possible that a decrease in capabilities may actually constitute a positive development in certain circumstances. With regard to the increase in stress, it may be argued that this is a requirement of development. That change is an inherently stressful process, but one that is ultimately beneficial. With regard to the decrease in affiliation, this could be argued to be a necessary consequence of the university's stated goal to develop individuals to change and develop society.

The ten factor model of capabilities.

Statistical analysis of the items reduced to ten factors, aligned with the ten capabilities around which the original instrument was designed, continues to reveal a reduction in the capabilities of affiliation, emotions and life which all demonstrate a significant decrease. However, the capability of bodily health has a significant increase (although this is not one of the capabilities explicitly associated with education). Clearly this finding is at odds with the notion that education ought to enhance capabilities.

Intrinsic motivation.

With regard to the longitudinal study, the most significant result (which recorded a medium effect size) concerned a decrease in levels of intrinsic motivation. This is clearly of concern given the evidence in the literature (Taylor et al., 2014) concerning the link between intrinsic motivation and academic performance. While in this study, there was a correlation between both extrinsic motivation (positive) and amotivation (negative) and academic performance

but not between intrinsic motivation and academic performance, intrinsic motivation did constitute a factor in the model predicting academic performance.

There were correlations between amotivation and extrinsic motivation and academic success but not intrinsic motivation. Where intrinsic motivation did correlate with other factors was in the cases of general graduate attributes scores and general capabilities.

Furthermore, there was a correlation between intrinsic motivation and the development of capabilities (notably stress and affiliation), conscientiousness and graduate attributes. In these areas, intrinsic motivation had a positive impact on development. This result suggests that intrinsic motivation may be more instrumental in the development of the non-academic aspect of the university experience. In any case, given the clear importance of intrinsic motivation in the majority of areas measured in this study, the decrease noted here should be of some concern to the institutions involved.

Positive developments

Graduate attributes.

The questions designed to assess the development of graduate attributes did not register a significant change, either in terms of growth or reduction between the two data collection points. This is perhaps not surprising as the study covered just one year of a five-year degree program. Furthermore, it is worth noting that while neither of the graduate attribute related factors experienced significant growth, the critical application factor (a measure of the development of critical thinking) did demonstrate movement in a positive direction.

Conscientiousness.

The area where the students who participated in this study developed the most is connected with the personality trait of conscientiousness. While this aspect was measured in the research by a personality test, development of this type does appear to be in alignment with

the sort of development that is described in generic university graduate attributes related to values. Conscientiousness can for example, be argued to align with certain desirable characteristics such as organisational skills, time management, maturity and taking responsibility for oneself. It seems then, that this increase constitutes a development of the participants concerned in line with those suggested by graduate attributes. One of the Kazakhstan University graduate attributes states that on graduation, students will "be thoughtful decision makers who know how to involve others" (Kazakhstan University 2013).

Predictors of change

Intrinsic motivation and levels of stress shared an intimate relationship of correlations and impacted significantly on each other. These two variables both individually and taken in combination, constituted the most important predictors of the other areas measured in this study.

Intrinsic motivation.

Intrinsic motivation predicts both overall capabilities attainment and graduate attribute development. Intrinsic motivation also acts as a moderating variable between stress and overall capabilities development. These findings align with the extensive literature supporting the role of motivation in academic development as discussed in the literature review.

Stress.

Stress was an important predictor of several other variables. Affiliation was for example, found to be a factor which decreased over the course of the foundation year. The results indicate that stress is a predictor of affiliation. Furthermore, stress was a mediating variable between affiliation at time 1 and affiliation at time 2. Stress also predicts intrinsic motivation, which given the importance of intrinsic motivation noted above, appears to be an important observation.

Limitations of the research

The participants of the survey constituted a narrow demographic range in terms of age and nationality. As such, the conclusions drawn here may apply only to subjects in those categories. A more comprehensive result would have been obtained by involving participants studying the same course at London University.

While the sample size for the tests conducted was sufficient, a greater number of participants would have made the results more robust. The length of the instrument appears to have been a factor in people completing the survey, as a substantial number of participants (n=259) began but did not complete it.

Conclusion

The research question that was the focus of this study concerned how students develop and what factors predict that development. It is clear that students do develop and change over the course of the foundation year. This change manifests itself in a decrease in capabilities, a decrease in intrinsic motivation and an increase in conscientiousness. However, questions designed to measure a change in skills related to graduate attributes did not register a significant change either for the better or the worse, although in this area the change does appear to be positive, if not significantly so.

The majority of students (55%) are extrinsically motivated upon entry to the foundation year. As noted above, this motivation changes with a decrease in intrinsic motivation. However, students become more conscientiousness. This aspect of personality is aligned with many values related graduate attributes.

In terms of predictors of student development, intrinsic motivation and levels of stress constitute two important variables that combine to create models of student development both academically and in the area of capabilities.

6: Study 2: Experiences of staff working on a foundation programme.

The aim of this study is to investigate the perceptions of staff working on the foundation programme. The perceptions that are of particular focus concern staff ideas about the nature of the institution of the university and subsequently the value of a degree.

It will be argued that there is no fixed essence to the idea of the university and as a result there is a question of what the people involved with the delivery of courses within the institution believe that to be. It follows on from this that the value of a degree is also something which is not the subject of a concrete consensus. As was argued in the general introduction, the value of a degree appears to be coalescing around an extrinsic conceptualisation, whereby the value is associated with what it allows the graduate to achieve later in life rather than the intrinsic value that may be associated with the personal development that takes place over the course of a degree. It is argued that it is important to understand what the perceived value of a degree is as this may impact on the way in which education is delivered.

In fact, it appears that the developmental role of universities is one factor at least which is consistent throughout the multiple historical conceptualisations of the institution. It seems reasonable to expect therefore that those stakeholders engaged with the delivery of tertiary education would recognise the importance of the developmental role. However, as was pointed out in the general introduction, the institution at the centre of this research constitutes the manifestation of a number of trends in HE. It is a transnational partnership with a particular societal developmental mandate to increase participation in HE situated on the new Silk Road. To summarise, the institution represents an attempt to not only influence the future direction of the nation of Kazakhstan but also as a manifestation of the internationalisation of education in that it is involved in transnational educational

partnership. As such it is part of the global trends that may be responsible for the shift away from the intrinsic value of a degree to a more extrinsic one.

In terms of the wider study that this research is a part of, in order to properly understand the development that students undergo, it seems important to first understand what stakeholders understand to be the purpose of the university and how students develop. If there is consistency between the perceived value of a degree and the way that students develop, then this indicates a consistency of purpose within the institution of the university that manifests in the transnational context. If there is a disconnect, it would seem that this would represent a potentially negative hurdle to student development. In order to explore these questions, this study involves qualitative research to investigate the perceptions of stakeholders.

As was noted in the general introduction, the HE sector is facing a number of challenges and the overall argument of this project is that the intrinsic value of a degree can be communicated more effectively by institutions. While there is substantial literature concerning western institutions, which states that the development undergone by students is consistent from institution to institution (Buckley, 2015; Feldman, 1969; Pascarella & Terenzini, 2005), there is limited research concerning manifestations of transnational institutions and transnational partnerships in particular.

This study will begin by analysing the literature surrounding the ontology of the institution of the university before moving onto the literature surrounding the experiences of transnational academic staff. Subsequently the methods of data collection (in depth interviews) will be explained, followed by the presentation and discussion of the results. In summary, participants did not demonstrate an essentialist conception of the institution of the university. Participants perceived students to develop in ways consistent with graduate

attributes, and while they saw themselves to be motivated intrinsically, they perceived students to be motivated extrinsically.

Literature review

The definition of a university

The answer to the question, "what is the oldest university in the world?" ought to be a straightforward one. However, while the Guinness record goes to the University of Karueein in Fez, Morocco, a case can also be made for the University of Bologna, where the term 'university' originated. While the purpose of this research is not to analyse or debate the history of higher education (HE), the example is intended to illustrate that the idea of the university is a fluid one, and one that has undergone historical change as well contrasting conceptualisations depending on mission, geography and many other factors.

It is argued here that there is no fixed essence which constitutes a set of criteria to define the idea of the university. As Searle notes, "what we think of as social objects, such as governments, money, and universities, are in fact just placeholders for patterns of activities" (Searle, 1996, p. 48). The idea that concepts have fixed essential definitions was refuted by Wittgenstein who pointed out that meaning exists more as a family resemblance between different uses of terms rather than defining sets of criteria. Wittgenstein's famous example is that of a game.

> Consider, for example, the activities that we call "games". I mean board-games, card-games, ball-games, athletic games, and so on. What is common to them all? Don't say: "They must have something in common, or they would not be called 'games' " but look and see whether there is anything common to all. For if you look at them, you won't see something that is common to all, but similarities, affinities, and a whole series of them at that. To repeat: don't think, but look! Look, for example, at board-games, with their various affinities. Now pass to card-games; here you find many

> correspondences with the first group, but many common features drop out, and others appear. When we pass next to ball-games, much that is common is retained, but much is lost. Are they all 'entertaining'? Compare chess with noughts and crosses. Or is there always winning and losing, or competition between players? Think of patience. In ball-games, there is winning and losing; but when a child throws his ball at the wall and catches it again, this feature has disappeared. Look at the parts played by skill and luck, and at the difference between skill in chess and skill in tennis. Think now of singing and dancing games; here we have the element of entertainment, but how many other characteristic features have disappeared! And we can go through the many, many other groups of games in the same way, can see how similarities crop up and disappear.
>
> And the upshot of these considerations is: we see a complicated network of similarities overlapping and criss-crossing: similarities in the large and in the small.(Wittgenstein et al., 2009, p. 36)

There are no fixed criteria which could define a game. Rather one can trace resemblances between different games. For Wittgenstein, problems occur when essentialist definitions are posited as these tend to be somewhat restrictive and at the same time inaccurate. This is also true when the idea of the university is considered.

Despite the perception that perhaps the term 'university' applies to a specific type of institution, the evidence is rather to the contrary. Historically, the university has undergone a variety of different manifestations. The ideas of Kant, Newman, Hume and Von Humboldt (who offer conceptions which are perhaps similar in certain aspects), cover so broad a spectrum of ideas that they prevent the formation of a meaningful essentialist definition of what a university is.

In the present day, the situation is even more complex. Collini notes that universities in the UK since the late 20th century are "more diverse in both types of institution and fields of study, and they are arguably more varied in quality and viability" (Collini, 2012, p. 100). Williams (Williams, 2002) specifies five different perceptions of the purpose of universities. These are the humanistic enclave (Newman), civic training (Jefferson), vocational training, disciplinary research and corporatisation (Williams, 2002). Clearly there are grey areas between these categories and moreover, Collini points out that the different conceptions "can be in active contradiction with each other" (Collini, 2012, p. 90). It seems that it is not possible to arrive at a set of sufficient conditions for the university. Furthermore, even if a set of necessary conditions could be arrived at, there is no reason to assume that the fulfilment of these conditions would result in institutions that would be the same or indeed aim at the achievement of the same goals. It is the case that not all of the strengths of different universities are, or indeed should, be in the same areas.

However, the theme of student development is one that runs through these competing conceptions, and while perhaps it is not a sufficient condition for the definition of a university, it could certainly be considered to be a necessary one.

Newman for example felt the university to be an institution foremost for teaching. It could be argued that this model of the purely teaching institution was followed in the Soviet period.

> 'Liberal Education makes not the Christian, not the Catholic, but the gentleman. It is well to be a gentleman, it is well to have a cultivated intellect, a delicate taste, a candid, equitable, dispassionate mind, a noble and courteous bearing in the conduct of life; – these are the connatural qualities of a large knowledge; they are the objects of a University" (Newman, 1999, p. 110)

The model advocated by Von Humboldt combined teaching and research, but the developmental end, to create citizens of the world, was the same. It seems fair to conclude then that given development towards world citizenship also being part of graduate attributes, this should be manifested in the transnational context as well.

The experiences of transnational academic staff

The literature on transnational academic staff is somewhat limited (Cai & Hall, 2016; W. Green & Myatt, 2011; Smith, 2009). However, it is clear that there is a growth in the mobility of academic staff internationally and that this is a product of the trends of internationalisation and commercialisation (Cai & Hall, 2016; Kim, 2010).

This growth in the mobility of academic staff, is likely driven by the trends described earlier of internationalisation and commercialisation. Kim (2010) argues that the increase in fixed term contracts for academics in the UK (part of the commercialisation trend described earlier) has facilitated transnational academic mobility (Kim, 2010). There is a similar situation in USA, Australia and South Korea (Kim, 2010). Cai and Hall (2016) argue that on account of the difficulties involved in staffing transnational institutions, universities may be looking to learn lessons from the staffing policies and practices of multinational corporations.

There appears to be a consensus that working in a transnational context is a transformative experience for academic staff (Cai & Hall, 2016; W. Green & Myatt, 2011; Kim, 2010; Smith, 2009). Research conducted by Smith (2009) involved an analysis of what she describes as the limited research in the area. A participant in one study covered by Smith, commented that the transformative experience of transnational teaching had "moved her from a liberal humanist position towards one that is more critical postmodernist" (Smith, 2009, p. 117).

Part of the experience of transformation appears to involve overcoming the challenges of adapting to new teaching and learning research contexts (Cai & Hall, 2016; W. Green &

Myatt, 2011). In research conducted at a UK IBC in China, Cai and Hall observed that it was also difficult for staff to adapt to the differences of the IBC when compared to the home institution.

> Although as a private institution in China the IBC relied in part upon its distinctive Britishness to market its courses and attract students, there appeared to be no ongoing work among the staff to define, maintain, and develop the ethos and values that supported this distinctiveness in the Chinese context (Cai & Hall, 2016, p. 12).

In conclusion, it seems that there is no fixed essence to the idea of the university. Given the current trends of commercialisation massification and internationalisation that are shaping HE, it seems reasonable to question whether these have shifted the conceptualisation of the purpose of the institution and the value of a degree. Furthermore, the literature indicates that transnational academic staff undergo transformative experiences as a result of their roles. Taking these two factors together, the focus of this study is to question what transnational academic staff understand the purpose of the institution of the university to be and what they see as the value of a degree.

Research question:

What do teaching and administrative staff working on the foundation program perceive as student development?

Methods

This aspect of the overall research is qualitative and involves the use of in depth interviews. These were chosen because they aim "to capture the point of view of the respondent rather than the concerns of the researcher" (Henn, Weinstein, & Foard, 2006, p. 162). This approach has been used in institutional research internationally. In Australia for example, Nuemann (1992) used this method in research into the perceptions of the relationship between research

and teaching of senior academic administrators at the University of Technology, Sydney. Binsardi and Ekwulugo (2003) also used in depth interviews in order to explore student perceptions of higher education in the UK. In a 2007 study into the perception of university students as consumers of education, Lomas used in depth interviews as a means of understanding staff perceptions of the issue. Furthermore, Cai and Hall (2016) used in depth interviews to understand the perceptions of transnational academics working at a UK IBC in China, a context similar to the one of this research. As Lomas (2007) points out, in depth interviews allow for two way communication and the following up of interesting ideas. Given the exploratory nature of the research questions of this project, interviews appear to be the most suitable method.

Judgement or purposeful sampling was used to obtain participants for the research whereby the researcher "selects the most productive sample to answer the research question" (Marshall, 1996, p. 523). The subjects and their roles and responsibilities were known to the researcher and as such as broad of a picture as possible was made available. Marshall notes that "it may be advantageous to study a broad range of subjects (maximum variation sample), outliers (deviant sample), subjects who have specific experiences (critical case sample) or subjects with special expertise (key informant sample)" (1996 p.523). Maximum variation was achieved by approaching staff involved with all the different subjects delivered in the foundation as well as administration. Critical case information was achieved by involving participants who had experiences of teaching, teacher management and student engagement through administration. Key informant information was obtained from one participant being a member of the foundation's senior management team and who was also the only participant to be involved in the delivery of the program both in London and in Kazakhstan.

Each student of the foundation program studies four modules over the course of the foundation year. Two of these modules are taught by English for academic purposes (EAP)

staff and two by subject staff. Subsequently three strata within employees of the foundation program were identified. These were EAP staff, subject staff and administration staff. In 2014, there were 33 EAP staff, 28 subject staff and 8 administration staff. Within each stratum, participants were selected using simple random sampling (the RAND function in Excel) and contacted by email to participate in the study. Of those contacted four members of EAP staff, three subject staff and two administration staff accepted the invitation to participate. In addition, one participant from EAP was a mid-level manager, one subject staff member was also a mid-level manager and one other participant from the subject staff was a senior level manager and member of the foundation's senior management team. From a population of 69, the response rate of nine constitutes a confidence interval of 30 at a 95% confidence level.

In order to provide a better understanding of the nature of participants without identifying them, some background information on the roles participants played at the university is included in table 6.1

Table 6. 1

Background information on interview participants

Participant Label	**Role**	**Nationality**	**Years of experience**	**Additional information**
EAP 1	EAP teaching fellow	UK	10 -15	International experience in HE
EAP 2	EAP coordinator	UK	10-15	International experience in HE
EAP 3	EAP teaching fellow	UK	5-10	UK HE experience
EAP 4	EAP teaching fellow	USA	<5	International experience in HE
SUB 1	Senior subject coordinator	UK	20-30	UK HE experience

SUB 2	Biology teaching fellow	UK	20-30	International experience in secondary education
SUB 3	Subject coordinator	UK	10-15	International experience in HE
ADMIN 1	Administrator	Kazakhstani	<5	Graduate degree from USA (Bolashak)
ADMIN 2	Administrator	Kazakhstani	<5	Graduate degree from UK (Bolashak)

The interviews were conducted in July 2014. A ten-item interview schedule was designed and distributed to participants prior to the interview. A consent form was also sent to participants at this time (see appendix A). The questions were as follows:

1. What do you think is the purpose of a university?
2. What do you think are the main reasons why our students are studying at this university?
3. What do you think are the most valuable aspects of obtaining a degree?
4. In what ways do students develop the most over the course of a degree?
5. Do you think these are the most important things for them to develop?
6. In what ways does your work contribute to that development?
7. What problems do you think students face in obtaining a degree?
8. What do you think of the idea that students are customers and consumers of education?
9. What does this university offer to Kazakhstan?
10. Apart from earning a living, why do you do this job?

Interviews were semi structured and varied in length from 22 to 50 minutes. The interviews were recorded (with the permission of participants) and the results transcribed. These transcriptions were then analysed and coded using the *NVivo* software program. How the results in this chapter have been organised in relation to those interview questions can be seen in Table 6.2.

Table 6. 2

Interview questions and chapter structure

Chapter section	Interview questions
• The purpose of a university	What do you think is the purpose of a university?
	What does this university offer to Kazakhstan?
• Staff perceptions of student motivation	What do you think are the main reasons why our students are studying at this university?
	What do you think are the most valuable aspects of obtaining a degree?
	What do you think of the idea that students are customers and consumers of education?
• Staff perceptions of student development	In what ways do students develop the most over the course of a degree?
	Do you think these are the most important things for them to develop?
	In what ways does your work contribute to that development?
• Staff perceptions of the obstacles students face at university	What problems do you think students face in obtaining a degree?
• Staff motivation	Apart from earning a living, why do you do this job?

Participants have been given invented titles to preserve anonymity but to allow for identification of their role. SUB indicates a member of the subject staff, EAP indicates a member of the EAP staff and ADMIN identifies a member of the administration staff.

An inductive thematic approach was used to the data analysis in order to summarize the raw data and draw links between the research questions and that summarised data (Thomas, 2006). Coding proceeded according to the stages outlined by Bryman (2012). Initial codes were established from multiple readings of the transcripts. These initial codes

were subsequently grouped and categorised to reduce overlap and redundancy. From these new sets of codes, broader categories were created (see table 6.3). Material included in this chapter is designed to both illustrate the overall codes, but also how the secondary codes developed into those final codes.

Coding

Table 6. 3

Codes

Overall categories	Second coding	Initial Coding
Purpose of university	Different purposes according to institutions	International respect
		Economic growth
	Benefits to society	Duty
		Purpose dependent on type of institution
		Purpose dependent on location of institution
		Educate future citizens
Student Motivation to attend university	Future Job opportunities	Parental pressure
		Prestige
	Prestige	Grade motivation
	Students as customers	Scholarships
		Future job opportunities
		Networking
		Scholarship
		Students as customers
Student development	Personality	Critical thinking
	Independence	Maturity
	Socialization	Immaturity
	Skills	Socialization

	Faculty role	Communication
		Learning to learn
		Faculty role
		Faculty motivation
		Personality/character development
		Confidence
		Independence
		Gender
Obstacles students face	Stress: Family expectation	Parental pressure
		Family expectation
	Stress: Adapting to new educational and living environment	Passive learning
		New living environment
		Homesickness
		Different teaching styles
Staff motivation	Altruism	Altruism
	Personal benefit	Pleasure of teaching
		International working environment
		Travel

In order to establish consistency, independent parallel coding was used (Stemler & Colors, 2001; Thomas, 2006) and the results of both coding activities merged (see table 6.4 for independent coder's results). The independent coder is a PhD candidate in the social sciences at the University of Canterbury, New Zealand. These results were combined with the initial codes to achieve the overall categories described in table 6.3.

Table 6. 4

Independent coder codes

Overall Categories	Initial coding
Purpose of a university	Educate future citizens
	Develop state
Reasons to come to university	Future opportunities
	Job, money
	Prestige
Value of a degree	Better job, money
	Developing character
	Confidence
	Practical skills
Student gains	Socialisation
	Independence
Problems students face	Parents pressuring for certain life choices
	Adaptation to new environment
	Students as customers

Results

The purpose of a university

Different purposes according to institutions.

Participants responded in a variety of ways to this question, a fact which serves to reinforce the lack of an essentialist definition of the institution. In general, it seems that participants felt that the purpose of a university depends in its type and location. Often multiple purposes were offered as with this comment from EAP 4 *"I think the purpose of a university is to help people grow emotionally and to provide intelligence and knowledge and also as a way to*

make the work force more competitive." This one sentence response offers at least three and possibly four different purposes for a university.

In addition to the perception that the purpose depends on the type and the location of the university in question, one participant also pointed out that universities have had different purposes throughout their histories. *"I went to university at a time when universities were, they thought, the hot bed of activity and pushing for change. We all then became old and more conservative I suppose"* (SUB 1). Another participant pointed out that whether the university had a campus and students were resident made a difference to the development of the students in that institution, pointing out that in this context, *"interrelations between the students of the same age become particularly important"* (SUB 3).

In addition to universities in general having multiple roles, it was noted by three respondents that this particular university had a different purpose to other universities. This idea was also implicit through the responses of other candidates who asked whether the question referred to this particular university. One participant also observed that the purpose was connected with geography. *"I suppose it depends on where you are in the world. As we're in Kazakhstan, I'm thinking about this one particularly in the moment, and I would say it's probably the prestige thing"* (EAP 1).

Benefits to society.

A recurring idea was that the university should benefit society, with ideas mentioned relating to the production of a dynamic workforce, growing the economy and gaining international recognition.

> *The government wants to be on the map, wants to part of the global community. It needs something, a heavy weight of an institution that can show off its intellectual qualities of its people. Also, could attract people to its country, attract other*

> *intelligence to the place, which happens a lot in the UK or America where they have huge institutions that attract the best brilliance of the world (EAP 1).*

With regard to economic growth, participants made reference to the country's 2030 strategic plan, part of which specifies that Kazakhstan will be in the top 50 world economies by 2020.

> *To them this university is an economic tool that is going to help propel them into the, well they want to be in the upper quartile of prosperity, I don't know what you can measure for this. I think it's domestic product per capita; I mean I have no idea. They want to be in the upper quartile by, is it 2030? (SUB 1)*

In order to achieve this economic growth, the education of citizens was felt to be a key aspect. As one participant noted *"I think it is buying citizens who will be able to be productive, constructive members of society and who will pay taxes"* (EAP 3). Furthermore, the skills these citizens have would have to be genuine. *"Hopefully it will offer a stream of graduates who are genuinely capable of doing things in a general sense, whether they're genuinely capable of being doctors, of being engineers, of coming out of that degree practically able"* (EAP 2). One participant summed up the purpose of this particular university when they commented somewhat succinctly, *"this university is an economic tool"* (SUB 1).

The role of the university being specifically related to the national context, was further reinforced by one participant who pointed out the economy of Kazakhstan to that point was too strongly dependent on natural resource reserves, notably oil, gas and uranium.

> *Of course, another thing for specifically here is that they need desperately to diversify their economy in the next 50 years. I think they're catching on that if they didn't have something like this, what are they going to do when their oil runs out? (EAP 1)*

However, again, there was scepticism about the extent to which this would happen. Given the political nature of the country and the post-Soviet context, criticism of the state was observed to be one thing that the leadership of the country probably didn't really want. One participant noted that the country wants *"better educated potential leaders yeah I suppose, to see things differently. And it's a kind of paradox, isn't it? You want them to do that, but you don't want them to do it too much. You want them to think but not too critically"* (SUB 2).

Staff perceptions of student motivation

Future Job opportunities.

In general, the most often occurring factor coming concerning student motivation from participants' responses was future job opportunities. Seven participants explicitly stated this factor as a key motivation for students to attend a university, with one going so far as to say, *"in the end, if you just look at it that coldly, then they're buying an entry certificate to a job"* (SUB 3).

It was implicit from responses that participants felt that this motivation applied to students in general. There was also an admission that this belief was assumed rather than experiential or tested knowledge. This was clear from the use by participants of hedging language to express their views.

> *I should imagine they are studying at this university in order to get better qualifications and get better jobs….I think they are paying for the key to future prosperity (SUB 1).*

Prestige.

A further motivation specific to the institution where the research took place was felt to be the prestige associated with that particular university. Again, this concept links in with the idea that the degree would offer future benefits. While five respondents mentioned this factor,

one in particular linked the notion of prestige to the unique model of the university, whereby each department is partnered with an internationally recognized institution.

> *It's appealing because of the prestige, and it's linked to many international bodies, particularly the universities that are overseeing the different departments. It's seen as attractive. The influence of the West, universities at least, which are held in high prestige. Some of those universities deserve that more than others, but nonetheless that's the way it's seen (SUB 3).*

Prestige as motivation for students was mentioned by five of the participants. EAP 2 noted that the prestige of the institution would constitute *"the largest step up in society".* They added, *"it will be seen as having networking opportunities. It will be seen as, being able to exit this university, you are almost certainly guaranteed some kind of decent position, so I would say in that sense, this is very inviting for students who want to be here"*(EAP 2).

In addition, EAP 4 made the link between the appeal of the university in terms of its prestige and the fact that students get scholarships to study there. *"It's an honour and that it's such a good university and they have scholarships"* (EAP 4). Perhaps surprisingly, the idea of the scholarship as motivation wasn't picked up by any of the other participants. EAP 3 mentioned this but in order to talk about the differences between study in Kazakhstan and the UK.

> *All our students have scholarships so therefore they are not paying for it, therefore they are not consumers, the government is in theory. so, its a bit more like past decades in the UK when we would all get grants and we are now paying for it so I think that gives a different perspective to the idea of the consumer. I think in the UK nowadays where people are paying for it sure they are more demanding because it's their money* (EAP 3).

Students as consumers of education.

The students at the university were non-fee-paying at the point this research was conducted. Subsequently, given the international trends towards the commercialisation of education, it was interesting to consider if staff perceived students as customers.

There was a consensus that even in a non-fee-paying context, students were becoming customers and consumers of education with one participant noting that *"it's true and it's getting more and more like that in European and American free market economies. It's absolutely, it's 100% free market"* (EAP 1). Another participant also noted that, *"I think parents are consumers of education"* (EAP 4), an observation which further stresses the role parents play in the Kazakhstani higher education experience.

The notion of students as customers was seen as something of an obstacle to student development as it puts the focus not on studying what you are interested in but on study as a means to the end of future opportunity.

> *There's this kind of ideal that in education it should be the pleasure of finding things out, a sense of curiosity. So, when you're suggesting that there's an aspect of them being consumers or customers, it makes it sound more like a business (SUB3).*

As is implicit from the comment above, there was also consistency in responses to what students were thought to be purchasing. Most participants talked about opportunities in the future and subject knowledge, as one participant noted, *"I think they'd say that, I think they'd say they're buying opportunity to a better job, better life"* (EAP 1) and "*future, in a word"* (EAP 2) and *"I think they are paying for the key to future prosperity"* (SUB 1).

This idea of future opportunities contradicts what participants in general agreed were the actual benefits of a university. Furthermore, as one participant observed, this may prevent students from taking certain subjects in favour of others that are deemed more future friendly.

> *Many years ago, people may have chosen subjects at university and career path, basically because they enjoyed the subject. Increasingly students look towards potential earnings and status and other things in order to make a decision* (SUB 1).

Staff perceptions of student development

Personality.

Participants' responses revealed several areas where they felt students developed over the course of a degree. It was clear from the range of responses that there is no single way in which students develop. This idea was summed up by one participant who commented, *"I think they develop in different ways. Some things more and some less"* (ADMIN 1).

Despite the variety of responses given, seven of the participants mentioned character development as being a key consideration which implies the importance of this issue to participants.

> *From a fundamental point of individualism, people should have the basic right to be themselves, and to know themselves, and if university can provide that, and can allow people to learn who they are, if that makes sense, or to develop their sense of self, and their individualism, then that has to be a fundamentally valuable and precious thing (EAP 2).*

Independence.

It was also observed that the students develop as adults, and that the course provides opportunities for them to do so. An example of this is the assessment at the end of the year, where each student defends the research project they have written in a short (30 minute) oral exam known as a viva.

> *I think it is the first time that they are given the opportunity to be treated more as an equal to their teacher. Give them the chance to have an adult discussion. They get to,*

> *during the course of the year with us they grow up a little bit. You can see that in their viva for example. Like they are talking to you, you know, they are on your level. They are discussing something they researched* (EAP 4).

Associated with the idea of maturity was independence, which also featured heavily in responses.

> *It's developing a sense of independence, I think. Not just to learn what's being thrown at you, or what's presented at you in a book that you recommended, but also to put that material in some kind of context, and hopefully the context would be as wide as possible in terms of the society* (SUB 3).

Socialization.

Socialization was another theme that multiple participants commented on, as ADMIN 1 commented *"I guess our students are studying from each other"* (ADMIN 1). This socialisation was also a skill connected to the idea of networking as SUB 3 observed, *"students also develop an ability to network among friends"* (SUB 3).

One participant also pointed out that the physical manifestation of the university, the fact that the students were brought together to live away from home in a campus environment, facilitated this development

> *It's learning how to relate to others, to their peers as well, because the nature of a campus university, particularly one where they're housed in dorms* (SUB 3).

Another participant made the additional claim that part of this socialisation may constitute a more progressive attitude towards gender.

> *There is a difference between male and female especially given the culture here. How the female will be perceived as a decision maker and making your own career that is something culturally I think they've got to take on board a bit more* (SUB 2).

Socialisation was also linked explicitly to the nature of the educational program (in this case Biology, which involved students going on a field trip) by one of the respondents.

> *Respecting other people's point of view. We really do some of that bit on the field trip. That's where they get to do more open science. That's where the team work comes in, where they are working in smaller groups, 4 and 5s. Then you know how to do the task, assigning different roles, that kind of thing* (SUB 2).

This relationship of the program to the development of this factor was noted by another participant as well, but in the context of a different course, in this case EAP.

> *Social development, without question. There would have to be some kind of social development. I think, depending on your cultural background, at, certainly western universities there's enormous amounts of assessment. I think it's based on group work, group assessments, presentations, things like this, which almost demand that students have to develop socially* (EAP 2).

Skills.

In general, it was felt that students develop skills as a result of their studies, notably communication (which manifests itself also in the idea of socialization mentioned above) and learning how to learn. EAP 4 observed for example that *"their communication skill develops a lot"* and that *"learning how to debate and argue"* also took place and also that students develop *"critical thinking. Learning how to analyse an issue. Learning that there is not just one right answer"* (EAP 4).

This idea of skills linked back to the idea that higher education was a part of the process of working towards a career with participants noting that a degree is *"training for a career"* (SUB 3) and similarly that students are *"being trained rather than educated. Being trained up to get a particular job at the end and having the requisite skills for that"* (EAP 3).

Moving away from the notion that the skills being developed were linked explicitly to a vocation, the idea that students need to learn how to learn was key. This skill in particular relates to the context of higher education and links to one of the obstacles faced by students discussed subsequently.

> *I mean yes learn to learn, learn to cope with normal situations. Learn to be able to I suppose assess those normal situations very quickly and perhaps the ability to apply appropriate and pragmatic solutions to that* (SUB 1).

Regarding learning to learn, one participant observed that the subject was largely irrelevant to the process of developing that skill.

> *The process that you actually go through, whether it's a scientific experiment, or whether it's reading and analysis and evaluation, is I guess largely irrelevant. You're still going through a process of, "What do I need to do? What do I need to read? What do I need to experiment? What do I need to explore to find that answer?"* (EAP 2).

In fact, the importance of subject knowledge was conspicuous in its absence from responses. As another participant observed, the knowledge acquired during the course of a university degree becomes obsolete with time.

> *Unless they have developed the skills to deal with that, they are going to run into a brick wall at some particular point. I mean a scientist can't accumulate much greater factual mass in terms of doing a degree. 20 years later much of that factual mass is actually useless to you and if you haven't acquired the ability to well build upon that factual mass by taking on other things then you're not going to be terribly useful* (SUB 1).

While the idea that knowledge changes and becomes obsolete with time seems common sense, there was still a sense among participants that this motivation for subject knowledge, as measured through grades, was important for students. As a participant observed,

> *Subject knowledge, for sure, but with a goal in mind of getting that certain grade. One thing I find dismaying is that they really are very obsessed and interested with the grade that they're going to get, rather than taking pleasure in taking that bit of knowledge from a certain chapter and then retaining it, and then knowing how to apply it in another situation. That could be another module where they have that as assumed entry knowledge, or it could be to a problem, so to the outside of their course. It is a bit disappointing that they are so focused on their marks, and not asking, "Why did I get slightly lower on this one?" Not just because they got it wrong, but because maybe they're missing a key bit of understanding* (SUB 3).

Faculty role.

Of particular note was the extent to which all participants felt that faculty had a key role in helping the students to develop. Participants pointed out that the method of teaching and the nature of the administration was such that it forced students to be adults outside of the classroom and independent learners within. As one participant commented with regard to administration, *"when people come here to apply or to submit documents they come with parents or with like grandparents. In the beginning parents come and ask the marks and results and we try to explain that the kids are not like children anymore and at the end you see like that students try to come as themselves and that's good"* (ADMIN 2).

With regard to teaching, participants stressed how important the need for students to take responsibility for their own learning was. Participants commented that *"you are not a teacher or lecturer in the traditional sense. You are a facilitator and giving them the tools to*

actually investigate it further themselves" (SUB 2) and that *"it's a bit like giving them enough room. Let's see what you go and do with it"* (EAP 1).

Overall the belief was expressed by participants that personal development takes place whether an individual goes to university or not, but that the university context provides a special sort of environment for that development.

> *Well if you are thinking that students come in at 17 or 18 you know because they are young adults they are going to develop socially and in maturity and they are going to develop personally regardless of where they are, but obviously university should enhance and give them extra opportunities and avenues to do that. So, in that sense they will grow up* (EAP 3).

While it was clear that participants felt that this area of personal and skills development was more important than subject knowledge, it seems that there was simultaneously the belief that the students themselves would not agree with this. There was the perception that future opportunities are more important than development for students even though participants see development as the more significant aspect. So although participants felt that students developed the most in this area, the perception was that students wouldn't realize this. As one participant noted in response to the questions about what they believed students perceived themselves to be getting out of the university experience.

> *Interviewer: What do you think students think they're buying?*
>
> *EAP 2: Future, in a word, and I don't think they necessarily see exactly what that is from all of those different perspectives, and I think a lot of the students will see as a step up, a career, and they won't necessarily see the social development that supports that.*

Staff perceptions of the obstacles students face at university

Stress: Family expectation.

Analysis of the interviews revealed that the obstacles faced by students in terms of completing their degree were connected with stress. This manifested itself in parental expectation and difficulty in adapting to a new environment.

Most participants mentioned family as a source of pressure and questioned the intrinsic motivation of students in the face of living up to the expectations of their parents.

> *There's a number of students for who that (obtaining a degree) may not necessarily be their own goal. It may be the goal of their parents that they want their child to go to this university so that their kid will get those opportunities. The classic, "My son will be an engineer"* (EAP 2).

This idea was linked to the notion of the prestige associated with the university by SUB 3 who commented that *"it's prestige, it's about future financial security, but with families being as close as they are here there's also sort of pride pressure, if you like, to follow in the footsteps of a relative. Probably the parents, but not always"* (SUB 3).

One participant observed that this sort of pressure is not unique to Kazakhstan but applies internationally.

> *I think at that age, when people are 17, as in any country, and probably quite a lot of it comes from the parents. I would imagine in the UK not every 17 year old knows exactly what they want to do either. But perhaps here parental pressure is more* (EAP 3).

Stress: Adapting to new educational and living environment.

In general, it was felt that adapting to a new environment both in terms of educational expectations and living arrangements was a challenge. As noted above, the method of

instruction at the university is designed to facilitate a critical attitude and promote independent learning. This involves the learner becoming responsible for their own learning which is difficult for students who have come from, and excelled in, an environment focused on rote learning (Burkhalter & Shegebayev, 2012). As one participant observed, *"they have been told that they are the best and the smartest in their schools and that this is what you do"* (EAP 4).

This adaptation was observed to be part of the normal transition from secondary to tertiary education, as one participant noted *"they learn how to analyse, how to give facts, how to think critically. That's the biggest change for them. Plus, they also learn to give their opinion which, usually, they are not asked"* (ADMIN 1).

However, it was pointed out that for the students at this institution, the gap was probably larger to bridge than for students entering western tertiary education from western secondary education. One reason for this is that in Kazakhstan, schooling lasts for 11 rather than 12 years (although this is slowly changing with the introduction of a 12th year in some schools). Another reason is the legacy of soviet style instruction from the state as it was pre-1991, a system "fraught with many fear-based behaviours antithetical to critical thinking and an open, democratic society" (Burkhalter & Shegebayev, 2012, p. 55). So, part of the role of the faculty was felt to be *"trying to get them (the students) away from a rote learning perspective, which a lot of our students have come from the post-Soviet educational perspectives, and I think by having that kind of methodology, and the students are perfectly capable of doing it"* (EAP 2).

In addition to adapting to a new educational environment, it was acknowledged that students have difficulty adapting to the new living environment. Moving away from home, learning to be responsible for meals, laundry and other everyday chores was observed as an obstacle.

> *I think leaving home is difficult for them. Especially our students. I think leaving home for western students is easier than it is for our students. But I think for all students, leaving an environment you are comfortable in for the first time is difficult* (EAP 4).

It is of interest to consider here whether the developmental aspects mentioned above could take place without a transition of this sort. There seems to be a strong link between new types of teaching and assessments and developing academic related skills. Furthermore, it is interesting to consider the extent to which socialization would develop without the challenge and stress of adapting to a new environment. It seems reasonable to conclude that the challenge of adapting to new situations is at least part of the road to student development.

Staff motivation

Participants' responses to the question of why (apart from financial motives) they worked in the institution, feed into two broad categories, altruism and personal benefit.

Altruism (intrinsic).

A number of participants from across all strata indicated that they were motivated by participating in the development of the students. For example, one participant commented that *"I just love showing people that there's another way of life. Another side of life than the one, the experience they've had so far when they're 18 and 17"* (EAP 1). Another noted that their own experience as a student contributed to their desire to help students.

> *I like doing this job because I remember feeling really lost when I first got to university and there was no one there to provide us with the lessons that we are providing our students and I just think it's really important stuff. I can relate to the students that's what I like about my job* (EAP 4).

EAP 2, who was also a mid-level manager, pointed out that they took pleasure not only from helping students, but also helping teachers.

> *There's something about being in education which is nice. I don't know. The cliché, "Teaching is rewarding," but fundamentally, philosophically, being a teacher is quite a nice thing to be. I feel comfortable with that as an individual, and coordinating, the same. I feel privileged ... That's the right word ... To be able to influence things, in the small way that I can, to make things work, to hopefully make life easier for the people that I work with, and that's a nice thing to be able to do, to have a small amount of influence in a positive way, so that's probably the main thing. I enjoy it, overall* (EAP 2).

This sentiment was also expressed by participants from the subject areas, and in this case, the focus was on the development of an interest in the subject, rather than general development.

> *I do like seeing youngsters develop their way of thinking, and to see for myself as they develop a passion for science, I teach science, so that's what I see, whereas perhaps they weren't able to see that in their previous schooling, because it was very much a hands off "teacher does this, you watch." So just to see their joy as they learn that it's actually something that they can do themselves, and that's something that's new for them* (SUB 3).

There was also a sense of there being a value from developing the country, as one participant noted for their motivation to take the job initially.

> *I was helping with the interpreting in a conference for the creation of this university and I was already thinking, "wow. It will be a very interesting project because everything's in English, students, and we are doing now in Kazakhstan." For that reason* (ADMIN 1).

The only participant that had experience of the programme in both the UK and Kazakhstan expressed a preference for the UK context. This participant pointed out the role for them was different between the two sites, with the UK version involving only teaching, and the Kazakhstani manifestation involving little teaching and substantial administration. It is clear that this participant took pleasure from teaching and this may explain the preference for the UK context.

> *I look upon my job in two ways; one is the teaching job which I don't do here very much. I mean like most of my teaching here, like this year's, have been plug the gaps when there haven't been requisite number of biologists. When there have been I haven't done any teaching… Although I mean sort of I should do some, but the teaching in London is unbelievably nice. I mean with small numbers of bright students that you're dealing with as individuals in very small groups… It is such an interesting stimulating job that doesn't have any administrative chores associated with it* (SUB 1).

Personal benefit (extrinsic).

Participants also expressed extrinsic motivations for their working at the university. Several participants mentioned travel, which is a factor that typically applies more to transnational institutions than it does traditional universities. One participant noted for example that *"I initially did this job because I wanted to travel and live in different counties"* (EAP 4).

Finally, one participant expressed a preference for working with international staff because of a perception that they were more polite and easier to work with.

> *And I like to work with foreigners because the attitude to us is different. If we work with Kazakhs it is different. Foreigners never rude. They can't shout at you. They can explain what they want even if you make mistakes. They explain to you very politely.*

> *And in general to work with foreigners is much better that with Kazakhs because it's a pity but Kazakhs still can't manage people without shouting or telling rude things* (ADMIN 2).

Discussion

The research question which is the focus of this study concerns what stakeholders perceive to be the value of a degree. In order to address this question, the following discussion will focus on the perceived purpose of the institution of the university, and the perceived development and motivation of students.

Purpose of the university

It is clear from the responses of participants that they did not consider there to be a singular purpose of the institution of the university. This aligns with the argument made at the beginning of this study and illustrates that the idea of the university being fluid, is not only a characteristic of the institution, but one which stakeholders are aware of. As noted above, participants observed there to be multiple roles of the institution, and that these roles were contingent on the location and mission of the institution. In that sense, participants viewed the institution as flexible and responsive, which appears to be a positive characteristic not commonly promoted by universities themselves.

With regard to the institution at the centre of this research, it was clear that participants were aware of its role to develop the country. This was evident not only in their direct responses but also in the way that the prestige of the institution was frequently mentioned. It is unclear however where this awareness comes from, whether it is the product of the university promoting itself and its mission to staff, such as via the university's graduate attributes, or whether it is from interactions with students. It may of course be a combination of both.

An interesting omission from responses was the role of research. No participants made reference to research as the purpose of the institution, despite several of them being published academics. This may be that because the nature of the foundation is preparation for undergraduate study, there is no primary research performed by students and faculty have no mandate to publish (although they are free to do so if they wish). At the same time, the mission of the wider university is to become a leading research institution, so in that sense, the omission of research from these responses is somewhat unexpected. Given that the participants were unanimous in their perception that the purpose of the university was to develop the country, it may be the case that this development was perceived to take place through the development of students rather than through research.

Student development

While, it was apparent that staff did not see a uniform development among students, the development that staff perceived to take place was broadly in line with the notions of graduate attributes. Students were perceived to have grown in the areas of organisational skills, independence and socialization. Broadly speaking these relate to the graduate attributes of awareness, community engagement, technological and problem-solving skills and social responsibility (Strivens, 2011).

The development noted, while in line with generic notions of graduate attributes, did not appear to be aligned more with one institution's attributes than the other. Certain comments could be interpreted as demonstrating preparation for an international jobs market, as specified by the London University graduate attributes, while others indicated an awareness of the developmental needs of Kazakhstan.

Secondly, this development is aligned with intrinsic notions of the value of a degree. While being independent and organised are of course compatible with the extrinsic goals of

getting a better job or a higher salary, they belong to the softer set of skills which as was argued earlier, are not frequently publicised as contributing to the value of a degree.

Furthermore, it is of additional interest, that staff appear to value the development of these sorts of attributes above other aspects, such as content knowledge. Comments made throughout the interviews, indicated a perception that this sort of personal development was ultimately the most valuable. One participant summed it up in the following way.

> *From a fundamental point of individualism, people should have the basic right to be themselves, and to know themselves, and if university can provide that, and can allow people to learn who they are, if that makes sense, or to develop their sense of self, and their individualism, then that has to be a fundamentally valuable and precious thing* (EAP 2).

Kim (2010) describes the following division of labour with regard to transnational academics.

1. Academic intellectuals, whose creative role is to engage as 'legislator' and 'interpreter' contributing to a 'creative destruction' and reconstruction of the paradigms of academic work;
2. Academic experts, many of whom increasingly define their roles as 'researchers' with transferable methodological research skills; and
3. Manager-academics, many of whom have assumed their role as general managers with transferable management skills rather than traditional academic leadership. (Kim, 2010, p. 579)

It is evident that the participants of this study fall into the first and third categories mentioned above. Despite this distinction in roles, there was still consensus between participants with regard to student development.

Student motivation

However, at the same time participants perceived students to be motivated largely by extrinsic factors, such as higher salaries, familial pressure or prestige. There appears to be something of a contradiction in this situation in that staff perceive students to develop mostly in the areas of personal development, including the development of a critical attitude, and yet they perceive students to be motivated extrinsically. Given that participants value personal development above other factors, it seems then that students are perceived to not realise what is of greatest benefit to them.

When discussing their own motivation, participants listed overwhelmingly intrinsic factors. It would appear then that participants perceived the value of a degree to be largely connected with the development of factors associated with intrinsic motivation, and that these factors are indeed the most commonly developed by students. Participants further stated their own motivation to work at the institution to be largely intrinsic, but at the same time perceive students to be motivated extrinsically.

Limitations

This study was conducted before the survey in study one was administered. Subsequently, it was not possible to target questions in order to explore results from the perspective of teaching and administrative staff. Furthermore, no members of staff from Kazakhstan University were interviewed. This was because only London University was responsible for the delivery of the course at this time and no Kazakhstan University staff were allowed to be involved with the foundation. It would be interesting to gain the opinions of staff working in the other institution as to how students develop.

Conclusion

This study has addressed the question of what stakeholders (in this case teaching and administrative staff) perceive to be the value of a degree. Responses from participants

indicate that the development of characteristics broadly aligned to those stated in graduate attributes is the most significant value of a degree. Furthermore, that this was the development that they observed most commonly in the students they interacted with.

This aligns with how participants perceived the purpose of the university. Participants indicated that the university in question existed to develop the state of Kazakhstan. This development was perceived to take place through the development of independent, critically aware graduates.

However, while participants perceived the value of a degree and the purpose of the university to be connected with the development of attributes largely connected with intrinsic value, they perceived students to be motivated extrinsically.

7: Study 3: Group interviews with students of the foundation program

The results of the longitudinal survey which was the focus of study 1 indicated that student development over the course of the foundation year involves a reduction in capabilities related to stress and affiliation and a reduction in intrinsic motivation. While there was no significant change in skills related to generic graduate attributes, students did register a significant increase in the character trait of conscientiousness, which is related to the values aspect of generic graduate attributes.

The results of the investigation into staff perceptions of the value of a degree revealed that the sorts of developments associated with graduate attributes were perceived to be not only the areas where students develop the most, but also the most valuable factors for them to develop. Despite this, staff also perceived students to be extrinsically motivated.

The purpose of this section is to present the results of the final part of the qualitative aspect of this study which involved group interviews with students who had successfully completed the London University foundation program at Kazakhstan University and who had participated at both data collection points of the quantitative survey part of the study. All of the participants have English as their second or third language and as a result there are grammatical and stylistic errors with their communication. These transcriptions have been left uncorrected. The aim of this part of the project was to explore students' perceptions of their own development in light of the results of the staff interviews and survey data. In order to better understand the context of the project, the literature surrounding student perceptions of their own development will be explored. Subsequently the methods of the study, which involved group interviews, the results and discussion will be presented.

Participants did not identify a core set of necessary or sufficient conditions to define the institution of the university. Rather, multiple purposes were identified which were

connected with the design and location of the institution. Participants also observed that while students do change over the course of the year, this change is polymorphic. The idea that a specific set of attributes are developed in all students does not seem to be the case. Areas of change included personality, skills and knowledge.

Stress was observed by participants to be a major hurdle of the university experience. In particular the fact that the foundation year ended with assessments that could result in the expulsion of the students from the university and the loss of their grants was a cause of this stress. Interestingly, students also perceived that the development they underwent at university would likely result in them having difficulty fitting into the more traditional society outside the university. Finally, it seems that participants observed that the stressful elements of the foundation year were seen to have a positive contribution to personal development.

Literature review

Student perceptions of development

A study by Glover, Law, and Youngman indicates that students appear to discern two areas with regard to their own development which are described as ‘graduateness’ and ‘employability’ (Glover, Sue Law, & Youngman, 2002). “Whilst graduateness may be seen as a statement of a level of knowledge, skills and understanding, employability is concerned with the way in which those who have completed university courses can be assimilated into national and international employment” (Glover et al., 2002, p. 296). It seems that the former, which involves notions of skills and understanding, aligns with intrinsic motivations to engage in HE, while the latter is associated more with extrinsic motivation.

The study used mixed methods. The quantitative element was cross-sectional and involved 833 participants (divided approximately in half between first and final term

students) who took a questionnaire. Each subject area had a different questionnaire. The qualitative element involved in depth interviews with 16 final term students.

The results of the study align with the perception from participants of the second study in this research that students are extrinsically motivated. Overall, the indication was that participants valued employability over graduateness. The authors note that "their expectations are of courses that will ensure them a secure and profitable future and they are slow to recognise the gains from the wholeness of the university experience – 78% identified the former, only 14% the latter" (Glover et al., 2002, p. 303). There appeared to be a trend towards increased appreciation of graduateness over time (the final term participants rating it higher than the first term participants). "Final year responses indicate that whilst the degree course is still seen as a means to an end, students have come to recognise the impact of university experience as a set of general capabilities" (Glover et al., 2002, p. 298). However, the overall impression was that employability was the greater concern.

Of further note was the observation that participants in this study observed an increase in graduateness, in the skills associated with graduate attributes in themselves. This is also in line with observations about student development made by the participants of the second study of this research.

A study by Tomlinson (2008) takes the idea that students are extrinsically motivated a step further. As with the Glover et al study, this research involved interviews with final year undergraduates. The study was comprised of 53 participants from UK institutions who had studied a variety of different majors.

Results in this study indicated that employability was the major concern for participants. Tomlinson observers that there is "a widespread perception among students that their higher education credentials are vital commodities in the pursuit of relatively well-paid, high-status and rewarding forms of graduate employment" (Tomlinson, 2008, p. 52).

However, Tomlinson makes the further observation that the notion of employability is not so much concerned with skills or knowledge or attributes they may have developed, but rather that without the degree, they would be overlooked.

> Educational credentials are primarily pursued because of their perceived positional value and advantages in providing access to employment. This is likely to be the case even though they might not have any direct, immediate or transferable value in the labour market (Tomlinson, 2008, p. 53).

This attitude to gaining a qualification represents an extreme extrinsic motivation, and may go some way to explaining why students resort to plagiarism, ghost writing and other sorts of academic integrity issues. If the aim is merely to gain a qualification, and according to Tomlinson, the minimum grade that students perceive UK employers to require is a 2:1 (equivalent to a B grade in other systems), then the lack of intrinsic motivation to learn coupled with the need to pass at a high level could explain the rising levels of academic integrity issues discussed earlier. As Tomlinson notes, "such instrumental concerns over grade classification took clear primacy over more intrinsic values around self-development and 'learning for its own sake'" (Tomlinson, 2008, p. 56).

As with Glover et al's (2002) study, Tomlinson observed that students were aware of their development and that the development of the sorts of skills associated with graduate attributes had indeed taken place. However, the value of this sort of development was perceived not as an end in itself by participants but rather as a way to enhance employability (Tomlinson, 2008).

A different result was found in a study by Henri et al (2017), which observed that development was not an automatic result of the university experience. The research was longitudinal and quantitative using a self-reporting survey.

The study found no change in development of autonomy. The authors argue that this may be because as students progress through education, the challenges increase and so their perception of autonomy stays the same while in reality they are becoming more autonomous. They state that this may be something of a 'red queen effect', a reference to the evolutionary theory that posits that organisms adapt not just to gain advantage, but because while all the other organisms around them are adapting, adaptation is necessary also for mere survival (Henri et al., 2017). However, this position assumes a consistent progression of difficulty throughout undergraduate courses, which, when considering the likelihood of excellent course design across all programs coupled with the impact of electives on at least some of the courses, seems unlikely.

It seems that students do appear to be aware of the development of soft skills. However, their motivation seems to be largely extrinsic and their perception of the value of a degree appears to be connected with employability and future job prospects. These findings appear to be consistent with the perception of student development and motivation described in the second study of this research. There was however, one difference. In the second study, participants (staff working on the foundation year program) perceived the development of skills to be the most important aspect of the education experience. This review of the literature seems to indicate that students do not share that perception, and are more concerned with employability.

Student perceptions in Kazakhstan

As mentioned earlier, the research on student development and students perception of their own development in the context of HE in Kazakhstan is limited. However, a study by Chankseliani investigating student mobility, observed that the motives for Kazakhstani students to study abroad, involved factors related to employability. "Individuals as well as states aim at increasing their competitiveness in the age of globalisation by investing in HE

for the advancement of human capital" (Chankseliani, 2016, p. 311). While this research was concerned with students travelling overseas, the students at the centre of this research elected to stay in Kazakhstan to study. Subsequently the research question of this study is as follows.

Research question:

What are students' experiences and perceptions of developing graduate attributes, capabilities and their predictors?

Methods

Group interviews with students

The final component of the study was qualitative in nature and involved group interviews with students. Participants who had completed the survey at both data collection points (n=101) were approached by email to participate in the interviews in January 2017. Of this number nine volunteered to continue with the research. There was a gap of 18 months between the close of the survey and the group interviews. This was a result of the need to complete statistical analysis of the survey data prior to instigating the group interviews and the need to wait for a semester break in which to speak to students.

The purpose of the group interviews was both confirmatory and exploratory. One aspect was to confirm the ideas arising from the survey and previous qualitative study. The other was to explore possible explanations for those observations. The research question which was the focus of the group interviews was designed to explore students' experiences and perceptions of developing graduate attributes, capabilities and their predictors.

Group interviews were used in order to make sure that the ideas of the stakeholders (in this case students) were collected and also to put the students at ease. Binsardi and Ekwulugo (2003) followed their survey with in depth interviews. However, Henn et al state that the purpose of focus groups is "to stimulate discussion among people and bring to the

surface responses that otherwise might lay dormant" (Henn et al., 2006, p. 164). There are many different elements connected to the research and it was considered important to allow the opportunity for as many related ideas to emerge as possible. Subsequently group interviews were seen to be a superior medium to in depth interviews. This was especially the case given that the participants were students. As Aubel notes, "development projects or programmes often fail to reach their goals because they were not based on an adequate understanding of the point of view of the people they were trying to help" (Aubel, 1994, p. 1).

The second reason was to make the participants as comfortable as possible and to foster an atmosphere where contributions were facilitated. Whereas staff may feel more at ease talking to an interviewer, especially a peer, the group context was felt to help students to open up about ideas. However, because the interview structure of the initial qualitative research needed to be followed, group interviews were chosen over focus groups, although the two are very similar.

> In a well-facilitated group interview, participants usually feel at ease, are not pressured to answer every question, have time to think about the questions asked, and often can gain confidence to answer after hearing the responses of other participants. Whereas in an individual interview the conversation is exclusively between the interviewee and interviewer, in the group discussion interaction between the participants is encouraged. This tends to diminish the control which the interviewer has over the group and to establish a relaxed atmosphere in which the participants interact quite spontaneously with others in the group (Aubel, 1994, p. 4).

Questionnaire

The ten-item questionnaire used in the initial qualitative research was adapted and distributed to participants prior to the interview. The adaptations included questions relating directly to

changing motivation, a sense of affiliation and stress levels. A consent form was also sent to participants at this time (see appendix A). The questions were designed to elicit from participants responses which would contribute to an understanding of the research questions listed above and to explore the results of the previous aspects of the research. The questions were as follows.

1. What do you think is the purpose of a university?

a. To what extent do you feel that you are part of this university? Have these feelings changed over the course of your study? If so, how?

2. What are the main reasons why you are studying at this university and have these changed since you arrived?

a. Has your motivation changed over the course of your study? If so, how?

3. In what ways have you developed the most over the course of your degree?

a. Has the extent to which your awareness of your responsibilities and your attitude towards them changed over the course of your study? If so, how?

b. Has the extent to which you feel open to new challenges and experiences changed over the course of your study? If so, how?

4. Do you think these are the most important things to develop?

5. What problems do you think students face in obtaining a degree?

a. Have your levels of stress changed over the course of your study? If so, how?

Sampling

Participants were chosen from the group of students that had completed both the first and second data collection points of the survey instrument. As the population was comparatively small (n=101) and with limited variation with regard to age and nationality, whole population sampling was chosen allowing all 101 previous participants the opportunity to be involved (Etikan, 2016).

The interviews were conducted in January 2017. In total, there were 9 participants spread over 4 group interview sessions (see table 7.1). These participants were students from all three of the undergraduate schools at NU, the school of Humanities and Social Sciences, the school of Engineering and the school of Science and Technology. Six participants were female and three were male. The sessions lasted on average 45 minutes.

Table 7. 1

Group sizes

Group 1	3 participants
Group 2	3 participants
Group 3	2 participants
Group 4	1 participant

As with the staff interviews, an inductive thematic approach was used to the data analysis in order to summarize the raw data and draw links between the research questions and that summarised data (Thomas, 2006). Participants were given labels to prevent identification. The first part of the label indicates which group a participant was in and the second is the unique identifier derived from the order in which they contributed. So, for example, G1S1 was the first student to contribute to the discussion of group 1.

Coding

Also mirroring the staff study, the groups were recorded (with the permission of participants) and the results transcribed. Once again, these transcriptions were then analysed and coded using *NVivo*. Initial codes were established from multiple readings of the transcripts and were subsequently grouped and categorised to reduce overlap and redundancy. From these new sets of codes, broader categories were created (see table 7.2).

Table 7. 2

Codes

Overall categories	Second coding	Initial Coding
Purpose of university	Multiple purposes	Change mindset of people
	Development of society	change society
		Changing idea of purpose of university
		develop society
		Multiple purposes of university
		soviet legacy
		Types of university
		University corruption
		Research
Student Motivation to attend university	Future Job opportunities	work experience
		To get a job
	Skills	Subject not important
	Prestige	Peer motivation
	Parents	parental influence
		Opportunities
		Knowledge growth
		International faculty
		interesting courses important motivation
		Easy courses as motivation
		degree as insurance policy
		changing motivation
		Scholarships
		Prestige
		Duty
Student development	Personality	Confidence
	Knowledge	Conscientious
	Skills	deeper understanding
	Socialisation	Freedom of ideas and speech
		Identity as university student
		Independence
		Maturity
		New challenges
		New way of thinking
		responsible for own problems
		Self-consciousness
		Self-development
		Self-expression
		Practical skills development
		Socialisation
		problems at home friends
		English Language

Obstacles students face	Affiliation university Family Stress	Distractions Lack of understanding of what university was Not part of university Parents Problem of decision making Stress too many activities (affiliation)

Results

The Purpose of a university

Multiple purposes.

It is clear from responses that participants did not consider there to be a simple, clear cut purpose of a university. Responses indicate that there is an institutional duty to develop society, and that different institutions have different roles contingent upon their geographical location. As with the responses from staff, it was clear that the students thought that there were multiple purposes for a university. One participant pointed out that different institutions had different specialisations.

> *I think it will depend on the type of university. For example, we have different types of universities and, in particular, our university is research. Scientific university* (G1S3).

The idea that Kazakhstan University was different to other universities came up repeatedly and it was implied that the university was of a higher prestige than other universities. This relates to the later discussion on the motivation to attend university.

> *I think it is a question whether you are going to this university in particular or you are just going to a university* (G2S2).

Development of society.

As mentioned above, one of the roles of universities that featured in all of the discussions was the development of society. This development comes about from a number of products of universities. One such product being skilled workers.

> *I want to add that the main, in my opinion, the main purpose of the university to prepare the scientist's research such as in area of chemistry, biology, engineers, in order to develop the Kazakhstan's scientific world because, as you know, Kazakhstan is a young country. So, we need the professionals and the scientists that will continue and will apply all the knowledge in order to develop Kazakhstan* (G1S3).

The quote above mentions research which was another aspect that was observed to be an important role of the university. Several participants named it the most important role of the university. One participant stated *"I think its main purpose is, yes, to research, contribute to Kazakhstani science"* (G1S2).

A further way in which participants felt that universities developed society was by changing the mind-set of the population. One participant noted that graduates *"should develop during studying this university, their attitude towards studying, towards helping their society and their people"* (G1S2). It was more specifically noted by another participant that by promoting free and critical thinking, a more democratic mind set could be achieved.

> *I think it's kind of a change of mind-set or mentality of people. For example, to more democratic mind-set. Because in fact, I think that we are like a little island of democracy in Kazakhstan. And also, you got to teach us to be more academic-oriented people. To be more, yeah, to critically think, evaluate everything and, I don't know, just to be more European thinkers* (G3S3).

As noted in the previous quote, it seems that there is an association between European or Western thinking and critical thinking. It seems reasonable to imply from this that there is at

the very least a perception that there is a lack of critical thinking inherent in the prevailing culture or the culture that was prevalent under the USSR or both. There was a feeling expressed by participants that there had been a restriction on free thinking during the USSR. As one participant noted with regard to their upbringing.

> *All sort of depends for example, on how we were raised. For example, I was raised by my grandparents and they love USSR times and they are like really soviet people, you know. We love Stalin* (G2S3).

A different participant observed that the identity of this university stood in contrast to those of the period of the USSR.

> *Okay, almost all universities in our country are based on the programme of Soviet Union, I guess. It's my opinion. They have other programmes and also maybe some kind of, how to say it, the interaction between the students and the teachers is not as in our university. I guess that it is the key differences* (G4S1).

However, it was not merely the culture of the USSR that was contrasted with the model of the new university. One participant compared the development from this university in contrast to what they labelled the Cossack mentality.

> *I think this university has given me something which fulfils my nature, my nature requirements, because I'm kind of very freedom-like person and I don't like traditions much. It's why, sometimes, I really as well feel there's a clash between traditional Cossack thinking* (G3S2).

So while there were quite different ideas about where the prevailing mind set in their society originated from, it seems fair to say that a theme that emerged from among the participants was that change is needed and that the university had a role as a catalyst in that change.

Finally, there was a perception among participants that the previous system of higher education was susceptible to corruption. Subsequently it was felt that the new university has a role in avoiding corruption.

> *But at X University, I felt like something is wrong. That's why I changed to this university, because I didn't like the values of people, of dressing well or something like that. Also that corruption in the exams and all that stuff made me think* (G3S3).

Student motivation

Future Job opportunities.

The purpose of the university links in to the motivation students had to attend university and this was the second of the categories to emerge from the coding. Responses can be divided into push factors such as parental influence and pull factors such as future job opportunities.

Responses connected to future employment appeared throughout the discussion groups and were summed up in general by one participant who commented that they had come to university *"to be a good professional, for your career basically"* (G2S3).

There was a lack of consensus with regard to the importance of the subject studied. One participant made the point that the preparation they engaged in at university was for a specific role. *"It's to become ready for my future work as an engineer"* (G4S1).

However, several other participants mentioned that the subject they studied was not a primary concern.

> *My major is political science international relations. I studied because it was, again, the best option for me because if I don't like economics, sociology doesn't seem fun. Or literature, I don't like reading literature very much. Whereas political science international relations is actually interesting* (G2S1).

Or that the subject that they had chosen was based more on what they didn't want to do than what they actually wanted to do.

> *PSIR (Political Science and International Relations) was chosen totally through the method of elimination actually. Calculus, no calculus* (G3S3).

One candidate also made the point that a degree was for them a sort of insurance policy.

> *I believe the purpose of the university from a social perspective is to make your life stable. To have a plan B in the case of something going wrong. For example, if it's not really what you hoped. If the field you are going to in the university is not really what you want and for example, you want to become a businessman or you want to become a dancer, but you're not sure that tomorrow there will be work for you. That your work will go really up, then you have. We have something that will ensure that you're not going to die* (G2S2).

This participant also revealed that their ideas about what to study had changed since they began their studies, as the following exchange illustrates.

> *G2S2: But yeah, of course as general you should study what you are interested in. Interviewer: Interesting. Would you have said that before you came to university? G2S2: Never, never. I would never say that* (G2S2).

The idea that students should study what interested them was mentioned by a number of participants. This is an interesting result in that it contradicts the perceptions of staff. A number of staff participants in the earlier study voiced concerns that students were choosing the wrong subject because of a perceived future reward. It may be the case that during the foundation year staff make this point to students. In any case, there seems to be an understanding among student participants that studying what you are interested in is beneficial.

> *Better to study what you're interested in. Because then you will you choose the career which you don't like and your work will be like hell, you know. And if you choose something that you're interested in you can change your major, for example. I said*

> *that you have to study more what you are interested, like not more like choose it, rather than the one you are required for your major for example. And I chose something that's interesting* (G2S3).

Another pull factor for several respondents related to the nature of the university was the presence of international faculty and the importance that faculty conduct research. Under the HE system of the USSR there was a strict division between teaching institutions and institutions dedicated to research (M. S. Johnson, 2008; Kuraev, 2016; Oleksiyenko, 2014; Saltykov, 2008).

> *For me, I think, yes, I am more than happy. And now as a second year, I think than when there was in the foundation year, I did not even think that I could be, for example, participate in any scientific research. And now I have met, actually, in the last semester, some great professors that motivated me to at least take a brief look at what are the new scientific research news and now in the world of science, and actually in our sphere of electrical engineering. I think that the faculty contribute to the good* (G1S2).

Skills.

Related to this was the development of free or critical thinking. It was mentioned earlier that the university was seen to have a role in developing society by fostering critical thinking. This was also it seems a motivation for students to come to university. In the previous system, precedence was given to subjects related to science and engineering. Humanities and social sciences were taught but in a censored version with many gate keepers. Ideological imperatives stemming from centralised control of HE may well have resulted in the stunting of academic development (Saltykov, 2008). While this further illustrates the fluidity of the university as a concept, the independence of the new university as manifested by the international faculty and research profile is clearly an attractive characteristic for students.

Another appeal that the university had was the fact that each student received a scholarship covering their fees and living expenses. One participant noted,

> *There is a difference between usual universities in Kazakhstan and ours because in our university the stress put more put on the self-work, rather than on your money. For example, I'm making a parallel between my university and university of my sister, because their students, they have to pay for every exam and for every session. Even though it's a medical university* (G3S2).

Despite the comments earlier that the subject was not the key motivation for study, several participants did comment that gaining knowledge was important for them. These were often the more vocational courses where this was the case as with the following from a student planning to become a doctor who had left a specialist medical university to study Biology at KU.

> *When I started medical university, I start to deeply prepare for the biology. So, I'm interested in cellular biology, so I started to find, for example, materials. But I could not find in Kazakh or Russian these materials, so I interested in research in biology* (G1S3).

In cases where the importance of subject knowledge was stressed, this often involved a reference to future employment, as with this participant studying Engineering who commented that they had come to university *"to improve myself like improve my knowledge. It's to become ready for my future work as an engineer"* (G4S1).

Prestige.

Finally, there was a feeling that the university was a prestigious place to study. One participant observed the following sentiment that they perceived to be demonstrated by some of their peers. *"Oh, I'm a student of one of the best universities in Kazakhstan. Like, they are*

proud to be, some students proud to be the student of this university" (G1S2). In the same group, another participant agreed, but commented that they personally did not like to do so.

> *I know that there are many money invested here. And probably more than 90% of students study here for free and I think that some people could see me as I'm ... how to say? Showing off my personality, if I say I study here* (G1S1).

Whether these participants expressed pride or not, that they were aware of the general sense that students felt pride in the university, seems to indicate a shared understanding of the prestige of the institution.

This notion of prestige was also connected to the idea of the university having a role to improve society. One participant observed that while studying, students should be developing *"towards helping their society and their people"* (G1S2). This idea was also mentioned in other discussions. In the following exchange, the participants acknowledged the role of the university to develop society, but one reflected that they did not consider it the most important role.

> *Interviewer: Some people say that the role of the university is to benefit society.*
>
> *G2S1: Well in our case it is the case.*
>
> *G2S2: I know.*
>
> *G2S1: Because the purpose of this university was to kind of bring the future version of smart professionals to give the base, the working class of society and to help them benefit for this country. This is clearly not always the case but generally speaking I don't think that this is the main purpose of the university. To better the society. It sounds weird.*

However, later in the discussion, the same participant appeared to change their mind, making the following comment.

> *Well, you asked at the beginning, what about the impact on the society. And now I'm looking at it from more of an economic perspective and I think that there are people sitting here, okay, who are coming to build a university and why, why should we build it? The answer I guess is to grow professionals and to make them work for the country to increase the economy of the country to improve it. And maybe this is the most important purpose* (G2S1).

Parents.

In terms of push factors, the influence of parents was a strong factor both in the decision to go and in terms of the subject to be studied. When asked why they had gone to university several participants mentioned their parents directly, as with (G2S1) who replied, *"Well first, I will please my parents."*

More than merely the act of going to university, parental influence stretched to subject choice. As (G2S2) recalled *"in the beginning, I was totally off economics and, just my father said, 'that's something that's going to help you in the future' and I was like, 'okay'".* This parental influence was commented on in all of the groups that were interviewed. There was a consensus that parents connected the act of attending university with getting a specific career. In this sense, parental motivation seems to be influenced by the conception of the degree as a private good for the student. As another participant in the same group commented.

> *My friend she wants to be an artist, like a director or something like this, but her parents always say 'don't do it, like you'll not have success in Kazakhstan' and just choose something which will be, which has demand regularly, like lawyer or, I don't know, engineer or something* (G2S1).

In a different group one participant recalled *"my parents influenced me and they said, 'It will be better if you become an economist'"* (G1S4).

It should be pointed out that this parental influence was not considered ill-informed in all cases. A different participant observed, *"in foundation year I wasn't interested in political science. The career choice was based on the choice of my parents. But now I'm myself interested in this area"* (G3S2).

However, in a number of cases, it was observed that this parental influence was a contributor to stress.

> *I think that being young person very stressful because everyone expects from you just that you will be like future of Kazakhstan. That you would satisfy your parents. Satisfy also wanting of the parents. And forget what you learned. You're beginning to be one of the best students in the country. It's really stressful. And also you don't know what to do with your life in the future* (G3S3).

Stress is considered later as one of the obstacles students need to overcome as part of their university experience.

Student development.

As with the concept of the university being fluid, it is clear from responses that the development of students happens in different ways. While this may appear to be a common sense and therefore unsurprising finding, it is worth considering in the context of the seemingly uniform development of graduate attributes that universities imply takes place during a degree.

Personality.

The most common area that participants discussed was concerned with personal development or growth. This often manifested itself in comments concerning maturity or growing up, such as the following about being responsible for their own problems.

> *I guess it's a matter of ability of dealing with your problems, myself. Because when we were younger, we expected support from our parents, from our family members, and*

> *now we're, for example, now I don't share my little problems with my parents. I try to deal with it by myself, like more responsible for my actions* (G1S3).

There was also an awareness among the participants that concepts such as maturity may not be fixed which, in itself, appears to be evidence of maturity of thought.

> *Well surely, I became more mature but mature. What does mature mean? For example, for her, it seems like mature means embracing your responsibilities, doing what you're gonna do, your work. While for me it's more for psychological, I guess. I surely do not know what I'm going to do and I do not work. And I don't have money, but I don't think that it makes me underdeveloped* (G2S1).

This idea of personal development also manifested itself in conscientiousness in terms of thinking about the future, as one participant noted.

> *I became more responsible as ... As I get older and because of this, I feel that graduation after two years and I have to know what will I do in the future, you know? So this kind of pressures me a little to be more responsible. More like an adult, I would say. Yeah, mostly this would be what I would* (G2S3).

Conscientiousness also featured in a discussion of how students need to moderate and manage their social lives, as a participant noted.

> *I want to emphasise that in the foundation I was a maximalist. I went to every party. I can sleep two hours or three hours, but I want to study, I want to go party and et cetera. Now I know that for example, if I don't sleep well, tomorrow my whole day will be, like, suck. So it's better to not study one subject and go to sleep. It's also my thing that, I realise that thing almost by the second course. I mean, the first course was filled with different parties and different difficult subjects. So I felt that my priorities are not set right. But I think that it has really changed. Sometimes I feel that it's not*

> *that funny as it was in the first grade, for the first course. But anyway, it's more useful* (G3S3).

Another participant reflected on the cause of this development of responsibility suggesting that it was connected with being away from the control of parents. Away from home, students find themselves to be the masters of their own actions and subject to a system where grades and academic performance constitute the principle form of extrinsic motivation.

> *Maybe I became more responsible person because university also helps people to gain this responsibility because my parents stay at home, and I'm here like alone and nobody can control me. Something like responsibility came to me, and understand that now I'm responsible for myself. If I don't do some work, for example, nobody will punish me. Of course, the education system will punish me, yeah, with bad marks. I understand it and that's why I'm being responsible. I'm doing my homework* (G4S1).

Finally, the idea of personality development was linked to the idea of an awareness of self. One participant enunciated the concept as a form of reflection, an idea that suggested itself in all of the interviews, as follows.

> *Self-consciousness of a mistake and also self-confidence I think. Because I feel the same thing. The development mostly is in the understanding of yourself. What do you want? What are you good at? Now you understand it, you should analyse yourself. And before I think I just, I don't know. I didn't think about it much* (G2S2).

Knowledge.

In addition, participants acknowledged that knowledge acquisition was a part of their development. The appreciation of knowledge at a deeper level and its connection to future careers was an observation made by several respondents.

> *I'm more interested in how well I understand the material myself. And I have to understand it as good as is possible because it would affect my future life, my future career* (G3S2).

However, the general perception of knowledge acquisition was that it took a secondary role to other areas of development. While participants were aware of the importance of this (as noted above) they seemed to acknowledge that it took a less important role than they had previously assumed, as the following comment from a participant illustrates.

> *Engineering knowledge is very important to as I said before, previous said, knowledge is very important thing, but without the skills, you can't gain more knowledge and can't apply this knowledge to your work or somewhere or your study* (G4S1).

Skills.

Another participant conceded the following when asked about what factors were important to develop at university. *"Skills, which will help me in my career, and I suppose too the knowledge I'll gain, yes"* (G2S1).

Skills development was a further area that participants thought was an important example of development. Once again, the nature of the university was matched against the previous experience of students at school where knowledge was theoretical not practical. A number of participants commented that at secondary school they had not had the opportunity to do lab work as part of their studies of science. The university provided them with the opportunity to develop practical skills in this area, as one participant noted.

> *In the foundation year of study, one of the interesting points in our course was labs. Biology and chemistry labs. So, now I can say that I'm ... I have really a good practical knowledge about laboratory skills, so that can I apply them in our life and then ... I thought that I'm developed in laboratory skills* (G1S3).

In addition, more general skills such as English language were developed, as another participant noted *"I'm more confident in my English speaking skills"* (G2S1).

Communication in general was another skill that was mentioned. *"I guess it's like when we meet a lot of people with common interests, we talk with them and, maybe, first that we can work together, and et cetera, on like different projects"* (G1S3).

Time management was a skill that featured throughout the group interviews. It is clearly one of the most important skills as far as the students are concerned. Participants made a variety of comments such as.

> *When you don't sleep at night just because you had like, meeting, so you didn't have time to write your paper or something. And then you just swear with all the words* (G2S3).

Another participant also noted that.

> *I should manage my time that I attend my lectures, that I can help my parents. Also, do a lot of things. So, for me, it was challenging to manage my time properly* (G1S3).

Participants were also aware that they had developed critical thinking skills. One participant talked about how they were questioning their family and friends and traditional beliefs.

> *G3S3: Now I'm thinking about my bigger things. Like when I go home, I talk to my mother and in Cossack society we have these like wedding parties which is for 500 people every day, and…*
>
> *Interviewer: Every day?*
>
> *G3S3: Yes, every day. And I asked them, why, why? And I started to think about and question bigger things.*

Socialisation.

The final area of development observed by participants was socialisation, which students saw as important but also problematic. As one student noted.

> *There are many purposes but for me the main purpose might be the ... Not the official one, but to kind of educate students to have or to grow in themselves their social skill. Skills to socialise. Skills to negotiate. Skills to clearly state your point of view, your position and maybe to state your position in a safely manner?* (G2S1).

This participant subsequently made the observation that the university promotes socialisation in a different form to the normal socialisation of the dominant culture.

> *Social norms, it occurred to me about the socialisation through I don't know ... that school, family and maybe universities are kind of actual socialisation so that's how we gain the social norms of society, the unwritten rules and etc. But in our case all our teachers are kind of foreign so this, it doesn't fight to our society* (G2S1).

This point was developed by another participant who observed that the university was preparing them in such a way that they would not fit in to society. In this sense the development promoted by study was seen to be a cause of problems.

> *No, our society is developing us well. But we live in our university. Our university's absolutely different with Kazakhstan's other universities because we have academic freedom. We have freedom that not a lot of those universities. One of my professors, he's the history of Kazakhstan professor. He says that he's afraid that our students. This is an isolated island in Kazakhstan, where you can develop yourself and where you can. Where you have this freedom. But outside, it's not the same. But society is also developing I would say. Maybe it's like, our guilt that we always say "Oh, everything's so bad" you know? But, I think that our society's a little more open. But more still, we will have a lot of obstacles when we all graduate, or even when we just walk out of the campus* (G2S3).

In a different group a specific example of not fitting in to society was given when one participant recounted the experience of a friend of hers who had recently graduated and gone to work in the capital.

> *I didn't yet experience it, but I have a very good friend who works now in a company somewhere in Astana, in some company who graduates from KU go to. And he says that it's very stressful actually. They don't at all understand. He said 'I want to make new innovations. I have created new app for their processes, some app which has helped for their job, and they looked at me, are you crazy? What are you doing? Just do your job and go home.' It's, I don't know, I'm afraid of that. Therefore, I want to go to study somewhere to the US and to become actress* (G3S3).

The theme was picked up by another participant in the same group who commented with reference to their friends who had graduated that *"you realise that yesterday they were students as you. But now they are completely different. And I'm a bit afraid"* (G3S2).

The problems of fitting in also extended to visits home between semesters and how students felt when meeting friends form their secondary education.

> *When I go home in holidays, and then I feel like when I meet my friends, my school classmates, and even my parents, I talk to them and there are lots of clashes in syncing and in lifestyles* (G3S3).

In a different group this feeling of not fitting in was explained as a sense of uncomfortableness that so much money had been invested in them and that they didn't want to appear to be boastful, a point referred to earlier in connection with prestige.

> *I know that there are many money invested here. And probably more than 90% of students study here for free and I think that some people could see me as I'm, how to say? Showing off my personality, if I say I study here (G1S2).*

It is of note that students acknowledged a change in their motivation over the course of their studies. As one participant responded when asked about their motivation to study.

> *I think it changed. Because from the very beginning, it was kind of by inertia, I was following always the constant feeling just to be good enough at all the subjects. As in school. Just you have to be a good learner, good pupil, good student* (G3S2).

This seems to contradict the perception emerging from the staff interviews, that students did not understand what the point of a university education was. Instead it seems that while they may not enter university with the same ideas as the staff participants, their perception changes over the course of their studies, as the following comment illustrates.

> *Two years ago, I think I would answer that university is about the knowledge. Yeah, but here, in reality, you have to develop in many ways, not only knowledge. Knowledge is just one kind, one, how to say it, one direction* (G4S1).

Obstacles to development

Affiliation at university.

The final category concerned the problems that students face while studying at university. It was noted above that students experienced a sense of not fitting in with society and a fear of that becoming a greater issue when they graduated. However, some students raised the issue of not fitting in to the university culture as an obstacle that they had to overcome. In particular one respondent felt this was an issue with initially being a student of the foundation program rather than the undergraduate program.

> *Throughout the year most of the people say that you are not even a student yet because you're a foundation student and by the end of the year the pressure becomes stronger because you realise that the exams are coming and you have two ways. Either you pass the exams successfully and you really become a student of this*

> *university or you fail and you go home. And because of this fear, you just start questioning if you're really a student of this university* (G2S2).

Family.

Multiple respondents listed the expectations of family as being a difficulty for them. As was noted earlier, one participant commented *"first, I will please my parents"* (G2S1). This pressure from family was also noted as being a source of stress.

> *I think that being young person very stressful because everyone expects from you just that you will be like future of the country. That you would satisfy your parents. Satisfy also wanting of the parents. And forget what you learned before you're beginning to be one of the best students in the country. It's really stressful. And also you don't know what to do with your life in the future* (G3S3).

Stress.

Stress as an issue came up in all of the group interviews. Stress levels varied between students with some noting that stress had decreased *"because of the confidence I gained, yes, it has decreased"* (G2S2) while others stated it had increased *"more and more stressed, I would say"* (G2S3), and others noted that it had stayed the same, *"I have a constant ... I mean, all that stuff like courses, friends, like lack of time management, that you homesickness, everything that external factor affect you"* (G3S3).

It was noted by several respondents (see comments above) that the foundation year saw a peak of stress because of the high stakes nature of the end of year exam. Unlike other years in the university where if courses are failed they can be retaken, if students fail the foundation year, they do not proceed to undergraduate study.

> *It's the end of foundation year. It just at a peak because it's the final exams. Yeah. Now, because if you fail, for example in your other subjects, you'll be expelled and it's not good. Because, today, for example, if I will take some kind of final exams during*

> *the semester here, if I take it, for example, fail here, I can retake it in the next semester. This is angle, some kind of reduced stress. Not, of course, it's can't reduce your responsibility for it, for a grade, but it reduces the stress* (G4S1).

However, this participant also made the point that stress can sometimes improve performance. This corresponds with the idea that emerged from the staff interviews that the obstacles students face can be catalysts for their development.

> *That's why you some kind maybe do better. I guess stress may be for people worse in two ways because some people with the stress try to do their best during exam. Some of them became very stressful and can't do something. If they have some kind of stress, they will do their best to save their lives. The university system is making like some kind of this thing* (G4S1).

Finally, it was observed that non-academic related stress was another factor. This type of stress was connected by participants to growing up and acknowledging the responsibilities they were developing.

> *Also, I guess on the other hand, stress might be increasing year by year because we're becoming adult and it's not stress-related with our studies but stress-related with our future life. Or like relationships or ... I don't know* (G1S4).

It seems that the student participants are aware of the links between development and stress as much as the staff are. The process of development, although desirable and part of the motivation to go to university, is at the same time a stressful experience and an obstacle needed to be overcome. A necessary obstacle perhaps but an obstacle none the less.

Discussion

The research question at the centre of this study concerns students' experiences and perceptions of developing graduate attributes, capabilities and their predictors. As this section is largely designed to explore the results from the first study, the organisation of this

discussion will map onto the earlier discussion and will subsequently address the negative and then the positive developments coming out of the first study.

Negative developments

Affiliation.

The results of the longitudinal survey that was the subject of study 1 indicated that there was a significant decrease in levels of affiliation among participants. While the effect size was small, any decrease in capability was an unexpected result and was subsequently discussed in the group interviews. Analysis of the participant responses above, indicates that the explanation may be connected to the nature of the foundation program. Participants observed that they did not feel as though they were properly students of the university until they had completed foundation and entered the undergraduate program. There was a correlation between affiliation and stress which perhaps suggests that the stress connected with the high stakes end of year exam relates to the feeling of not belonging until they have passed that exam. As noted earlier, the group interviews were conducted 18 months after the final data collection point of the survey. Subsequently, the observation made by Chambliss and Takacs, (2014) that students do not properly fit in until midway through their sophomore (second year of undergraduate study) year, appears to be confirmed in the context of this institution in Kazakhstan as well.

Of further note from the group discussions was the sense that students had of not properly belonging to society. This is of interest given the mission the university is seen to have to develop society. It was noted earlier that the university was felt to be both a public and a private good by participants. The institution develops society through the individual by training students for roles that would benefit society. Graduates are exposed to employment opportunities with higher wages and prestige and society benefits from skilled workers. Society would also benefit from having citizens who are open minded and critical thinkers.

Student participants appeared to be aware of this but while it was considered positive by them to a certain extent, they also pointed out that the situation was not without its difficulties. Participants commented that the transition from the university environment, which one described as “an island of democracy”, to the traditional society they were entering was a cause of tension. They were aware that they were joining a society which they had effectively been tasked with changing.

This finding fits in with recent literature concerning the Bolashak program, which, as noted previously, was designed with much the same aim as the university itself. To briefly restate, the Bolashak program involved the state sponsorship of overseas study. The result of the program was that Kazakhstan ranked in the top 15 of countries with students engaging in higher education overseas (n = 58,438 in 2011, OECD, 2012 as cited in Perna, Orosz, & Jumakulov, 2015).

Research indicates that employers favour Bolashak graduates for a variety of reasons that align with the results of the developments discovered in this project. One participant in Perna at al’s study, an employer in the financial services industry noted that ‘‘Bolashakers are more open-minded [than graduates of local universities]. They have lived abroad, are more adaptable” (Perna et al., 2015, p. 89).

In addition to open mindedness, employers in this study cited critical thinking, English language and the ability to make informed judgements. These skills were mentioned in the interviews conducted with both students and staff. Of note as well, is that English medium tuition can be a motivation for students from post-Soviet states to study abroad, as it is “ a language that is potentially associated with high economic returns” (Chankseliani, 2016, p. 311). It is interesting to consider that the attributes which employers perceive to be desirable and which may also constitute motivations for students to study abroad, may also contribute to this lack of affiliation. In any case, from the point of view of the mission of the

university, it seems that the students graduating from the Bolashak program share similar developmental characteristics to the students studying at KU.

Returning to the idea of affiliation, as noted above, there are also similarities between Boloshak graduates and students at KU. It was mentioned earlier that students in the foundation felt problems with a sense of belonging or affiliation within the university. However, this sense of not fitting in extended to beyond the university. Student participants pointed out that they felt out of place on trips home and worried about leaving the university to start careers and a life outside of the institution.

It was apparent that students were aware of the mission of the university to develop society. That part of that development depended on them living and working in society and leading by example. They were also aware that this was a task that would involve them feeling out of place. This feeling of not fitting in upon exposure to wider society was also reported by Bolashak graduates. Perna et al's 2015 study isolated four factors influencing the human capital benefits of the program, one of which was "ease of integrating new learning into the prevailing home culture" (Perna et al., 2015, p. 92). One participant from their study described the feeling as reverse culture shock.

> I worked for a pure Kazakhstan [company]. That was terrible. I was the only person who graduated from an international university, the only one from Bolashak. I was like an alien because I did not study [in Kazakhstan]. Eventually, I left – they didn't fire me. It's reverse cultural shock (Perna et al., 2015, p. 93).

It seems fair to deduce that the university is developing students in ways similar to those graduates who study overseas. In this way, it may be said that the university is at least in part achieving its mission, in that home-grown graduates display similar attributes to students experiencing overseas education.

Stress.

In the group interviews, stress was a topic commented on by many student participants. While levels of stress varied, where students had experienced an increase it was usually to do with the nature of the foundation year program. At the end of the year, students take a pass or fail exam. If they fail, there is no opportunity to resit the exam. The consequence is that they must leave the university. A number of students pointed out that this stress does not exist to the same extent once the undergraduate program has started, since if a course is failed in one semester, it can be retaken at a later date.

Where students experienced a decrease in stress this coincided with them experiencing a change in attitude towards their studies and a change in motivation. The students commented that they had grown to like their subjects. This bears out the observation of the correlation between intrinsic motivation and stress from the longitudinal study. In addition, the aforementioned growth in conscientiousness and skills at time management also served to reduce stress levels.

It is worthy of note that several participants observed the value of stress as a motivator in itself. It was commented that without stress, students would not perform to the same extent. One participant compared the university experience to the concept of "fight or flight".

> *If they have some kind of stress, they will do their best to save their lives. The university system is making like some kind of this thing* (G4S1).

This idea that stress can be beneficial is one which appears in the literature on immunology (Dhabhar, 2014) sport science (Turner & Jones, 2014) and education (Cohen & Khalaila, 2014) among others. Stress involves a combination of factors leading up to a biological response.

> An integrated definition states that stress is a constellation of events, consisting of a stimulus (stressor) that precipitates a reaction in the brain (stress perception), that activates physiological fight-or-flight systems in the body (stress response). It is important to understand that the only way that a stressor can affect the brain or body is through the biological stress response (Dhabhar, 2014, p. 194).

In the area of sports, stress has been observed to improve performance even among elite athletes who have careers, financial security and reputation at stake (Turner & Jones, 2014). In terms of education, a study by Cohen and Khalaila (2014) observed that stress improved performance in exams.

What is of particular relevance to this study is the idea that stress can be mitigated by acknowledgement and reappraisal, resulting in a harnessing of the positive elements of stress.

> While exams and other naturalistic stressors are unavoidable in the modern era, the present study suggests that the harmful effects of stress can be prevented through different pathways: by helping individuals reframe their appraisals of a stressor as a threat, through consultation and the teaching of cognitive means of reappraisal; by teaching students how to reduce anxiety or feelings of stress by means of peer or professional support, or relaxation training; by buffering the negative effects of stress on health through encouraging students to engage in healthy behaviors (Cohen & Khalaila, 2014, p. 424).

Turner and Jones (2014) frame this reconceptualization as challenge contrasted with threat. Where the event is perceived as a challenge stress enhances performance, when perceived as threat performance suffers.

In addition to the stress related to academic performance, it became clear from the group interviews, that participants found other aspects of the student experience to be stressful. These included being away from home, making a fresh start in a new environment,

coming to terms with the demands of a new system of education and everyday issues such as learning how to cook and so on. Taking the challenge threat dichotomy mentioned earlier, it is interesting to speculate whether the sort of personal development described by both student and staff participants would be possible without the sorts of stressful challenges of this sort. In this sense, the increase of stress recorded by the capabilities measurement tool would actually constitute a necessary part of the student experience.

Students in the foundation face a double aspect of stress. There is the stress of personal development which may be necessary for the development of conscientiousness, and the stress of high stakes end of year exams which may be necessary for the development of academic growth. The idea then would be that stress is a necessary factor for development but one that needs to be mitigated by reconceptualization from threat to challenge. It may be that graduate attributes can be composed to reflect this.

Intrinsic motivation.

The importance of intrinsic motivation was subsequently explored in the group interviews. Several of the student participants explained how their motivation had changed over their time at university. Participants reflected that they had come to university on an auto pilot of general and parental expectation. One student mentioning for example how she had chosen Economics because her father said it would be the right thing to do. In this case, and several others, students explained how they had come to enjoy these subjects and the context in which they were taught, and commented on how actually studying became easier the more interested they became. Sadly, the message coming out of the study is that more students, a significant proportion, experienced motivation movement in the other direction. In any case, the importance of intrinsic motivation seems clear.

Exploration of these findings in the qualitative part of this study supported the importance of both factors. Stress was discussed as being a function of the environment and

also the high stakes end of year assessment. The fact that students could lose their place at the university at the end of the year acted as an extrinsic motivation for them to perform academically. This information confirmed ideas from the interviews with staff, where extrinsic motivation in terms of grades was seen to be an important motivation for students.

However, it became clear from several comments in the student group interviews that intrinsic motivation was seen to be important.

> *Better to study what you're interested in. Because then you will you choose the career which you don't like and your work will be like hell, you know* (G2S3).

There were also indicators that intrinsic motivation may increase over the course of the degree. The group interviews happened at the midpoint of those students' second undergraduate year (their third year of study at the university). Several participants commented that as they learned more about their subjects, they grew to like them more. As one participant noted *"in foundation year I wasn't interested in political science. The career choice was based on the choice of my parents. But now I'm myself interested in this area"* (G3S2). Given the importance of intrinsic motivation as a predictor of student development, it would be interesting to revisit the test group to see whether intrinsic motivation levels increased. It may be the case for example, that the more motivated students were those that attended the group interviews, which would explain the difference in motivation between the three studies.

Positive developments

Graduate attributes.

In the first study, it was observed that the critical application factor (as measured by the graduate attribute instrument) registered positive change, although this growth was not significant. The second study corroborated this in that the participants (staff working on the foundation program) perceived students to develop in this manner. In these group interviews

with student participants, this development was explored and participants commented that they felt that they had indeed developed in the area of graduate attributes, with regard to English language, critical thinking and time management skills. The development of these attributes in the context of Kazakhstan is comparable to the development detailed in the literature review of students in the USA (Pascarella & Terenzini, 2005) and the UK (Buckley, 2015). However, participants pointed out that change was not uniform. Different students develop in different ways.

Conscientiousness.

The observed increase in conscientiousness in the longitudinal study was supported by both the staff participants of the second study and the student participants of the third. Staff observed a greater level of autonomy and students commented that they were learning to take responsibility for their own decisions, time management and everyday problems. Although a character trait, the idea of conscientiousness seems to fit in with certain aspects of graduate attributes, those associated with organisation and responsibility. In cross-sectional studies into capabilities, the personality instrument was used to control for personality being a variable which may impact on perceived capabilities (P Anand, Roope, & Gray, 2014; Anand, Krishnakumar, & Tran, 2011). It does seem however, to also be a variable that changes during the university experience.

Limitations

The first limitation of this study is the comparatively small sample size. Initially 12 candidates agreed to take part in three scheduled groups. However, only 9 out of a possible 101 candidates participated. This also impacted on the size of groups, as one candidate who missed their scheduled group asked to participate alone. This of course meant that the environment designed to stimulate discussion and engender confidence describe above did

not apply to this meeting. The responses from this lone candidate were however, aligned with those of the previous three groups.

Secondly, with regard to coding, an independent coder was not used as was the case with the second study. Finally, this study took place 18 months after final data collection. It is likely that students were at a different developmental stage at this point then when they took the survey instrument in their foundation year.

Conclusion

The research question for this study investigated student experiences and perceptions of developing graduate attributes, capabilities and their predictors. There was agreement to a great extent with the results from the previous two studies. With regard to the decrease in capabilities, this was confirmed and explained as what most likely appears to be a result of the nature of the foundation program and the experience of acclimatising to the HE environment taking more than a year. Participants commented that the pass fail nature of the foundation year led to an increase in their stress levels as the final exams approached. Other participants noted that stress was also caused by the demands of fitting into the university environment. Furthermore, the development that takes place in students, leads to a perception that they will have trouble fitting into society upon graduation.

There was however, a difference in the development of intrinsic motivation. The first study showed a decrease in intrinsic motivation and the staff participants of the second study observed students to be more extrinsically motivated than intrinsically motivated. However, student participants of this study indicated that their intrinsic motivation had increased.

Finally, one point which emerged from the staff interviews seems of particular interest here. This is the extent to which the obstacles students face during the course of their studies were felt by participants to contribute to the development they undergo.

8: Discussion

The overall aim of this study is to investigate student development in the context of a transnational higher education partnership to deliver a foundation program between a Russell group university in the UK and a recently established university in Kazakhstan. The first study involved the quantitative analysis of the development of graduate attributes, capabilities and their predictors. The second study investigated the perceptions of student development from the perspective of staff (both academic and administrative) working on the foundation program. The third study was a qualitative analysis of students' experiences and perceptions of developing graduate attributes, capabilities and their predictors. The following discussion of the results in light of the surrounding literature, serves to shed light on the overall research question of whether in the context of a transnational HE partnership in Kazakhstan, student development is consistent with the graduate attributes of the institutions involved.

The first part of this discussion will consider whether participant perceptions of the purpose of the university and value of a degree are consistent with the graduate attributes of the institutions involved and the wider literature. Subsequently, motivation for students to participate in higher education and the extent to which student development maps onto the stakeholder perceptions of how students should develop will be considered. Finally the appropriateness of the capabilities approach for measuring graduate attributes will be discussed.

The purpose of the university and value of a degree

This topic was directly addressed by the two qualitative studies. It was clear from both the study with staff and the study with students that there was no perceived fixed essence of the institution of either the university at the centre of the study or universities in general.

Answers fell initially into the area of the university as a public good but it became clear that participants also considered the university to be a private good as well.

Both stakeholder groups felt that the purpose of a university differed with its mission and geographical location. It seems reasonable to imply from this that the purpose of a university as understood by these stakeholders, is to work towards the public good. This conclusion seems reasonable given that the personal development of the individual would not seem to be contingent on geographical location or ostensive mission of a tertiary institution. Rather, those considerations seem to serve the notion of the university as a public good in that, for example, a region requiring skilled workers, as in the development of regional vocational universities in China (Kapur & Perry, 2015) or an industry requiring specific research as, for example, the work done by the Fraunhofer-Gesellschaft in Germany, are examples of institutions meeting the needs of government and industry respectively.

The idea that there is no fixed conception of what a university is or should be is supported by the literature. However, the conclusions of this study do at times appear to be at odds with the current literature. As noted in the literature review to study 1, there are and have been over the years multiple answers to the question of the identity of the university. Of note however in contemporary literature is the idea that the university may be in crisis (Altbach, 2010; David, 2011). In the UK for example, student numbers have increased greatly, from less than 2% of the youth population in 1945 to around 45% in 2010 (Hogan, 2015). While it seems a positive development, this growth has had the impact of a rise in the cost of attending university and a feeling that standards have dropped, as Altbach notes "in a mass system, top quality cannot be provided to all students" (Altbach, 2013, p. 9). Since the introduction of fees in the UK in 1998, the cost of tuition has risen steadily and the newly passed Higher Education and Research Act 2017 allows most universities in the UK to increase fees annually.

As noted earlier, Altbach describes this growth of the HE sector as ‘massification’ and states that it is “the most ubiquitous global influence of the past half century or more” (Altbach, 2015, p. 3). He observed that this process, which involves the rapid expansion of HE, has resulted in a number of phenomena, two of which seem of direct relevance to the findings connected with this research question.

The first observation was that the development of HE involves a move away from institutions being seen as a public good and towards them being seen a private good.

> Stimulated in part by the financial pressures of massification and also by broader changes in economic thinking, including the neoliberal agenda, higher education is increasingly considered in economic terms a private good—a benefit accruing mainly to individuals who should pay for it rather than a public good that contributes benefits to society and thus should be financially supported by the state (Altbach, 2015, p. 3).

The second concerned differentiation, which Altbach notes involves different HE institutions having different roles.

> All mass higher education systems are differentiated systems. Institutions serve varied missions, with differing funding sources and patterns and a range of quality.
>
> Successful academic systems must ensure that the various segments of the system are supported and sustained. While research universities need special attention, mass-access institutions do as well (Altbach, 2015, p. 3).

Taking the second idea first, the responses from participants in this research, as noted above, certainly backed up the idea that there is no fixed essence to the institution. Some of the common ideas connected with the idea of a university are developing society, preparation for the workplace and personal development. Participants also noted that the purpose of a university differed according to its location and the type of mission the institution has.

Despite the concordance of the literature and the results of this study concerning the notion of differentiation, the concept seems to fit poorly with the reality of league tables and current developments in HE such as the UK government's adoption of gold, silver and bronze rankings for tertiary institutions. Funding for tertiary education varies from country to country, but where a sizable part of that funding comes as a result of league table position, then differentiation must surely suffer. As noted previously, different league tables take into account different factors, but it seems a reality that institutions higher up the rankings attract more students, can charge higher fees and will be able to employ more staff on higher wages. This will in turn improve student staff ratios, research output and other variables taken into account when compiling league tables, and keep that institution higher up in the rankings.

In terms of differentiation and the conceptualisation of universities as a public good, this situation is limiting because only certain sorts of tertiary institutions seem to score highly in the rankings. Institutions offering less popular courses may fail, resulting in those differentiated options ceasing to exist. A farmer looking for an appropriate vehicle to help manage the day to day workings of his farm might wisely choose to pass over the high-ranking performance specifications of a Ferrari in favour of a vehicle more suited to his needs. The same famer might also be better served by studying Agricultural Science at Anglia Ruskin than PPE at Oxford despite the disparity in the overall rankings of those institutions.

According to "The Complete University Guide" rankings, Anglia Ruskin currently ranks at number 18 in the UK for the study of Agricultural Science. In the overall rankings, Anglia Ruskin ranks at number 118 in the UK. In the current climate where universities are under threat, as evidenced by the upcoming closure of Manchester Metropolitan University's Crewe campus, institutions existing lower down the league tables are presumably more at risk than others higher up. While Oxford University ranks at number 2 overall, Agricultural

Science is a subject not offered by that institution. If institutions are forced to close, it seems reasonable to conclude that elements of differentiation will be lost. If institutions have to be of a certain type to survive, it is possible that the problem highlighted by Deresiewicz in his book "Excellent Sheep" (Deresiewicz, 2014) may become more widespread. All graduates may emerge having studied the same subjects and with the same attributes, which may not actually serve to benefit society.

As noted earlier, it was clear from this study that participants felt that this particular university had a purpose to develop society. While this fits in with the idea of differentiation, even within that conception of the university's purpose, there were different ideas about how that would happen with some participants focusing on how graduates would be able to fill positions that would improve the economy such as positions in engineering and medicine and others focusing on how the development of critical thinking and open mindedness in individuals would benefit both the individuals concerned and society.

The explicit nature of the university at the centre of this project being a public good, is outlined in the university's strategic plan. This document states the purpose of this university to deliver the following.

- A national research and development program that puts Kazakhstan researchers at the forefront of efforts to solve the country's and the world's most critical problems;
- A vocational education system that gives Kazakhstan a labor force with the technical skills the economy needs to compete and succeed;
- A university system that produces the leadership and expertise needed to drive Kazakhstan's social and economic development.

  (Kazakhstan University 2013 p5)

However, even within the specific context of this particular university in Kazakhstan, with a specific mission (as mentioned), it was clear from the range and variety of participant

responses that there is no set of necessary and sufficient conditions for a university to be a university. Some of the ideas mentioned by participants clearly are part of that specific mission. Others are seemingly fluid.

It seems worthy of note for example, that none of the staff participants mentioned research among the purpose of the university. This may be because there is no research mandate in the foundation year program and staff are employed exclusively for teaching. However, it seems peculiar that university employees would not associate the purpose of a university with research.

It should be pointed out that the student participants did talk about the importance of research. Discussion of this aspect of the mission of the university occurred with relation to the appeal of the reputation of the institution and the impact that research had on the quality of the courses as well as its role in developing society.

Motivation to enter Higher Education

The first point from Altbach (2015) referenced earlier was the claim that universities are moving from being a public to a private good. While the responses covered above support the conception that the university at the centre of this study constitutes a public good, responses given in the discussion of the motivation for students to attend university point to the conception of the university as a private good. It seems apparent from these results that the university was thought to do both, a finding seemingly at odds with Altbach's claim.

Results of the academic motivation scale from the first data collection point of the survey at the beginning of the year, indicated that the majority of students (55%) demonstrated extrinsic motivations to study. A notable finding of the longitudinal analysis was that levels of intrinsic motivation (already secondary to extrinsic motivation) demonstrated a significant decrease over the course of the study.

Qualitative responses from study participants to the questions of why students were motivated to go to university implied the notion of the university as the provider of a private good and were largely extrinsic in nature. Both staff and students cited the motivation of improved employment prospects as key in the decision to enrol in a degree. As noted in the results chapter, responses from student participants revealed a set of push and pull factors to attend university. On the pull side was the idea of future employment and other factors relating to personal good. On the push side was parental influence. However, this too can be seen as an implicit acknowledgement of the private good, as an exploration of the motives of parents in these discussions revealed that they wanted their children to study in order to enhance their future prospects. As one student participant recalled regarding advice from their father.

> *In the beginning, I was totally off economics and, just my father said, "that's something that's going to help you in the future" and I was like, "okay"* (G2S2).

As noted earlier, further insight into perceptions of the purpose of a university was manifest in the discussion of the motivation for students to attend university. Here it seems fair to say that the idea of the private good seemed to eclipse the public one. Both staff and student participants cited the importance of future job opportunities. It was clear that participants felt a degree was a useful tool in obtaining employment. So, while the purpose of the university was felt to be to benefit and develop society, the motivation for students to attend the university was felt to be largely self-serving. Put another way, both participant groups seemed to suggest that students attended university to benefit themselves, not society. However, in benefitting the individual, it may be the case that society also benefits.

Despite this, as noted in the introduction, a degree is no longer a guarantee of a job. Furthermore, the situation in terms of graduate employability is likely to worsen as more and more graduates are produced from states with emerging economies who are qualified to

perform the graduate level jobs currently employing graduates from states with developed economies because of the difference in wage expectation (David, 2011; Mok & Wu, 2015).

The other motivation that was mentioned by both staff and students was prestige. The nature of the university was felt to be attractive. It seems reasonable to conclude that this prestige could be a factor in the thinking about job opportunities. The more prestigious the institution the more attractive it is to stakeholders. However, there was also a sense among students of duty with one noting that the university was *"something new and really something privileged"* (G2S2). Subsequently it seems reasonable to assume that the public good mission of the university may, to a certain extent at least, be a motivating factor for students.

There was also a suggestion in the group interviews that participants were becoming more intrinsically motivated as they progressed through their studies. That they were coming to enjoy the subjects they were studying. This finding would be in line with the findings in a variety of studies in the USA mentioned in the literature review, which observed that as students progressed though the university experience, their motivation to study and indeed with regard to future employment, became more concerned with the intrinsic value of these things (Pascarella & Terenzini, 2005). However, as noted earlier, it could be the case that the students who participated in the research were merely more motivated than those that chose not to. It was certainly the case that participants saw their peers as extrinsically motivated.

Student development

It was clear from both the qualitative and quantitative aspects of this project that students do indeed change. Statistically significant changes identified in the longitudinal study were subsequently explored in the group interviews with students. Of course, people would change over time whatever the context they find themselves in, but it is clear that the university

experience does have some influence over this as the findings of the longitudinal study were in large part corroborated by the group discussions with students.

As was noted in the literature review however, there is a sense that in naming the attributes 'graduate attributes', universities are implying they are unique providers of these phenomena. Pitman and Broomhall point out that universities "have thus selected a terminology to express their engagement with lifelong learning that positions them as unique providers of a particular set of generic skills." (2009, p. 443). Subsequently, a further question lies in terms of whether the sorts of developments experienced by students, are the sorts of developments that they might only have experienced in the context of a university.

Personality change

In the qualitative study, both participant groups stressed the importance of the development of conscientiousness. Notions of personal growth, maturity and taking greater responsibility emerged as constituent themes of the notion of conscientiousness. The development of these themes was noted consistently in discussions with staff and students. It is of note that student participants further observed that they realised the importance of this development only after being at university. This suggests a condition whereby students only realise the significance of certain aspects of the university experience after experiencing university. While this may not be surprising, it has implications for the idea of students making choices about which institutions to attend or even whether to go to university at all.

Conscientiousness seems to fall into the category of being both a private and a public good. From the point of view of society, the benefits of a more conscientious citizenry seem obvious. There is substantial evidence to suggest that there are also private benefits to an increase in conscientiousness such as increased longevity and avoidance of negative personal habits such as consuming tobacco and alcohol (Roberts & Bogg, 2004). However, it seems reasonable to conclude that the development of conscientiousness cannot uniquely be

ascribed to a university education. Roberts and Bogg (2004) cite a number of influences including poverty and marriage stability as factors influencing personality change of this sort. This isn't to say that a university education cannot be responsible for the development of this attribute, but rather that it seems unreasonable to say that only a university education can lead to such a change. It was however, noted by one staff participant that the university environment does in fact provide an environment suitable for development of this sort because of the additional opportunities it offers.

> *Well if you are thinking that students come in at 17 or 18 you know because they are young adults they are going to develop socially and in maturity and they are going to develop personally regardless of where they are, but obviously university should enhance and give them extra opportunities and avenues to do that. So, in that sense they will grow up* (EAP 3).

In exploring this finding in the group interviews, it was clear that the students do indeed note this development in themselves. It manifests itself within the academic sphere in terms of greater skills of time management (managing deadlines and preparing for exams) and an enhanced ability to work in teams with other students. Outside of the academic sphere, this increase in conscientiousness manifested in students' perceptions that they were increasingly taking responsibility for their own problems. This observation was mirrored in comments from staff participants who noted increased levels of maturity and responsibility in students.

This observation is also in line with the 2015 UK Engagement Survey (UKES) (Buckley, 2015) where the key finding was students' greatest engagement was in perceived core skills associated with HE. These fit with the concepts of independent learning and critical thinking and comprise "taking responsibility for their own learning, being challenged to do their best work, and learning things that change the way they think about issues"

(Buckley, 2015, p. 3). The development was also in line with studies on student development conducted in the USA and referred to in the literature review (Pascarella & Terenzini, 2005).

To summarise, student development is not a clear cut or easily predictable phenomena. Different students develop in different ways. However, there does seem to be an understanding of the complexities of this development in the students themselves, which in itself is evidence of more sophisticated thinking about the world, as the following exchange illustrates.

> *G4S1: As I said before, you're nothing without some skills. Also, you're nothing without your knowledge, without the knowledge, some kind of knowledge, which you'll need for your future*
>
> *Interviewer: If I had asked you that question two years ago, what would your answer have been?*
>
> *G4S1: Two years ago, I think I would answer that university is about the knowledge. Yeah, but here, in reality, you have to develop in many ways, not only knowledge. Knowledge is just one kind, one, how to say it, one direction.*

Development of student participants in the context of the internationalisation of HE

It was noted in the discussion of study 3 that KU is developing students in similar ways to those in which students who have had Bolashak scholarships develop. Given the unique model upon which KU was founded, this finding is of interest in the wider context of the internationalisation of higher education. The international branch campus model has numerous failings as noted earlier, not least accusations of compromising standards and a fixation on profit (Altbach, 2013). Wilkins (2016) observes that since the foundation of IBCs in the 1990s around 10% of the 230 (institutions that existed at the start of 2016) have failed. The KU model is different to those which have gone before not least in that it is not designed

to be a for profit institution. The success of the KU model may be of interest to institutions looking to expand and internationalise or indeed for states looking to modify their economies. As Brown observes, the global order is changing and the expansion of access to tertiary education is part of the equation that "allows emerging economies to leapfrog decades of industrial development to create a high-skill, low-wage workforce capable of competing successfully for hi-tech, high-value employment" (P. Brown, Lauder, & Ashton, 2011, p. 3).

However, of note is that there is no record of the process of how the graduate attributes at KU were devised. Given the nature of the partnership with so many different institutions, it is interesting to speculate on how or whether at all, the alignment of graduate attributes was considered in the establishment of the partnerships. If there was no consideration of the merging or aligning of so many different attributes from so many different institutions (initially seven institutions were involved in addition to KU itself), then it may be evidence that institutions do not as yet see graduate attributes as a means of highlighting their differentiated models.

Student development and stakeholder perceptions of student development

Broadly speaking and in the context of the institution at the centre of this project, it appears that student development matches the expectations of stakeholders. The results from the quantitative study aligned with and were explained by the results of the qualitative studies.

To begin with, the development revealed and discussed in this study does actually map on to Hager's conceptualization of what graduate attributes should be doing.

> Rather than being viewed as discrete attributes that people learn to transfer, generic attributes should be seen as learnt capacities to handle an increasing variety of diverse situations. Thus transfer becomes more a growth in confidence and adaptability as learners experience ever more success in their deployment of generic skills in a range of situations (Hager & Holland, 2006, p. 43).

Revisiting the Cardinal Wooley quote featured earlier, it seems that the students have indeed engaged in reflection and made steps towards what was described as "the truest and most useful result of human knowledge, the consciousness and confession of their comparative ignorance" (Woolley, 1862, p. 21 as cited in Candy et al., 1994). As one student participant noted of themselves, their time at university was *"just helping to become what I am in fact. Because before university, that person wasn't self-conscious enough"* (G3S1).

The quantitative study showed a growth in conscientiousness and responses from both staff and students indicated that one of the key areas of student development was maturity and personal development. This sort of development appears to be directly in line with the attributes of the institution.

The decrease in capabilities from the quantitative study was located in the areas of stress and affiliation but they too align with the perception of how graduates should develop. The importance of adaptability was a factor that came up repeatedly in terms of the new situations students had to manage. These situations occurred both within the university environment, such as adapting to new learning environments, as well as outside the university as for example, was mentioned with the issue of integration. While these were a source of stress, they were also a manifestation of student development in their ability to overcome and adapt. Adapting to new contexts, a key graduate attribute, is a stressful experience. As noted earlier, it may be the case that different types of stress, challenge versus threat, can be isolated in future capabilities measurements. It seems that the decline in capabilities actually exemplifies the increase in attributes. If students hadn't developed, they wouldn't feel uncomfortable.

The decrease in intrinsic motivation is, however, a result which was not satisfactorily explained in the subsequent group interviews. This was measured by the academic motivation scale, and, while it is not an explicit graduate attribute or a factor in capability, the literature

illustrates the importance of motivation with regard to academic achievement and a range of other life factors. Certainly, the quantitative part of this study found intrinsic motivation to be a moderating variable for stress and to correlate significantly with a range of other variables tested in this study. Given the importance mentioned previously of intrinsic motivation, any decrease is worth understanding.

To a great extent, the purpose of a university as envisioned by stakeholders does map onto the attributes of the institutions involved. The first question to address in this context is concerned with which institution the students were supposed to develop the graduate attributes of. As was noted previously, the graduate attributes of the two institutions, while similar, still hold some notable differences. For example, London University wants graduates to look beyond their local context, while Kazakhstan University wants graduates to develop the state of Kazakhstan (see table 8.1).

The results of the qualitative survey indicate that participants felt that the purpose of a university varied according to its location and mission. It seems that with regard to Kazakhstan University, participants felt that the institution had a mission to develop the state of Kazakhstan. This mission is directly represented in the GAs of the university (see table 8.1).

Continuing with the graduate attributes of Kazakhstan University (see table 8.1), it may be argued that there is a tension between the attribute for global citizenship and the attribute for the development of Kazakhstan. While national and international interests are not of necessity conflicting interests, it is straightforward to think of a number of issues where there would be conflict. For example, the economy of Kazakhstan is still highly dependent on fossil fuels and other non-renewable assets. This might well conflict with international attempts at the regulation of fossil fuel use.

Table 8. 1

Graduate Attributes

London University Graduate Attributes graduates	**Kazakhstan University Graduate Attributes**
• Look beyond their individual and local interests and see the complexity of an interconnected world. • Understand the nature of the challenges that face that world. • Are aware of their social, ethical and political responsibilities. • Are ready to display leadership and work together to change the world for the better. • Are able to solve problems through innovation and entrepreneurship. • Prosper in a global jobs market that values the skills London University provides	• Possess an in-depth and sophisticated understanding of their domain of study • Be intellectually agile, curious, creative and open-minded. • Be thoughtful decision makers who know how to involve others. • Be entrepreneurial, self-propelling and able to create new opportunities. • Be fluent and nuanced communicators across languages and cultures. • Be cultured and tolerant citizens of the world. • Demonstrate high personal integrity. • Be prepared to take a leading role in the development of their country.
(London University, 2017)	(Kazakhstan University, 2017)

In terms of the results of this survey, the questions designed to measure generic graduate attributes did not register any significant change. Aspects of the capabilities approach questions appeared to register a decrease in capability that could be argued to relate to graduate attributes. For example, the capability related to affiliation registered a decrease. This capability could be argued to give insight into the graduate attribute of global citizenship.

Investigation of this result in the group interviews with students revealed that the decrease of affiliation was connected with two different factors, neither of which related directly to global citizenship. One area was that participants did not feel authentic members of the university as foundation students. This raises the question of whether affiliation subsequently improves once students pass into the undergraduate program.

The second area connected to a reduction in affiliation was the sense that as students developed the skills associated with critical thinking and independent thought, they found

themselves becoming distanced from their friends and families at home and the society into which they would emerge upon graduation. In this sense, the lowering of affiliation could be argued to be an indicator that the students are actually developing towards having the ability to change and develop society. In this sense, some of the graduate attributes of the institution could be argued to have been developed. Furthermore, it could be argued that the students have developed the London University attribute about thinking beyond individual and local interests (see table 8.1).

Both qualitative aspects of this project revealed that the participants felt that it was the purpose of universities in general to develop individuals and promote critical thinking. In this sense, the graduate attributes of both institutions could be argued to align with the stakeholders' perceptions of the purpose of a university.

Overall, results indicated that participants felt that different institutions have different purposes. It seems fair to assert that these different purposes ought to be manifested clearly in the graduate attributes of universities, but that in the case of the two institutions involved that individual mission is not clear. With regard to Kazakhstan there is reference to developing that state, but how that happens through individuals is not explicit. If it is the case, as assumed in this research, that the development takes place through developing critical thinking and open minded graduates, then that is in line with stakeholder perceptions of the purpose of the university.

With regard to London University, the graduate attributes seem less directly relevant to the students at Kazakhstan University. This is possibly because the list of graduate attributes appears to stress the international as it references a global jobs market and a complex and interrelated world. Once again, the general individual developmental aspects seem to relate to stakeholder perceptions. What is missing is something that makes the institution and its graduates unique.

Student development of graduate attributes

The principle question of the research is the extent to which students develop in the ways universities state that they do in their graduate attributes. The results of this research indicate that to certain extent, by the end of a foundation year, the students that participated in this research had indeed developed certain of the graduate attributes of the two institutions involved in the study.

Although, the quantitative element of the study finished at the end of the foundation year, and therefore there is no quantitative data for participants after that times, it appeared clear from the qualitative interviews with student participants that their development continued on after the foundation. Student participants displayed critical thinking, open-mindedness and reflection in their comments, thus demonstrating to the researcher that those qualities had developed.

The capabilities approach as an appropriate measure of graduate attributes

This study indicates that the capabilities approach has at least two applications in the area of measuring graduate attributes. Although beyond the scope of this research, in that the target institution did not base their graduate attributes on the capabilities approach, it seems that where an institution uses the capabilities approach as the basis for its graduate attributes, then the capabilities measurement instrument used here should be able to measure that change. In the context of this research, the capabilities measure did record change in participants over the course of the foundation year, although that change may be perceived negatively. At the same time it is argued that this change still sheds light on the development of graduate attributes.

Much like universities themselves, and therefore perhaps unsurprisingly, graduate attributes lack a fixed essence. In this sense the idea of a one size fits all graduate attribute measure may logically be considered to be an impossibility. As noted earlier, attempts at

measurement are unsatisfactory (Ipperciel & ElAtia, 2014; Pitman & Broomhall, 2009). However, given the importance of graduate attributes, some measure of their existence, growth or level seems essential.

It was from this foundation that the idea of capabilities was considered as a measure. Given the idea that a university education ought to at least to some extent be a private good (as well as perhaps a public good), that good ought to manifest itself in greater capability for the individual. In this sense, it may be argued that the capabilities approach constitutes a way of measuring personal development but not generic attributes. However, in a context where the capabilities approach constituted the foundation of the graduate attributes of an institution, then it seems reasonable to assume that they could measure that development. It furthermore seems reasonable to conclude that the sort of institution that might use the capabilities approach as the foundation of their graduate attributes would be the sort of institution that lay more at the private good end of the scale than at the public good end. The type of institution that has no mandate to develop society or serve industry.

However, even in the situation where an institution's attributes were based on the capabilities approach, it seems likely that stress would still be a factor demonstrating a measurable decrease in capability as stress seems to be an unavoidable part of the university experience. As noted earlier, the status of stress as a negative is not a given. It may be the case that a capabilities measure can be updated to reflect the distinction between stress as threat and stress as challenge.

It is clear from the results presented here that overall capabilities did not increase over the course of the foundation year. On the contrary two factors associated with capabilities decreased. However, this development can still be considered as a means of mapping the growth of graduate attributes. Given that the function of the institution at the centre of this study is to serve the public rather than a private good, then that decrease in capabilities,

actually maps onto an increase in graduate attributes. As noted earlier, given the mission that graduates are expected to change and develop society, it would be a strange result to find that they felt an increased sense of belonging to the society they were charged with changing.

It seems that depending on the mission of the institution in question, the capabilities approach can indeed be used to measure the development of graduate attributes. However, that development may sometimes manifest itself as a decrease in capabilities. This is not to say that where an institution is designed to deliver a public good over a private good there must always be a decrease in the capabilities of the individual, but rather to point out that it may be the case that in certain situations there is a conflict of interests between the private and the public good. As one student participant commented

> *The answer I guess is to grow professionals and to make them work for the country to increase the economy of the country to improve it. And maybe this is the most important purpose we may have* (G2S2).

Conclusion

Overall it seems that stakeholder perceptions of the purpose of a university do indeed map onto student development. While there is a significant recorded drop in capabilities connected to stress and affiliation, the qualitative follow up to the survey indicates that this phenomena is understandable in the context of a foundation year.

It is of interest that although there is a connection between perceptions of the purpose of the university and lists of graduate attributers and indeed how students develop, there is a disconnect between this consensus and the motivation students have for going to university in the first place. The survey instrument revealed students' motivations to be largely extrinsic. This observation was confirmed by both the interviews with staff and the group interviews with students. So while students acknowledge that the purpose of a university is to develop

individuals and society, they chose to go to university not to develop as individuals, but because of the opportunities having a degree would offer them in later life.

An unfortunate finding is that intrinsic motivation decreases over the course of the foundation year. However, it appeared from the group interviews with students that their motivation had actually increased in the time since the end of the foundation. It seems reasonable to posit that reasons for those students' increase in motivation might meaningfully be inverted to deduce the reason for other students' decreases in motivation. The increase in motivation for the participants of the qualitative study, came from an understanding of the relevance of the material to be studied to their futures. As one participant noted, *"all of this, is not only, you shouldn't just take it only because you have to close this required course, you know, because it will help you in your career"* (G2S3). Subsequently, it would be worth investigating whether a lack of motivation correlates with a lack of understanding the function and utility of the material that needs to be learned.

It may also be the case that an extrinsic motivation to attend university stems from a lack of understanding of the purpose of a university. The student participants who contributed to this research had been attending university for two and a half years by the time of the group interview stage of this study. As noted earlier, a number of them commented on how their understanding of the university had changed in that time, as the following interchange illustrates.

G2S2: But yeah, of course as general you should study what you are interested in.

Interviewer: So would you be better off studying a degree in a subject you're interested in that maybe didn't have a direct career path but enabled you to…

G2S2: Yeah.

Interviewer: Interesting. Would you have said that before you came to university?

G2S2: Never, never. I would never say that.

Limitations

The main limitation of this study is the fact that only foundation year students were involved. In order to properly evaluate the development of graduate attributes, the entirety of the undergraduate experience should be considered. Furthermore, the majority of students worldwide do not enter a foundation program and so the relevance is limited in that sense. The nature of the participants being of a narrow range of age and nationality, as mentioned in the limitations of a previous study, is a further pressure on the expandability of the results of this study.

In addition, there was a substantial time gap between the three studies. A reordering whereby the interviews with staff happened after the survey to allow for confirmation of the survey results would be desirable in retrospect. Also, a smaller gap between the second data collection point of the survey and the group interviews with participants would mean that the issues raised were fresh in their minds and that they themselves had not developed much further from when they took that survey.

Areas for further research

First of all, it would be of interest to administer the survey instrument a third time. If it were administered at the end of the cohort's degree, a fuller picture of student development would emerge. It has been speculated here for example, that stress levels may lower after the foundation year and affiliation levels would rise. Furthermore, as noted above, the group interviews in the third study hinted at an increase in intrinsic motivation among some participants. Such an increase in motivation would be in line with other studies (Pascarella & Terenzini, 2005). A third data collection point would address these questions.

As noted previously, the survey instrument used in this study is too long and involves too much of a time commitment for students to complete. Also, many of the questions

regarding capability are not strictly relevant to the context in which the student participants of this survey find themselves. This is perhaps more a function of age (the average age of student participants was 18 across the study) than culture or language. The capabilities and development of capabilities of young adults seem to be different to those of people at later stages in their lives. As noted in the previous section, an increase in stress seems an unavoidable consequence of growing up and is probably not only not a bad thing but ultimately a positive.

In addition, the questions designed to measure the development of skills should be revisited. It was clear from the group interviews with students that development of critical thinking had taken place. However, this development was not revealed in the survey results. This could be because of the time passed between the survey and the group interviews (18 months) but it could also be a result of the instrument being flawed. This was the only part of the instrument to be developed independently and therefore is the least robust aspect. Further testing of this part of the instrument should occur as well as an investigation into the other critical thinking assessment instruments available. Subsequently the instrument should be redesigned to reflect these observations.

As noted above, it is possible to measure changes in personality and capabilities. It is also possible that when taken together, aspects of personality, motivation and capability which are directly measurable could be combined to inform understanding of the development of non-directly measurable variables such as certain values related graduate attributes.

SEM did reveal connections between variables measured in this study. Intrinsic motivation and stress were found to be important variables which when combined with others, predicted the development of behaviours and performance. These models need to be

tested further to ascertain their accuracy. They should also be tested with different populations in order to see if the findings here can be applied elsewhere.

Ultimately, it would be useful to replicate the survey, with the amendments mentioned above, at a range of different institutions. It would be especially interesting to compare development within an institution with a branch campus. In this way, the models could be tested and the development of graduate attributes and capabilities in different contexts more fully explored.

9: Conclusion

The aim of this research was to investigate the extent to which students develop graduate attributes in the context of a transnational partnership between universities from the UK and Kazakhstan.

There are two main conclusions to be made from the overall study. Firstly, the development that students undergo over the course of their foundation year as measured quantitatively in the first study, mostly aligns with the perceptions of that development that staff and students have, as observed in the two qualitative studies. This is in line with the intrinsic notion of the benefits of the university as described in general by graduate attributes and which is represented in the graduate attributes of the two institutions involved in the research. Secondly, how students develop can be predicted by the analysis of variables including intrinsic motivation and stress.

Consensus on the purpose of the university

In order to understand whether there was consensus on the development of the graduate attributes of the institution, it was necessary to understand whether there was a consensus between staff and students on the purpose of the institution of the university. Understanding the perception of the value of a degree also fed into an understanding of the motivation for students to attend university. The results indicate that among stakeholders there is no fixed conception of the institution of the university in general. There is not a set of necessary and sufficient conditions which an institution could fulfil in order to be called a university. There are however, a selection of activities that universities ought to be doing and these are concerned with the development of the individual and the development of society. In this sense, it seems that while stakeholders believe that universities can fulfil a number of different roles according to their specific mission and location, they perceive that universities serve both the private and the public good. It seems then that there is a perception that the

purpose of the university and the value of a degree has both extrinsic (to do with personal gain for the individual, such as obtaining a better paid job, and society, such as enhancing the economy) and intrinsic (to develop the person and society though better citizenship) value.

Consensus on the development of graduate attributes

The quantitative study revealed that participants undergo a variety of changes. Many of these, such as the growth in conscientiousness, are consistent with the development of graduate attributes. The instrument designed to measure graduate attributes and the instrument designed to measure capabilities correlated with each other, revealing small but not significant levels of growth. These developments were consistent with the observations of student development recorded in the two qualitative studies.

One of the findings of this research was a significant decrease for participants in the capabilities of affiliation and stress. Given the assumption that in general education ought to increase capability, this finding was unexpected. However, as was noted previously, these reductions may be explained by the nature of the foundation year program. It may for example be the case that students take longer than one year to feel that they properly fit in with an institution. Also, the pass or fail assessment of the foundation year may cause a spike in stress that subsequently abates over the following years of study. Alternatively, there may be an issue with the capabilities approach and its use on young adults in that stress may be a necessary element of development. Subsequently, an institution looking to use the capabilities approach as a foundation for its graduate attributes would be advised to adapt existing capabilities measurement tools to reflect those differences between young adults and adults. In any case, further research is required to answer these questions.

The capabilities approach as a foundation for the establishment of graduate attributes

Were an institution to use the capabilities approach as the foundation for the development of their graduate attributes, it would be possible to measure the development of those

capabilities using existing instruments. It would be necessary to measure those capabilities longitudinally with at least two points of data collection at the beginning and the end of the educational experience. This is because it is clear from this study that students do not all develop in the same way. In reality, universities would most likely be better served stating that the values described in their graduate attributes are those valued by the institution. That the institution has an atmosphere that fosters those values and provides opportunities for their development.

Predictors of development

Motivation is clearly an important variable in how students develop. Levels of extrinsic and amotivation were found to have significant impacts of academic performance. Interestingly, intrinsic motivation did not appear to impact on academic performance directly, although it did feature in the model that predicted academic performance. Given the impact that intrinsic motivation has on success as illustrated in the literature, it may be the case that universities should consider assessments which foster intrinsic motivation.

In this study, it was clear that intrinsic motivation had a significant impact on the development of skills and values that are typically featured in graduate attributes. However, it was also the case that students suffered a drop in intrinsic motivation over the course of their studies in the first year. As noted previously, it may be the case that intrinsic motivation increases later in the university experience. Once again, further research would be required to answer this question.

The other major predictor of student development was stress. Taken in combination with intrinsic motivation, a model was created that accounted for both student development and academic performance. Clearly further testing both in the same and different contexts is required before stronger conclusions can be drawn, but it does seem that these variables merit further investigation as a means of predicting student success in higher education. If the

findings here are supported, it seems a logical next step to investigate interventions to encourage intrinsic motivation and mitigate stress, especially amongst foundation year students.

Implications for Kazakhstan University

Given the location of this research, the results have particular relevance to Kazakhstan University. To begin with, it seems that there is a tension in the list of the institutions' graduate attributes between the local and the international. Results indicate that the development that the students display is in line with having a more global outlook and more critical attitude.

The university should support students in their transition from university to society after graduation. This would involve preparation not only for graduates but also for the industries those graduates will be going to work in. The students are developing in ways which appear to be making them experience lower affiliation towards the society which they are supposed to develop. The students appear to be aware of this and it is a cause of stress. The decrease in capabilities related to affiliation and stress is at least in part a result of this factor. As a result, it would be beneficial for graduates to properly understand what conditions they should expect and for industry to understand that graduates will be critical thinkers and why they have an important and difficult role to play.

The university should also consider ways to smooth the transition into the foundation year from secondary school. It was clear that the foundation year is a stressful experience and the pass or fail nature of the end of that year assessment increases stress. While this could be argued to be a necessary filter for entry into the undergraduate program, there could be efforts made to help students manage stress. This may involve helping students and their families to understand the development that students undergo. It may also look at ways in which stress can be harnessed as a positive motivator to enhance performance.

In addition, the university should look at ways to preserve and enhance intrinsic motivation. As noted in previous sections, students' motivations to attend university were largely extrinsic and there was a significant drop in intrinsic motivation over the course of the year. The university is clearly able to extrinsically motivate students through assessments and other activities related to work experience and career planning. While motivation through assessment can be positive when those assessments are aligned properly to program outcomes and graduate attributes, there is a risk that the levels of performance may not be as high when intrinsic motivation is not present and a real danger of ineffective or indeed negative development when assessments do not match program outcomes and graduate attributes.

Following on from this, the importance of constructive alignment between graduate attributes, program outcomes and assessments should be of upmost importance to the university. It is recommended that the university revisit its graduate attributes in light of consideration of how they might both represent the unique mission of the institution but also at the same time provide the conditions under which the attainment of those attributes can be measured.

As a result of discussions about this research project, as of the autumn of 2018, the department of institutional research at KU has integrated questions to measure intrinsic motivation into the university wide student survey. This survey is administered to students on entry to the foundation, at the end of the foundation year and at the end of undergraduate study. It is anticipated that the data will provide useful insight into student development.

Implications for universities in general

Universities in general would be well advised to revisit their graduate attributes. An institution's graduate attributes can send a powerful message about the qualities that institution values, the nature of the environment the institution creates and the unique mission

the institution has. It is also advised that when drafting lists of graduate attributes, universities consider how those attributes might be measured. As it stands, measurement of skills related attributes appears to be the remit of individuals in industry applying subjective judgement without proper criteria or methods. The research citing the opinions of these individuals in industry has had considerable impact on the way universities organize themselves. It seems reasonable that universities then consider measurement when drawing up graduate attributes and then apply the same rigor to that assessment as they do to their assessments of content knowledge.

In the opening section of this research, it was argued that there is a crisis in HE. That the purpose of universities is misunderstood and that the direction towards corporatization could lead to institutions closing and society being harmed as a result. This research seems to support this idea. It was found for example, that even in the context of a university where all the students were on state scholarships (at the time of the data collection), students were perceived to be customers and consumers of education. Furthermore, students' motivations to attend university were, initially at least, extrinsic in nature.

Subsequently, it seems that HE is seen as a means to an end rather than an end in itself. This it seems is a danger to universities, as if the situation occurs that a degree is no longer a substantial asset in the search for a meaningful career, then the value of the degree will be seen to be greatly lessened by stakeholders. Subsequently, it is in the interests of institutions to promote the value of study at HE as an end in itself. This promotion can be achieved though graduate attributes. Universities should therefore pay great attention to the design and measurement of their graduate attributes.

To sum up, attending a university and studying for a degree is an experience which is developmental. Knowledge acquisition is only part of that development. While knowledge acquisition is measured, the other aspects of development are often vaguely prescribed and

unmeasured. It seems likely that different institutions develop students in different ways. This development is not always easy and may result in a lack of affiliation with a student's parent culture depending on the nature of that institution and the parent culture. The development may also be stressful.

Despite the evidence that students develop graduate attributes, this study also indicates that students' motivation to attend university is largely extrinsic. It has been argued that this is a manifestation of the crisis universities are facing. If a degree is seen as only a means to an end and if it no longer serves to guarantee that end, then HE will suffer a crisis of participation. Universities should promote the value of a degree as an end in itself. This can be achieved though the careful design and measurement of graduate attributes.

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Appendix A

Participant invitation letters

Information sheet provided to prospective interview participants

Assessing Graduate Attributes

INFORMATION SHEET FOR PARTICIPANTS

Dear Colleague,

I would like to interview you as part of a research project designed to assess graduate attributes. This research is part of a PhD thesis at the University of Nottingham.

In order for you to be able to make an informed decision about continuing to take part in this research, I will explain what the research is for and what you would be required to do. If you decide to participate, you will be asked to sign a form granting your consent before the focus group begins. You can change your mind at any time and withdraw from the study without giving a reason.

The information you provide is confidential.

The purpose of the research study is to examine students' perceptions of the attributes they possess as a result of study at university. The interview is intended to provide a staff perspective on this topic. It should last no more than 25 minutes.

The information gained from this research will contribute to an understanding of how universities can best communicate their role in society. The results of the study may also lead onto further studies into graduate attributes.

The interview will be conducted in private and the results held anonymously in a secure location. Your responses will be treated with full confidentiality and no research

participant will be identifiable from any publications. This study has been reviewed and approved by the Research Ethics Committee at the University of Nottingham.

Please do not hesitate to contact me if you need further information

Yours sincerely,

Dominic Mahon

domincmahon@gmail.com

Information sheet provided to prospective survey participants

Assessing Graduate Attributes

INFORMATION SHEET FOR PARTICIPANTS

Dear Student,

I would like to invite you to take part in an online survey designed to assess graduate attributes. This research is part of a PhD thesis at the University of Nottingham.

In order for you to be able to make an informed decision about taking part in this research, I will explain what the research is for and what you would be required to do. If you decide to participate, you will be asked to give your consent before completing the survey. In addition, you will be asked to give your personal details so that you can be contacted to complete a follow up survey at a later date.. You can change your mind at any time and withdraw from the study without giving a reason.

Although the researcher is an employee of your university, your answers to this survey are confidential and will in no way affect your studies or grades.

The purpose of the research study is to examine students' perceptions of the attributes they possess as a result of study at university. As a result, the survey will contain a series of

question about your feelings about yourself and your abilities. It should take no more than 20 minutes to complete.

The information gained from this research will contribute to an understanding of how universities can best communicate their role in society. The results of the study may also lead onto further studies into graduate attributes.

The survey will be conducted online and the results held anonymously in a secure location. Your responses will be treated with full confidentiality and no research participant will be identifiable from any publications. This study has been reviewed and approved by the Research Ethics Committee at the University of Nottingham.

Please do not hesitate to contact me if you need further information.

Yours sincerely,

Dominic Mahon

domincmahon@gmail.com

Information sheet provided to prospective follow up survey participants

Assessing Graduate Attributes

INFORMATION SHEET FOR PARTICIPANTS

Dear Student,

Last semester you completed a survey as part of research for a PhD thesis at the University of Nottingham. I would like to invite you to continue your participation by retaking the online survey designed to assess graduate attributes.

In order for you to be able to make an informed decision about continuing to participate in this research, I will explain again what the research is for and what you would

be required to do. If you decide to participate, you will be asked to give your consent before completing the survey. In addition, you will be asked to give your personal details so that your responses to both surveys can be compared. You can change your mind at any time and withdraw from the study without giving a reason.

Your answers to this survey are confidential and will in no way affect your studies or grades.

The purpose of the research study is to examine students' perceptions of the attributes they possess as a result of study at university. As a result, the survey will contain a series of question about your feelings about yourself and your abilities. It should take no more than 20 minutes to complete.

The information gained from this research will contribute to an understanding of how universities can best communicate their role in society. The results of the study may also lead onto further studies into graduate attributes.

The survey will be conducted online and the results held anonymously in a secure location. Your responses will be treated with full confidentiality and no research participant will be identifiable from any publications. This study has been reviewed and approved by the Research Ethics Committee at the University of Nottingham.

Please do not hesitate to contact me if you need further information.

Yours sincerely,

Dominic Mahon

domincmahon@gmail.com

Information sheet provided to prospective focus group participants

Assessing Graduate Attributes

INFORMATION SHEET FOR PARTICIPANTS

Dear Student,

I would like to invite you to take part in a focus group designed to assess graduate attributes. This research is part of a PhD thesis at the University of Nottingham.

In order for you to be able to make an informed decision about continuing to take part in this research, I will explain what the research is for and what you would be required to do. If you decide to participate, you will be asked to sign a form granting your consent before the focus group begins. You can change your mind at any time and withdraw from the study without giving a reason.

Your contribution to the focus group discussion is confidential and will in no way affect your studies or grades.

The purpose of the research study is to examine students' perceptions of the attributes they possess as a result of study at university. The Focus group is intended to clarify information collected from a survey. It should last no more than 45 minutes.

The information gained from this research will contribute to an understanding of how universities can best communicate their role in society. The results of the study may also lead onto further studies into graduate attributes.

The focus group will be conducted in private and the results held anonymously in a secure location. Your responses will be treated with full confidentiality and no research participant will be identifiable from any publications. This study has been reviewed and approved by the Research Ethics Committee at the University of Nottingham.

Please do not hesitate to contact me if you need further information.

Yours sincerely,

Dominic Mahon

domincmahon@gmail.com

Appendix B

Principle Components Analysis Factor Loadings

Table B. 1

7 Factors Rotated Component Matrix[a]

	Component						
	1	2	3	4	5	6	7
Q2 Bodily health (general health)							.314
Q4 Bodily health (Diet)							.422
Q5 A Bodily health (ability to have children)							.326
Q7 Senses (political expression)		.496		.350			
Q8 Senses (political activity)		.528					
Q9 Senses (religious freedom)		.574					
Q10 Practical Reason (good based on own judgement)		.538					
Q11 Affiliation A (respect value and appreciate other people)		.669					
Q12 Emotions (love care and support of family)		.525					
Q13 Species (appreciate nature)		.473					
Q14 Emotions (make friends)			.521				
Q15 Emotions (loss of sleep)				.589			
Q16 Emotions (feeling under strain)			.330	.604			
Q17 Senses (ability to enjoy every day activities)			.616				

Q18 Control over life (useful at work)		.650			
Q19 Practical reason (useful outside work)		.516			
Q20 Play (ability to enjoy recreational activities)		.616			
Q21 Affiliation B (worthless person)		.424	.353		
Q22 Bodily health (accommodation)		.477			
Q23 bodily health (ability to move)					
Q24 Bodily integrity (safety during day)			.324		.352
Q25 Bodily integrity (safety at night)					.557
Q26 Bodily integrity (victim of sexual assault)					-.445
Q27 Bodily integrity (scale of vulnerability to attack or sexual assault)				.838	
Q28 Bodily integrity (victim of domestic violence)					-.490
Q29 Bodily integrity (scale of vulnerability to domestic violence)				.798	
Q30 Bodily integrity (victim of other violence)			.513		
Q31 Bodily integrity (prediction of future assault)			.621		
Q32 Life control (police search)			.352		
Q33 Senses (imagination daily use)				-.539	
Q34 Practical reason (life plan)	.453				

Q35 Affiliation B (annual holiday)			.301		
Q36 Affiliation A (meet friends)					
Q37 Affiliation A (imagine situation of others)				-.406	
Q38 Life control (past employment)				-.330	
Q39 Life control (future employment)				-.352	
Q40a Affiliation B (discrimination outside work race)				.452	
Q40b Affiliation B (discrimination outside work sexual orientation)	.422				-.301
Q40c Affiliation B (discrimination outside work gender)				.598	
Q40d Affiliation B (discrimination outside work religion)		.404		.381	
Q40e Affiliation B (discrimination outside work age)	.393			.542	
Q41a Affiliation B (discrimination outside work sexual orientation)	.800				
Q41b Affiliation B (discrimination outside work gender)	.793				
Q41c Affiliation B (discrimination outside work religion)	.749				
Q41d Affiliation B (discrimination outside work age)	.731				
Q41e Affiliation B (discrimination outside work race)	.797				

Q42 Life control (uni work makes use of skills)	.350			
Q43 Life control (relate to others at university)		.485	.537	
Q44 Life control (respect at uniersity)	.334	.380	.312	

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.[a]
a. Rotation converged in 7 iterations.

Table B. 2

Forced 10 Factor Rotated Component Matrix[a]

	Component									
	1	2	3	4	5	6	7	8	9	10
Q2 Bodily health (general health)								.584		
Q4 Bodily health (Diet)										.552
Q5 A Bodily health (ability to have children)							-.391			
Q7 Senses (political expression)		.570								
Q8 Senses (political activity)		.597								
Q9 Senses (religious freedom)		.636								
Q10 Practical Reason (good based on own judgement)		.504								
Q11 Affiliation A (respect value and appreciate other people)		.626								

Q12 Emotions (love care and support of family)	.541					
Q13 Species (appreciate nature)	.468					
Q14 Emotions (make friends)	.312	.547				
Q15 Emotions (loss of sleep)			.666			
Q16 Emotions (feeling under strain)			.596			
Q17 Senses (ability to enjoy every day activities)		.564				
Q18 Control over life (useful at work)		.686				
Q19 Practical reason (useful outside work)		.596				
Q20 Play (ability to enjoy recreational activities)		.612				
Q21 Affiliation B (worthless person)		.345	.367		-.325	
Q22 Bodily health (accommodation)		.420		.420		
Q23 bodily health (ability to move)				.521		
Q24 Bodily integrity (safety during day)			.303		.512	
Q25 Bodily integrity (safety at night)					.506	-.473

Q26 Bodily integrity (victim of sexual assault)						.598	
Q27 Bodily integrity (scale of vulnerability to attack or sexual assault)				.877			
Q28 Bodily integrity (victim of domestic violence)			.339		.451	.384	
Q29 Bodily integrity (scale of vulnerability to domestic violence)				.820			
Q30 Bodily integrity (victim of other violence)		.521					
Q31 Bodily integrity (prediction of future assault)		.618					
Q32 Life control (police search)		.368					
Q33 Senses (imagination daily use)	.302		-.435				
Q34 Practical reason (life plan)	.368						
Q35 Affiliation B (annual holiday)	.301						
Q36 Affiliation A (meet friends)							.533
Q37 Affiliation A (imagine situation of others)			-.396				

Q38 Life control (past employment)						-.600
Q39 Life control (future employment)					.536	
Q40a Affiliation B (discrimination outside work race)			.537			
Q40b Affiliation B (discrimination outside work sexual orientation)	.480			-.351		
Q40c Affiliation B (discrimination outside work gender)			.631			
Q40d Affiliation B (discrimination outside work religion)		.375	.411			
Q40e Affiliation B (discrimination outside work age)			.662			
Q41a Affiliation B (discrimination outside work sexual orientation)	.832					
Q41b Affiliation B (discrimination outside work gender)	.769					
Q41c Affiliation B (discrimination outside work religion)	.764					

Q41d Affiliation B (discrimination outside work age)	.692					
Q41e Affiliation B (discrimination outside work race)	.788					
Q42 Life control (uni work makes use of skills)		.334			.339	
Q43 Life control (relate to others at university)			.468	.521		
Q44 Life control (respect at uniersity)		.342	.374			-.340

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.[a]
a. Rotation converged in 18 iterations.

Appendix C

Questions for group interviews

PARTICIPANT CONSENT FORM

Please read the following notes and if you are happy to proceed with participation, sign at the bottom.

Project title: Assessing Graduate Attributes

Researcher: Dominic Mahon

Supervisors: Dr David Murphy

- I have read the Participant Information Sheet and the nature and purpose of the research project has been explained to me. I understand and agree to take part.

- I understand the purpose of the research project and my involvement in it.

- I understand that I may withdraw from the research project at any stage and that this will not affect my status now or in the future.

- I understand that while information gained during the study may be published, I will not be identified and my personal results will remain confidential.

- I understand that I will be audiotaped during the interview.

- I understand that the researcher is an employee of NU.

- I understand that data will be stored securely both digitally and in hard copy.

- I understand that I may be contacted by the researched again to participate in a follow up study.

- I understand that I may contact the researcher or supervisor if I require further information about the research, and that I may contact the Research Ethics Coordinator of the School of Education, University of Nottingham, if I wish to make a complaint relating to my involvement in the research.

Signed …….. (Research participant)

Print name …… **Date** ……

Contact details

Researcher: Dominic Mahon – *dominicmahon@gmail.com*

School of Education Research Ethics Coordinator: educationresearchethics@nottingham.ac.uk

Questions to discuss

11. What do you think is the purpose of a university?

   a. To what extent do you feel that you are part of this university? Have these feelings changed over the course of your study? If so, how?

12. What are the main reasons why you are studying at this university and have these changed since you arrived?

   a. Has your motivation changed over the course of your study? If so, how?

13. In what ways have you developed the most over the course of your degree?

   a. Has the extent to which your awareness of your responsibilities and your attitude towards them changed over the course of your study? If so, how?

   b. Has the extent to which you feel open to new challenges and experiences changed over the course of your study? If so, how?

14. Do you think these are the most important things to develop?

15. What problems do you think students face in obtaining a degree?

   a. Have your levels of stress changed over the course of your study? If so, how?

Appendix D

Survey Questions

Question 1: How satisfied or dissatisfied are you with your life as a whole?

Completely satisfied	*Very satisfied*	*Fairly satisfied*	*Neither satisfied nor dissatisfied*	*Fairly dissatisfied*	*Very dissatisfied*	*Completely dissatisfied*

Question 2: Does your health in any way limit your daily activities compared to most people of your age?

yes *no*

Question 3: Given your family history, dietary habits, lifestyle and health status until what age do you expect to live? [Please enter the maximum age you expect to reach]

Question 4: Do you eat fresh meat, chicken or fish at least twice a week?

yes *no*

Question 4.a: I am vegetarian/vegan

yes *no*

Question 4.b: I cannot afford to

yes *no*

Question 4.c: I do not like eating fresh meat, chicken or fish that often

yes *no*

Question 4.d: I do not have time to prepare fresh food.

yes *no*

Question 4.e: Some other reason

yes *no*

Question 5: Are you able to have children?

Yes *No* *Don't Know* *Prefer not to answer*

Question 5.a: I cannot have children because of my age

yes *no*

Question 5.b: I cannot have children because I have had a vasectomy / hysterectomy

yes *no*

Question 5.c: I cannot have children because of another medical condition

yes *no*

Question 5.d: I cannot have children because my partner is unable / unwilling

yes *no*

Question 5.e: I cannot have children for another reason

yes *no*

Question 5.f: Prefer not to answer

yes *no*

Question 6: Even if you don't need or have never needed any of the following, are you prohibited from using any of the following for any reason (e.g. religious beliefs, family pressure)?

Question 6.a: Contraception (e.g. the pill, condoms, coils etc.)

yes *no*

Question 6.b: Abortion

yes *no*

Question 6.c: Infertility treatment

yes *no*

Question 6.d: I am not prohibited from using any of the above

yes *no*

Question 7: I am free to express my political views

Agree strongly	*Agree moderately*	*Agree a little*	*Neither agree nor disagree*	*Disagree a little*	*Disagree moderately*	*Disagree strongly*

Question 8: I am able to participate in the political activities that affect my life if I want to

Agree strongly	*Agree moderately*	*Agree a little*	*Neither agree nor disagree*	*Disagree a little*	*Disagree moderately*	*Disagree strongly*

Question 9: I am free to practice my religion as I want to

Agree strongly	*Agree moderately*	*Agree a little*	*Neither agree nor disagree*	*Disagree a little*	*Disagree moderately*	*Disagree strongly*

Question 10: My idea of a good life is based on my own judgement

Agree strongly	*Agree moderately*	*Agree a little*	*Neither agree nor disagree*	*Disagree a little*	*Disagree moderately*	*Disagree strongly*

Question 11: I respect, value and appreciate other people

Agree strongly	*Agree moderately*	*Agree a little*	*Neither agree nor disagree*	*Disagree a little*	*Disagree moderately*	*Disagree strongly*

Question 12: At present how easy or difficult do you find it to enjoy the love care and support of your immediate family?

Extremely easy	*Very easy*	*Fairly easy*	*Neither easy nor difficult*	*Fairly difficult*	*Very difficult*	*Extremely difficult*	*Not Applicable*

Question 13: Please indicate to what extent you agree or disagree with the following statement: I appreciate and value plants, animals and the world of nature?

Agree strongly	*Agree moderately*	*Agree a little*	*Neither agree nor disagree*	*Disagree a little*	*Disagree moderately*	*Disagree strongly*

Question 14: How difficult do you find it to make friendships which last with people outside university?

Extremely easy	*Very easy*	*Fairly easy*	*Neither easy nor difficult*	*Fairly difficult*	*Very difficult*	*Extremely difficult*

Question 15: Have you recently lost much sleep over worry?

Not at all	*No more than usual*	*Rather more than usual*	*Much more than usual*

Question 16: Have you recently felt constantly under strain?

Not at all	*No more than usual*	*Rather more than usual*	*Much more than usual*

Question 17: Have you recently been able to enjoy your normal day-to- day activities?

More so than usual	*Same as usual*	*Less so than usual*	*Much less than usual*

Question 18: At university, have you recently felt that you were playing a useful part in things?

More so than usual	*Same as usual*	*Less so than usual*	*Much less than usual*

Question 19: Outside of university, have you recently felt that you were playing a useful part in things?

More so than usual	*Same as usual*	*Less so than usual*	*Much less than usual*

Question 20: Have you recently been enjoying your recreational activities?

More so than usual	*Same as usual*	*Less so than usual*	*Much less than usual*

Question 21: Have you recently been thinking of yourself as a worthless person?

Not at all	*No more than usual*	*Rather more than usual*	*Much more than usual*

Question 22: Is your current accommodation adequate or inadequate for your current needs?

More than adequate	*Adequate*	*Inadequate*	*Very inadequate*

Question 23: Are you prevented from moving home for any reason?

yes	*no*

Question 23.a: What prevents you from moving home?

Lack of money/finances	*The local government would be unlikely to re-house me*	*Family responsibilities and/or schooling*	*I could not move out of my current accommodation because of some other reason*

Question 24: Please indicate how safe you feel walking alone in the area near your home DURING THE DAY time

Completely safe	*Very safe*	*Fairly safe*	*Neither safe nor unsafe*	*Fairly unsafe*	*Very unsafe*	*Not at all safe*

Question 25: Please indicate how safe you feel walking alone in the area near your home AFTER DARK

Completely safe	*Very safe*	*Fairly safe*	*Neither safe nor unsafe*	*Fairly unsafe*	*Very unsafe*	*Not at all safe*

Question 26: Have you ever been a victim of sexual assault?

Yes	*No*	*Prefer not to answer*

Question 27: Please indicate how vulnerable you feel to sexual assault or attack -- using a scale of 1 to 7where 1 means "not at all vulnerable" and 7 means "very vulnerable"?

1 Not at all vulnerable	*2*	*3*	*4*	*5*	*6*	*7 Very Vulnerable*

Question 28: Have you ever been a victim of domestic violence?

Yes	*No*	*Prefer not to answer*

Question 29: Please indicate how vulnerable you feel to domestic violence in the future -- using a scale of 1 to 7 where 1 means "not at all vulnerable" and 7 means "very vulnerable"?

1 Not at all vulnerable	*2*	*3*	*4*	*5*	*6*	*7 Very Vulnerable*

Question 30: Have you ever been the victim of some other form of violent assault or attack -- i.e. an assault other than sexual or domestic?

Yes	*No*	*Prefer not to answer*

Question 31: How likely do you think it is that you will be a victim of violent assault or attack in the future?

Extremely likely	*Very likely*	*Fairly likely*	*Neither likely nor unlikely*	*Fairly unlikely*	*Very unlikely*	*Extremely unlikely*

Question 32: How likely do you think it is that within the next 12 months you will be stopped and searched by the police when it is not warranted?

Extremely likely	*Very likely*	*Fairly likely*	*Neither likely nor unlikely*	*Fairly unlikely*	*Very unlikely*	*Extremely unlikely*

Question 33: How often do you use your imagination and or reasoning in your day to day life?

All the time	*Very often*	*Fairly often*	*Occasionally*	*Rarely*	*Very Rarely*	*Never*

Question 34: Please indicate how strongly you agree or disagree with the following statement; 'I have a clear plan of how I would like my life to be'

Agree strongly	*Agree moderately*	*Agree a little*	*Neither agree nor disagree*	*Disagree a little*	*Disagree moderately*	*Disagree strongly*

Question 35: Do you normally have at least a week's (seven days) annual holiday away from home?

yes *no*

Question 35.a: For which of the following reasons, if any, do you NOT normally take at least one week's holiday? [Please tick all that apply]Lack of money/finances

yes *no*

Question 35.b: Lack of time

yes *no*

Question 35.c: I did not want to

yes *no*

Question 35.d: Some other reason

yes *no*

Question 36: Do you normally meet up with friends or family for a drink or a meal at least once a month?

yes *no*

Question 36.a: In general, why do you not meet friends or family for a drink or meal more often? [Please tick all that apply]Lack of money/finances

yes *no*

Question 36.b: I do not have the time

yes *no*

Question 36.c: I choose not to

yes *no*

Question 36.d: Some other reason

yes *no*

Question 37: Do you tend to find it easy or difficult to imagine the situation of other people? (i.e. 'to put yourself in others' shoes')

Extremely easy	*Very easy*	*Fairly easy*	*Neither easy nor difficult*	*Fairly difficult*	*Very difficult*	*Extremely difficult*

Question 38: Have you ever sought employment?

yes *no*

Question 38.a: When seeking employment in the past, have you ever experienced discrimination because of your...Race

yes *no*

Question 38.b: Sexual orientation

yes *no*

Question 38.c: Gender

yes *no*

Question 38.d: Religion

yes *no*

Question 38.e: Age

yes *no*

Question 39: Are you likely to seek employment in the Future

yes *no*

Question 39.a: When seeking work in the future how likely do you think it is that you will experience discrimination because of your...Race

Extremely likely	*Very likely*	*Fairly likely*	*Neither likely nor unlikely*	*Fairly unlikely*	*Very unlikely*	*Extremely unlikely*

Question 39.b: Sexual orientation

Extremely likely	*Very likely*	*Fairly likely*	*Neither likely nor unlikely*	*Fairly unlikely*	*Very unlikely*	*Extremely unlikely*

Question 39.c: Gender

Extremely likely	*Very likely*	*Fairly likely*	*Neither likely nor unlikely*	*Fairly unlikely*	*Very unlikely*	*Extremely unlikely*

Question 39.d: Religion

Extremely likely	*Very likely*	*Fairly likely*	*Neither likely nor unlikely*	*Fairly unlikely*	*Very unlikely*	*Extremely unlikely*

Question 39.e: Age

Extremely likely	*Very likely*	*Fairly likely*	*Neither likely nor unlikely*	*Fairly unlikely*	*Very unlikely*	*Extremely unlikely*

Question 40: Outside of any employment or work situation, have you ever experienced discrimination because of your...

Question 40.a: Race

yes *no*

Question 40.b: Sexual orientation

yes *no*

Question 40.c: Gender

yes *no*

Question 40.d: Religion

yes *no*

Question 40.e: Age

yes *no*

Question 41: Outside of any work or employment situation, how likely do you think it is that in the future you will be discriminated against because of your...

Question actions

Question 41.a: Sexual orientation

Extremely likely	*Very likely*	*Fairly likely*	*Neither likely nor unlikely*	*Fairly unlikely*	*Very unlikely*	*Extremely unlikely*

Question 41.b: Gender

Extremely likely	*Very likely*	*Fairly likely*	*Neither likely nor unlikely*	*Fairly unlikely*	*Very unlikely*	*Extremely unlikely*

Question 41.c: Religion

Extremely likely	*Very likely*	*Fairly likely*	*Neither likely nor unlikely*	*Fairly unlikely*	*Very unlikely*	*Extremely unlikely*

Question 41.d: Age

Extremely likely	*Very likely*	*Fairly likely*	*Neither likely nor unlikely*	*Fairly unlikely*	*Very unlikely*	*Extremely unlikely*

Question 41.e: Race

Extremely likely	*Very likely*	*Fairly likely*	*Neither likely nor unlikely*	*Fairly unlikely*	*Very unlikely*	*Extremely unlikely*

Question 42: To what extent does your work at university make use of your skills and talents?

All the time	*Very often*	*Fairly often*	*Occasionally*	*Rarely*	*Very Rarely*	*Never*

Question 43: Do you tend to find it easy or difficult to relate to other students at university?

Extremely easy	*Very easy*	*Fairly easy*	*Neither easy nor difficult*	*Fairly difficult*	*Very difficult*	*Extremely difficult*

Question 44: At university are you treated with respect?

All the time	*Very often*	*Fairly often*	*Occasionally*	*Rarely*	*Very Rarely*	*Never*

Question 45: I challenge my ideas about the world regularly.

All the time	*Very often*	*Fairly often*	*Occasionally*	*Rarely*	*Very Rarely*	*Never*

Question 46: I question the ideas of others, even my friends and family.

All the time	*Very often*	*Fairly often*	*Occasionally*	*Rarely*	*Very Rarely*	*Never*

Question 47: When I get new information, my opinions can change, even about important issues.

Agree strongly	*Agree moderately*	*Agree a little*	*Neither agree nor disagree*	*Disagree a little*	*Disagree moderately*	*Disagree strongly*

Question 48: I am able to express myself though activities I undertake in my free time.

Agree strongly	*Agree moderately*	*Agree a little*	*Neither agree nor disagree*	*Disagree a little*	*Disagree moderately*	*Disagree strongly*

Question 49: I feel free to express my ideas, even when I know that those around me might disagree with me.

Agree strongly	*Agree moderately*	*Agree a little*	*Neither agree nor disagree*	*Disagree a little*	*Disagree moderately*	*Disagree strongly*

Question 50: I will continue to learn after I graduate from university.

Agree strongly	*Agree moderately*	*Agree a little*	*Neither agree nor disagree*	*Disagree a little*	*Disagree moderately*	*Disagree strongly*

Question 51: The skills I have acquired from university will be applicable in my working life after I graduate.

Agree strongly	*Agree moderately*	*Agree a little*	*Neither agree nor disagree*	*Disagree a little*	*Disagree moderately*	*Disagree strongly*

Question 52: The skills I have acquired from university will be applicable outside my working life after I graduate.

Agree strongly	*Agree moderately*	*Agree a little*	*Neither agree nor disagree*	*Disagree a little*	*Disagree moderately*	*Disagree strongly*

Question 53: I have the ability to learn well even when not directed by someone else.

All the time	*Very often*	*Fairly often*	*Occasionally*	*Rarely*	*Very Rarely*	*Never*

Question 54: I value learning as an end in itself, not just as a means to an end.

Agree strongly	*Agree moderately*	*Agree a little*	*Neither agree nor disagree*	*Disagree a little*	*Disagree moderately*	*Disagree strongly*

Question 55: I am capable of recognizing the skills I need and acquiring them.

Agree strongly	*Agree moderately*	*Agree a little*	*Neither agree nor disagree*	*Disagree a little*	*Disagree moderately*	*Disagree strongly*

Question 56: To what extent do you agree with the following statement 'I view all people as having equal rights independent of race, gender, religion and sexual identity'.

Agree strongly	*Agree moderately*	*Agree a little*	*Neither agree nor disagree*	*Disagree a little*	*Disagree moderately*	*Disagree strongly*

Question 57: 'I see myself as extraverted, enthusiastic'

Agree strongly	*Agree moderately*	*Agree a little*	*Neither agree nor disagree*	*Disagree a little*	*Disagree moderately*	*Disagree strongly*

Question 58: 'I see myself as critical, quarrelsome'

Agree strongly	*Agree moderately*	*Agree a little*	*Neither agree nor disagree*	*Disagree a little*	*Disagree moderately*	*Disagree strongly*

Question 59: 'I see myself as dependable, self-disciplined'

Agree strongly	*Agree moderately*	*Agree a little*	*Neither agree nor disagree*	*Disagree a little*	*Disagree moderately*	*Disagree strongly*

Question 60: 'I see myself as anxious, easily upset'

Agree strongly	*Agree moderately*	*Agree a little*	*Neither agree nor disagree*	*Disagree a little*	*Disagree moderately*	*Disagree strongly*

Question 61: 'I see myself as open to new experience, complex'

Agree strongly	*Agree moderately*	*Agree a little*	*Neither agree nor disagree*	*Disagree a little*	*Disagree moderately*	*Disagree strongly*

Question 62: 'I see myself as reserved, quiet'

Agree strongly	*Agree moderately*	*Agree a little*	*Neither agree nor disagree*	*Disagree a little*	*Disagree moderately*	*Disagree strongly*

Question 63: 'I see myself as sympathetic, warm'

Agree strongly	*Agree moderately*	*Agree a little*	*Neither agree nor disagree*	*Disagree a little*	*Disagree moderately*	*Disagree strongly*

Question 64: 'I see myself as disorganised, careless'

Agree strongly	*Agree moderately*	*Agree a little*	*Neither agree nor disagree*	*Disagree a little*	*Disagree moderately*	*Disagree strongly*

Question 65: 'I see myself as calm, emotionally stable'

Agree strongly	*Agree moderately*	*Agree a little*	*Neither agree nor disagree*	*Disagree a little*	*Disagree moderately*	*Disagree strongly*

Question 66: 'I see myself as conventional, uncreative'

Agree strongly	*Agree moderately*	*Agree a little*	*Neither agree nor disagree*	*Disagree a little*	*Disagree moderately*	*Disagree strongly*

Questions 67-94: Why do you go to university?

Question 67: Because with only a high-school degree I would not find a high-paying job later on.

1 Does not agree at all	*2*	*3*	*4*	*5*	*6*	*7 Agrees exactly*

Question 68: Because I experience pleasure and satisfaction while learning new things.

1 Does not agree at all	*2*	*3*	*4*	*5*	*6*	*7 Agrees exactly*

Question 69: Because I think that a college education will help me better prepare for the career I have chosen.

1 Does not agree at all	*2*	*3*	*4*	*5*	*6*	*7 Agrees exactly*

Question 70: For the intense feelings I experience when I am communicating my own ideas to others.

1 Does not agree at all	*2*	*3*	*4*	*5*	*6*	*7 Agrees exactly*

Question 71: Honestly, I don't know; I really feel that I am wasting my time in school.

1 Does not agree at all	*2*	*3*	*4*	*5*	*6*	*7 Agrees exactly*

Question 72: For the pleasure I experience while surpassing myself in my studies.

1 Does not agree at all	*2*	*3*	*4*	*5*	*6*	*7 Agrees exactly*

Question 73: To prove to myself that I am capable of completing my college degree.

1 Does not agree at all	*2*	*3*	*4*	*5*	*6*	*7 Agrees exactly*

Question 74: In order to obtain a more prestigious job later on.

1 Does not agree at all	*2*	*3*	*4*	*5*	*6*	*7 Agrees exactly*

Question 75: For the pleasure I experience when I discover new things never seen before.

1 Does not agree at all	*2*	*3*	*4*	*5*	*6*	*7 Agrees exactly*

Question 76: Because eventually it will enable me to enter the job market in a field that I like.

1 Does not agree at all	*2*	*3*	*4*	*5*	*6*	*7 Agrees exactly*

Question 77: For the pleasure that I experience when I read interesting authors.

1 Does not agree at all	*2*	*3*	*4*	*5*	*6*	*7 Agrees exactly*

Question 78: I once had good reasons for going to college; however, now I wonder whether I should continue.

1 Does not agree at all	*2*	*3*	*4*	*5*	*6*	*7 Agrees exactly*

Question 79: For the pleasure that I experience while I am surpassing myself in one of my personal accomplishments.

1 Does not agree at all	*2*	*3*	*4*	*5*	*6*	*7 Agrees exactly*

Question 80: Because of the fact that when I succeed in college I feel important.

1 Does not agree at all	*2*	*3*	*4*	*5*	*6*	*7 Agrees exactly*

Question 81: Because I want to have "the good life" later on.

1 Does not agree at all	*2*	*3*	*4*	*5*	*6*	*7 Agrees exactly*

Question 82: For the pleasure that I experience in broadening my knowledge about subjects which appeal to me.

1 Does not agree at all	*2*	*3*	*4*	*5*	*6*	*7 Agrees exactly*

Question 83: Because this will help me make a better choice regarding my career orientation.

1 Does not agree at all	*2*	*3*	*4*	*5*	*6*	*7 Agrees exactly*

Question 84: For the pleasure that I experience when I feel completely absorbed by what certain authors have written.

1 Does not agree at all	*2*	*3*	*4*	*5*	*6*	*7 Agrees exactly*

Question 85: I can't see why I go to college and frankly, I couldn't care less.

1 Does not agree at all	*2*	*3*	*4*	*5*	*6*	*7 Agrees exactly*

Question 86: For the satisfaction I feel when I am in the process of accomplishing difficult academic activities.

1 Does not agree at all	*2*	*3*	*4*	*5*	*6*	*7 Agrees exactly*

Question 87: To show myself that I am an intelligent person.

1 Does not agree at all	*2*	*3*	*4*	*5*	*6*	*7 Agrees exactly*

Question 88: In order to have a better salary later on.

1 Does not agree at all	*2*	*3*	*4*	*5*	*6*	*7 Agrees exactly*

Question 89: Because my studies allow me to continue to learn about many things that interest me.

1 Does not agree at all	*2*	*3*	*4*	*5*	*6*	*7 Agrees exactly*

Question 90: Because I believe that a few additional years of education will improve my competence as a worker.

1 Does not agree at all	*2*	*3*	*4*	*5*	*6*	*7 Agrees exactly*

Question 91: For the "high" feeling that I experience while reading about various interesting subjects.

1 Does not agree at all	*2*	*3*	*4*	*5*	*6*	*7 Agrees exactly*

Question 92: I don't know; I can't understand what I am doing in school.

1 Does not agree at all	*2*	*3*	*4*	*5*	*6*	*7 Agrees exactly*

Question 93: Because college allows me to experience a personal satisfaction in my quest for excellence in my studies.

1 Does not agree at all	*2*	*3*	*4*	*5*	*6*	*7 Agrees exactly*

Question 94: Because I want to show myself that I can succeed in my studies.

1 Does not agree at all	*2*	*3*	*4*	*5*	*6*	*7 Agrees exactly*

Question 95: Please enter your student ID number

Question 96: What is your gender?

male	*female*	*Prefer not to say*

Question 97: What are you studying?

International relations and Economics	*Maths and Physics*	*Biology and Chemistry*	*Other*

Question 97.a: If you selected Other, please specify:

Question 98: Please enter your date of birth:

Question 99: Which country form this list best describes your nationality?

Afghanistan	*Cambodia*	*Falkland Islands (Malvinas)*	*Jersey*	*Nauru*	*Senegal*	*Turkmenistan*
Aland Islands	*Cameroon*	*Faroe Islands*	*Jordan*	*Nepal*	*Serbia And Montenegro*	*Turks And Caicos Islands*
Albania	*Canada*	*Fiji*	*Kazakhstan*	*Netherlands*	*Seychelles*	*Tuvalu*
Algeria	*Cape Verde*	*Finland*	*Kenya*	*Netherlands Antilles*	*Sierra Leone*	*Uganda*
American Samoa	*Cayman Islands*	*France*	*Kiribati*	*New Caledonia*	*Singapore*	*Ukraine*
Andorra	*Central African Republic*	*French Guiana*	*Korea, Democratic People'S Republic Of*	*New Zealand*	*Slovakia*	*United Arab Emirates*
Angola	*Chad*	*French Polynesia*	*Korea, Republic Of*	*Nicaragua*	*Slovenia*	*United Kingdom*
Anguilla	*Chile*	*French Southern Territories*	*Kuwait*	*Niger*	*Solomon Islands*	*United States*
Antarctica	*China*	*Gabon*	*Kyrgyzstan*	*Nigeria*	*Somalia*	*United States Minor Outlying Islands*
Antigua And Barbuda	*Christmas Island*	*Gambia*	*Lao People'S Democratic Republic*	*Niue*	*South Africa*	*Uruguay*
Argentina	*Cocos (Keeling) Islands*	*Georgia*	*Latvia*	*Norfolk Island*	*South Georgia And The South Sandwich Islands*	*Uzbekistan*
Armenia	*Colombia*	*Germany*	*Lebanon*	*Northern Mariana Islands*	*Spain*	*Vanuatu*
Aruba	*Comoros*	*Ghana*	*Lesotho*	*Norway*	*Sri Lanka*	*Venezuela*
Australia	*Congo*	*Gibraltar*	*Liberia*	*Oman*	*Sudan*	*Viet Nam*
Austria	*Congo, The Democratic Republic Of The*	*Greece*	*Libyan Arab Jamahiriya*	*Pakistan*	*Suriname*	*Virgin Islands, British*
Azerbaijan		*Greenland*		*Palau*	*Svalbard And Jan Mayen*	
Bahamas		*Grenada*	*Liechtenstein*	*Palestinian Territory, Occupied*	*Swaziland*	*Virgin Islands, U.S.*
Bahrain	*Cook Islands*	*Guadeloupe*	*Lithuania*	*Panama*	*Sweden*	*Wallis And Futuna*
Bangladesh	*Costa Rica*	*Guam*	*Luxembourg*	*Papua New Guinea*	*Switzerland*	*Western Sahara*
Barbados	*Cote D'Ivoire*	*Guatemala*	*Macao*	*Paraguay*	*Syrian Arab Republic*	*Yemen*
Belarus	*Croatia*	*Guernsey*	*Macedonia, The Former Yugoslav Republic Of*	*Peru*		*Zambia*
Belgium	*Cuba*	*Guinea*		*Philippines*		*Zimbabwe*
Belize	*Cyprus*	*Guinea-Bissau*		*Pitcairn*		
Benin		*Guyana*		*Poland*		
Bermuda		*Haiti*		*Portugal*		
Bhutan						
Bolivia						
Bosnia And Herzegovina						
Botswana						

Bouvet Island	*Czech Republic*	*Heard Island And Mcdonald Islands*	*Madagascar*	*Puerto Rico*	*Taiwan, Province Of China*
Brazil	*Denmark*	*Holy See (Vatican City State)*	*Malawi*	*Qatar*	*Tajikistan*
British Indian Ocean Territory	*Djibouti*	*Honduras*	*Malaysia*	*Reunion*	*Tanzania, United Republic Of*
Brunei Darussalam	*Dominica*	*Hong Kong*	*Maldives*	*Romania*	*Thailand*
Bulgaria	*Dominican Republic*	*Hungary*	*Mali*	*Russian Federation*	*Timor-Leste*
Burkina Faso	*Ecuador*	*Iceland*	*Malta*	*Rwanda*	*Togo*
Burundi	*Egypt*	*India*	*Marshall Islands*	*Saint Helena*	*Tokelau*
	El Salvador	*Indonesia*	*Martinique*	*Saint Kitts And Nevis*	*Tonga*
	Equatorial Guinea	*Iran, Islamic Republic Of*	*Mauritania*	*Saint Lucia*	*Trinidad And Tobago*
	Eritrea	*Iraq*	*Mauritius*	*Saint Pierre And Miquelon*	*Tunisia*
	Estonia	*Ireland*	*Mayotte*	*Saint Vincent And The Grenadines*	*Turkey*
	Ethiopia	*Isle Of Man*	*Mexico*	*Samoa*	
		Israel	*Micronesia, Federated States Of*	*San Marino*	
		Italy	*Moldova, Republic Of*	*Sao Tome And Principe*	
		Jamaica	*Monaco*	*Saudi Arabia*	
		Japan	*Mongolia*		
			Montserrat		
			Morocco		
			Mozambique		
			Myanmar		
			Namibia		

Question 99.a: If you selected Other, please specify:

Question 100: Please add your email address:

Question 101: And thinking once more about your life, how satisfied or dissatisfied are you with your life as a whole?

Completely satisfied	*Very satisfied*	*Fairly satisfied*	*Neither satisfied nor dissatisfied*	*Fairly dissatisfied*	*Very dissatisfied*	*Completely dissatisfied*