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What really matters? Factors impacting international student satisfaction: the case of the UK

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Abstract: This study explores how international student satisfaction is affected by certain aspects of the learning and living experience, including university reputation, size and proportion of international students, as well as student gender and stage of study. It draws on data from undergraduate international students enrolled in full time, on-site programs at 32 universities located in the UK that administered the International Student Barometer (ISB) in Fall 2017 ($N = 11,652$). Multi-level linear regression revealed that international student satisfaction was predicted by stage of study, the reputation of the university and the proportion of international students enrolled. Comments from the survey are used to better understand these findings. This study gives institutional leaders insight into what factors influence the international student experience, allowing them to better prepare for the challenges confronting international higher education today.

Keywords: international student; student satisfaction; student experience; rankings; league tables; globalisation; education management.

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1 Introduction

The international student experience is a heavily researched topic in higher education, and for good reason: the most recent OECD statistics report 5.6 million internationally mobile students, more than twice the number in 2005 (OECD, 2020). The COVID-19 pandemic has accelerated many of the transitions already taking place in international higher education, perhaps triggering a 'fourth wave' in international student mobility (Choudaha, 2017, 2021). Understanding what shapes the international student experience is imperative to help institutions develop data-driven approaches to navigate through the tumult brought by the COVID-19 pandemic and recover quickly when a 'new normal' emerges.

This study defines international students as 'those who received their prior education in another country and are not residents of their current country of study' (OECD, 2019). Early signs signal major shifts in international student flows in the 2020-21 academic year, largely due to the COVID-19 pandemic. Universities UK (2018) International (UUKi) and IDP Connect on the attitudes and behaviours of international students in the UK revealed 45% of students would consider switching study destinations if it would allow them to start face-to-face learning sooner (IDP Connect, 2020). A report from the European Migration Network on the impact of COVID-19 on EU and OECD member states concludes that the host country and university's response to COVID-19 and support for international students has become a major new pull factor for study abroad

destinations (European Commission, 2020). While evidence suggests that international student mobility has declined on the whole in 2020, there may be a rebound in 2021, as some students who postponed higher education plans during the COVID-19 pandemic take them up again. Research from EY Parthenon predicts this may result in an increase of up 1.85 million new enrolments in foreign countries (Lundy and Duncan, 2020).

This research focuses on the UK to examine the international student experience, in part since the nation hosts the second highest number of international students. Though the UK's Universities and Colleges Admissions Service (UCAS) reported a 9% increase in the number of undergraduate students from outside the UK and the EU accepted in autumn 2020 (UCAS, 2020), rising to a new record total of over 44,000 international students, data on how many of those students actually took up their place has not been released as of January 2021. Furthermore, the Brexit deal, completed in December 2020, officially withdrew the UK from the EU, and students from outside the UK that took up their place after September 2020 will be subject to pay international student fees from 2021 onward. A 2020 survey by Study EU of more than 2500 EU students interested in studying in the UK found that up to 84% will reconsider their choice if their home fee status is lost (Study.EU, 2020). The UK's exit from the EU will undoubtedly be a consideration in international student decision-making, further highlighting the need to understand what factors influence international student satisfaction.

More broadly, the international student experience must be better understood because international students bring significant benefits to the universities and communities where they study. Research from the Higher Education Policy Institute (HEPI) indicates that domestic students gain connections and communication skills through interaction with international students, better equipping them for the global labour market (HEPI, 2015). A study by Luo and Jamieson-Drake (2013) showed that 5, 10 and 20 years after graduation, domestic students who interacted with international students regularly had increased self-confidence, leadership, and quantitative skills than peers who did not. The myriad contributions of international students to both the universities and countries in which they study demonstrate the key role they play in *internationalisation of higher education*, defined as 'the intentional process of integrating an international, intercultural or global dimension into the purpose, functions and delivery of post-secondary education, in order to enhance the quality of education and research for all students and staff, and to make a meaningful contribution to society' (De Wit et al., 2015).

International students not only foster cultural exchange and international competencies in their academic communities, but also bring economic benefits. International students contributed over 300 billion USD to world economies in 2017, according to a study using UNESCO data (Choudaha, 2019). International students sometimes seek to remain in their host country after graduation, comprising much of the international labour migration flows in many countries and making significant contributions to the economy (OECD, 2020). Many countries, including the UK, allow international students to remain in the country for a certain period of time after graduating to seek employment or start a business, potentially bringing valuable skills and economic contributions to the country.

1.1 Factors impacting the international student experience

1.1.1 Reputation

Much research has been conducted to understand how a university's reputation affects student behaviour, particularly in student decision-making (Bowman and Bastedo, 2009; Griffith and Rask, 2007; Palmer et al., 2009). There is evidence that – for better or worse – rankings and league tables influence the reputational assessments of prospective students (Bastedo and Bowman, 2010). Lenton (2015) found that traditional universities in the UK elicited higher scores on the National Student Satisfaction (NSS) survey than modern universities, which they speculate is 'possibly because the graduating body is aware of the reputational element of the university that is attached to their degree'. Qenani et al. (2014) postulated that attendance at a university with a high reputation may confer certain unobservable attributes such as self-confidence, self-efficacy and other skills valued by employers. It follows that a student's satisfaction with their university experience might be influenced by their belief in bright prospects after graduation.

In contrast, some research suggests perceived reputation is a poor predictor of student experience, and that rankings and league tables can be harmful to higher education. Nurunnabi and Abdelhadi (2018) found no statistically significant difference on student satisfaction rating between Russell Group (2019) and Non-Russell Group universities.¹ Pusser and Marginson (2013) suggested the most well-known rankings/league tables propagate dominant norms in global higher education rather than providing a useful tool to comprehensively evaluate institutional quality. Others have critiqued ranking systems for frequently changing their methodologies and call for quality assessments using other metrics (Altbach, 2012; Taylor and Braddock, 2007).

1.1.2 Size and proportion of international students

Research suggests that both quantity and quality of contact with domestic students impact international student satisfaction (Ward and Kennedy, 1993; Ward and Searle, 1991). The benefits of peer interaction are well-documented in literature and include *social benefits* such as improved communication skills inside and outside the classroom and higher intercultural understanding (Wilcox et al., 2005; Westwood and Barker, 1990); more confidence in communication in the second language (Noels et al., 1996). *psychological benefits* including reduced stress (Furnham and Li, 1993), and *learning benefits* including better adaptation to study abroad, fewer academic problems and more in-class peer interactions (Brouwer et al., 2016; Abel, 2002; Searle and Ward, 1990). A lower proportion of international students may mean more opportunities for interactions with domestic students due to increased exposure, resulting in higher satisfaction.

Few studies look specifically at the effect of the proportion of international students on the international student experience. Spencer-Oatey & Dauber (2015) found that as the international student proportion increases, overall satisfaction decreases. Perhaps universities with a high proportion of international students allow fewer opportunities for interactions with host nationals, lowering satisfaction. Class size – an aspect that can be influenced by enrolment numbers – has been shown to negatively impact both satisfaction (Mavondo et al., 2004) and academic achievement (Bandiera et al., 2010; Neves and Hillman, 2017). The influence of size on satisfaction may extend to a university's surroundings, as well: a 2014 report from Study Portals analysing over 16,000 comments made by nearly 7000 students revealed that 'in smaller cities and

universities, or those with well organised activities, students find it easier to connect to others, while in large cities and universities they find it harder’.

1.1.3 Student characteristics

This study considers how stage of study may impact satisfaction, drawing on theories related to sojourner adaptation and adjustment. Some research suggests that sojourner adjustment follows a ‘U-curve’, first conceptualised by Lysgaard in 1955, in which an individual transitions from a ‘honeymoon’ period, in which satisfaction is high, into culture shock, and later enter a recovery and adjustment. Other theories conceptualise a ‘W-curve’ in which the initial culture shock is followed by reverse culture shock upon re-entry into the sojourners’ home country (Gullahorn and Gullahorn, 1963). While the applicability of these curves has been disputed (Ward et al., 2001; Berardo, 2006), examining how a student’s stage of study may affect their experience merits further understanding.

This study also explores whether male and female international students differ in satisfaction. A study on international student satisfaction in Ireland found that female students had higher satisfaction with their studies than male students (Finn and Darmody, 2017), and that female international students were more likely to have meaningful relationships with host nationals than male students (Yang et al., 1994). Previous research has revealed gender differences in satisfaction in many consumer contexts, including education (Bendall-Lyon and Powers, 2002), and that males and females differ in social and interpersonal skills relevant to multicultural settings (Sinangil and Ones, 2003).

Existing research notwithstanding, there is a lack of large-scale quantitative studies examining international student satisfaction; this study seeks to contribute to both theory and practice by delving into this topic. This study explores the following research question:

How do aspects of the student experience, including university reputation, undergraduate enrolment, proportion of international students, and local population,² as well as student gender and stage of study, predict the satisfaction of undergraduate international students?

Hypotheses: Looking at university characteristics, we predict a significant positive relationship between universities’ *reputation* and the satisfaction of their undergraduate international students. We predict a significant negative relationship between *undergraduate enrolment, proportion of international students, and local population* and the satisfaction of undergraduate international students.

Looking at student characteristics, we predict a significant relationship between *stage of study* and satisfaction of undergraduate international students, with first year students reporting significantly higher levels of satisfaction than other and last year students. We predict a significant relationship between *gender* and satisfaction of undergraduate international students, with female students reporting significantly higher levels of satisfaction than male students.

2 Methodology

While there are many ways to evaluate the international student experience, self-reported satisfaction is a useful metric as it considers the varied experiences of international students. Subjective measures are well suited to investigate psychometric variables (i.e., student experience, quality of life, sense of belonging, etc.) that are conceptualised differently by individuals (Elasz and Gaddy, 1998). In this study, student satisfaction is defined as ‘the extent to which students are satisfied with the organisation and management, quality of teaching, personal development, assessment and feedback, learning resources and academic support’ (Alnawas, 2015).

The study uses a quantitative approach to explore the above research questions, drawing on the 2017 International Student Barometer³ (ISB) data set, filtered to contain only institutions based in the UK and only undergraduate, degree-seeking international students studying full-time, on-site, who answered the sections related to this study’s research questions. Of the total student responses received in the UK in 2017 ($N=35,410$), applying these parameters resulted in a subset of 11,652 responses. Individual student responses and university characteristics are contained within each university; therefore, a nested model was used in analyses (Field, 2013). 25 of the universities were located in England, five in Scotland, and one each in Wales and Northern Ireland. Likewise, the bulk of responses came from international students studying in England (82%), followed by Scotland (12%), Wales (5%) and Northern Ireland (1%). Demographic information on the study sample as well as the wider population of international students in the UK is presented in Table 1.

Table 1 Descriptive statistics for study sample and international students enrolled in UK (HESA, 2017–2018)

		<i>Study sample</i>	<i>International students in UK</i>
Age	18–20	57%	62%
	21–24	35%	27%
	Other age	8%	11%
Nationality	Non-EU	54%	63%
	EU	46%	37%
Gender*	Male	42%	44%
	Female	58%	56%
Stage of study	First year	44%	39%
	Other year	56%	61%
Top six fields of study**	Business & administrative studies	18%	26%
	Engineering & technology	10%	12%
	Social studies	10%	10%
	Creative arts & design	5%	9%
	Biological sciences	8%	7%
	Law	5%	6%
	Per cent of total fields	57%	69%

Table 1 Descriptive statistics for study sample and international students enrolled in UK (HESA, 2017–2018) (continued)

	<i>Study sample</i>	<i>International students in UK</i>
China	24%	23%
India	5%	4%
USA	9%	4%
Hong Kong	5%	4%
Malaysia	9%	3%
Top nationalities of non-UK students***	1%	2%
Nigeria	1%	2%
Saudi Arabia	1%	2%
Singapore	4%	2%
Thailand	1%	1%
Canada	3%	1%
Total % of international student enrolments	63%	47%

Notes: * Gender data for the UK reflects both domestic and international undergraduates ** Fields of study data for UK reflects both domestic and international undergraduate students

*** Top nationalities data for international students in UK includes both undergraduate and postgraduate students

In addition to overall satisfaction, the ISB tracks satisfaction levels of international students across specific areas of key importance, including the learning and living experiences. Students are asked to indicate their satisfaction with a particular element of their experience on a 4-point Likert-style scale (1= very dissatisfied, 4= very satisfied).⁴

This study is composed of two parts. The first part explores which aspects of the student experience predict the satisfaction of undergraduate international students. To do this, the study used factor analysis in SPSS to test for a sound construct of ‘university reputation’. The resulting construct was then used in a multilevel model to determine whether there is a relationship between university reputation, size, international mix and local population, as well as student gender and stage of study on satisfaction of international undergraduate students. Summative content analysis of student comments was used to help interpret results (Hsieh and Shannon, 2005).

4 Variables

Seven independent variables were used as reputational indicators in the factor analysis: 2017 Shanghai Jiao Tong University (SJTU) Ranking;⁵ 2017 Complete University Guide Ranking;⁶ 2017 Times Higher Education (THE) Ranking;⁷ Russell Group Membership;⁸ 2017 Teaching Excellence Framework (TEF) Rating;⁹ 2014 Research Excellence Framework (REF) Power Ranking;¹⁰ and the 2016-17 Degree Completion Rate.¹¹

Data used in the study come from various sources. Rankings/league tables used in the study were drawn directly from the league tables and rankings websites. Undergraduate and international student enrolment data came from 2016–2017 HESA data. The population of the town/city in which the university is located was determined using data from the most recent UK Census (Office for National Statistics, 2011). Student gender and stage of study were self-reported by ISB respondents.

Six independent variables and four dependent variables were included in the multilevel regression to determine their influence on international student satisfaction (see Table 2).

Table 2 University and student characteristics included in multilevel model

<i>Variable</i>	<i>N</i>	<i>Mean</i>	<i>SD</i>
Overall Satisfaction (Dependent variable)	12,236	3.19	0.66
Learning Satisfaction (Dependent variable)	11,711	3.12	0.63
Living Satisfaction (Dependent variable)	11,087	3.11	0.66
Undergraduate enrolment ¹² (Independent variable)	12,236	13,820	4,811
Proportion undergraduate international students ¹³ (Independent variable)	12,236	0.19	0.09
City size (in thousands) ¹⁴ (Independent variable)	12,236	817	2,022
Reputation Construct (Independent variable)	11,652	0.00	0.00
Gender (Independent variable)	12,236		
Female	7094	3.23	.64
Male	5142	3.22	.68
Stage of Study (Independent variable)	12,236		
First/Single Year	5,415	3.26	.67
Other Year	4311	3.22	.62
Last Year	2,510	3.17	.69

5 Analysis strategy

To investigate the role that reputational indicators play in international student satisfaction, a construct was created using seven variables that have been evidenced to be proxies of reputation – five rankings/league tables, membership to the Russell Group and the degree completion rate of each university. One factor accounted for 77.44% of the total variance in the data set. None of the other components had Eigen values greater than 1, and all items loaded highly onto the one component (factor loadings: .644–.962). Bartlett Factor Scores were generated to capture overall university reputation and account for this in subsequent models (see Table 3).

Table 3 Factor loadings and communalities based on a principal components analysis for seven variables related to reputation. Varimax with Kaiser Normalisation ($N = 12,097$)

<i>Variable</i>	<i>Reputation indicator</i>
Complete University Guide Ranking (2017)	.941
Shanghai Jiao Tong University (SJTU) (2017)	.910
Times Higher Education Ranking (2017a, 2017b, 2017c)	.938
Russell Group Membership (2019)	.798
Teaching Excellence Framework Rating (2017)	.644
Research Excellence Framework Power Ranking (2014)	.962
Degree Completion Rate (2016–2017)	.923

Note: Factor loadings $< .2$ are suppressed.

A multilevel model was then used to estimate international student satisfaction, measured as a series of student self-rated outcomes indicated on the ISB. Six independent variables were included in the model. Random intercepts were included for both institution and nationality; stage of study was allowed to vary randomly across both institutions and nationality. Degrees of freedom vary across analyses due to missing data and the inclusion of the random slope for study stage. The variable *undergraduate enrolment* was scaled by dividing by 100 ($M = 138.61$, $SD = 48.12$), and the variable *proportion undergraduate international students* was scaled by multiplying by 100 ($M = 19.02$, $SD = 8.86$).

Following quantitative analysis, student comments were explored to interpret results. Comments written into the survey, which contains sections concerning the learning experience (1446 comments), the living experience (1384 comments) and the support offered (979 comments). Specific comments from students are included in the results to further understand quantitative findings.

6 Results

6.1 *Multilevel model of university and student characteristics' effect on satisfaction*

- (1) *Overall satisfaction*: Satisfaction with the overall university experience was predicted by *stage of study* ($F(2, 56) = 8.67$, $p < .001$). Students in their first year were more satisfied ($M = 3.27$, $SE = 0.02$) than students in their last year ($M = 3.19$, $SE = 0.02$), $t(56) = 4.02$, $p < .001$. They were also more satisfied than students in other years ($M = 3.22$, $SE = 0.02$), $t(56) = 2.68$, $p = .01$. See Table 4 for full results. None of the other variables were predictive of overall satisfaction.

Table 4 Summary of multilevel regression model on overall, learning, living, and support satisfaction

Variable	Overall satisfaction (N = 11,652)			Learning satisfaction (N = 11,147)			Living satisfaction (N = 10,545)					
	B	SE	t	p	B	SE	t	p	B	SE	t	p
Reputation	0.03	0.02	1.66	0.10	0.00	0.02	0.07	0.95	0.04	0.01	2.91	0.004
City size	0.00	0.00	-1.62	0.10	0.00	0.00	-1.29	0.20	0.00	0.00	-1.09	0.28
Undergrad enrolment	0.00	0.00	-0.06	0.95	0.00	0.00	-0.00	0.10	0.00	0.00	-0.72	0.47
Proportion international	0.00	0.00	1.41	0.16	0.00	0.00	1.16	0.25	-0.003	0.002	-2.11	0.04
<i>Gender</i>												
Female	0.01	0.01	0.68	0.49	-0.10	0.01	-0.90	0.37	0.01	0.01	1.08	0.28
Male	0.00	-	-	-	0.00	-	-	-	0.00	-	-	-
<i>Study stage</i>												
First/single	0.05	0.02	2.68	0.01	-0.01	0.02	-0.08	0.94	0.02	0.02	0.83	0.41
Last year	-0.03	0.02	-1.67	0.10	-0.10	0.02	-0.53	0.60	0.04	0.02	1.79	0.08
Other year	0.00	-	-	-	0.00	-	-	-	0.00	-	-	-

Summative analysis of comments from the International Student Barometer (ISB) provide a means to interpret the significant findings: first year students constituted 44% of the respondents yet were responsible for only 32% of comments; other year students constituted 35% of respondents and 41% of comments; and last year students constituted 20% of the respondents and 27% of comments. Students in later stages of study supplied a disproportionately high number of comments relative to their representation in the data; this could be due to having more experience to draw on, resulting in a greater propensity to write in comments. Conversely, first year students supplied a disproportionately low number of comments, perhaps due to the fact they only had been at the university for several months and had not yet formed an impression.

- (2) *Learning satisfaction*: For satisfaction with learning, none of the variables were significantly predictive. See Table 4 for full results.
- (3) *Living satisfaction*: Satisfaction with the living experience was predicted by *university reputation* and the *proportion of international undergraduate students*. There is a positive relationship between reputation and satisfaction: as the reputation of the university increases, satisfaction with the living experience increases $F(1, 1E4) = 8.49, p = 0.0036$.

Conversely, there is a negative relationship between the proportion of international students and satisfaction: as the proportion of international students increases, satisfaction with the living experience decreases $F(1, 1E4) = 4.44, p = .035$. For each one-unit increase in the proportion of international students, there is a .00334 decrease in satisfaction with living experience. In other words, a university that is 10% international would, on average, be rated .0334 points higher than a university that is 20% international on the 1–4 Likert scale used in the survey. See Table 4 for full results.

Many comments from the living experience section of the survey related to issues with interaction and integration – areas likely to be affected by the density of international students. One student noted that his university ‘has one of the most diverse campus cultures, but it would be nice to see some sort of integration programs. For example, I see a lot of Chinese and Arab students always huddling together, it would be nice if the university made it possible for them to integrate easier.’ Another student noted she enjoyed the ‘small class sizes in my department, meaning lots of opportunity to ask questions and work with others on course’. Whether interaction and integration partly explain the apparent link between proportion of international students and satisfaction is explored in the discussion below. None of the other variables were predictive of overall satisfaction.

7 Discussion

Results indicate that international student satisfaction is influenced by the student’s stage of study, the reputation of the university and the proportion of international students enrolled. None of the other variables were found to be predictive. Though associations are generally small, suggesting that there are other factors that also play a role in this complex relationship, knowing that these factors influence satisfaction allows decision-makers at universities to better plan for and adapt to changes affecting the international student experience.

Some of the factors, including gender, city size and the number of undergraduates enrolled, did not predict satisfaction. It is nevertheless worth considering further what role gender may play in student satisfaction, since previous research has revealed gender differences in satisfaction with education consumption (Bendall-Lyon and Powers, 2002). In particular, females are more likely than males to consider the strength of their relationship with a service provider when making judgements (Bhagat and Williams, 2008), which might apply to the higher education context. Male and female international students may experience their time abroad differently, as there is evidence that they differ in social and interpersonal skills relevant to multicultural settings (Sinangil and Ones, 2003). While previous research has found evidence that differences exist, gender was not found to predict international student satisfaction in this study.

The three factors that were found to be predictive of international student satisfaction are discussed below:

- *Reputation of university:* International student satisfaction with the living experience is positively correlated with the reputation of the university. An organisational perspective helps explain the positive correlation between university reputation and student experience. For example, it could be that universities with more prestigious reputations have more resources to offer to students – i.e., more faculty and smaller class sizes – which then leads to higher satisfaction. Research indicates that students gravitate toward highly ranked institutions at least in part due to a perceived resource advantage (Brewer et al., 2001; Volkwein and Sweitzer, 2006). Indeed, it could be an abundance of resources that allows that university to enjoy a high reputation in the first place, as many rankings/league tables take this into account in the methodology.
- *Proportion of international students:* Results suggest that in instances where the proportion of international students decreases, satisfaction of international students increases. Universities must consider the factors that may mediate the relationship between proportion of international students and satisfaction, such as friendships with domestic students (Ward and Kennedy, 1993) and sense of belonging, defined as ‘the feeling of being a member of one or more communities at university and feeling support for being present at the university’ (Tinto, 1975), which is a key part of sojourner adjustment (Severiens and Wolff, 2008; Rienties et al., 2012). The COVID-19 pandemic may affect this apparent relationship, as it has given rise to increased online learning options (Tandy 2020), social distancing measures (Scott, 2020; Kim and Maloney, 2020), xenophobia (Brewis et al., 2020; Human Rights Watch, 2020) and stigmatisation (Yellow Horse and Leong, 2020) – all of which may ostensibly lead to decreased in-person interaction with peers.
- *Stage of study:* First year students were found to have higher mean satisfaction with their experience than students in their middle and last years. This could indicate a potential honeymoon effect, in which students’ perceptions of their experience start out positive and become increasingly critical as time passes. Previous research has shown that international students’ attitudes toward domestic students began as positive and became more negative as their time abroad passed (Klineberg and Hull, 1979; Stroebe et al., 1988). Data from the 2017 HEPI survey corroborates this: 29% of first year students – including domestic students – were significantly more likely than average to find their experience better than expected. A 2010 study by Peat,

Dalziel and Grant found that that long-term student satisfaction and performance was higher from students who participated in a first year ‘transition workshop’; universities could consider transition workshops, mentorships or buddy programs for international students to offer support and hopefully bolster satisfaction, throughout their time at university.

Higher education is constantly changing; the COVID-19 pandemic has hastened trends affecting the international student experience in both direct and indirect ways, making an understanding of what predicts student satisfaction even more important. Bean’s (1983) often-cited student attrition model posits that a student’s beliefs are influenced by their experiences at the institution, which become their attitudes about the institution, and, finally, shape their sense of belonging at the institution. There may be an effect on student attrition rates, as students – particularly those already struggling – suffer lower academic performance in online courses (Xu and Jaggars, 2013; Husbands and Day, 2020).

8 Limitations and future research

Despite careful methodological planning, this study is not without limitations. First, the analysis does not include demographic information such as student nationality, age, or area of study. It also, albeit intentionally, only considers undergraduate student satisfaction, and so does not allow insight into other levels of study. It also, intentionally, does not include students in short term, study abroad, part time, or online programs. The rationale for this is that the experiences of students in these categories are diverse and distinctive. Because results are limited to undergraduate, full-time, on campus international students, there remains room for future analysis on other groups of students. For example, might the reputation of a university not have a greater attractive effect for postgraduate students and shape their satisfaction accordingly?

Response bias is prevalent in surveys using self-report. With international students, many of whom do not speak English as a native language, interpretations of questions may vary. Some research has suggested that variation in response styles can be partially attributed to specific cultural traits including individualism and collectivism and power distance (Harzing, 2006; Johnson et al, 2005), as well as gender (Meisenberg and Williams, 2008). Additionally, a students’ propensity to answer the survey, which is optional, would be influenced by their own characteristics, satisfaction, level of engagement with the university, and gender – it is notable that the study sample included 58% female students and 42% male students. Trust in the confidentiality of individual survey responses would also be a source of bias. Students who have either very high or very low satisfaction may be more likely to comment on the survey than students who are neutral.

It is worth noting that satisfaction with the learning experience was not influenced by any of the variables included in the study. This deepens the desire to identify what factors influence satisfaction with the learning experience, if not the ones in this study. Previous research has lent support to the notion that a university’s learning environment plays a key role in facilitating interaction between home and international students and promoting social adjustment (Leask, 2009; Westwood and Barker, 1990). Exploring

which pedagogical practices and learning environments are conducive to a positive learning experience would be a relevant path to explore.

Finally, results suggest that additional variables—which were not included in the study – would be prudent to explore. For example, while the finding that living satisfaction is influenced by the proportion of international students is intriguing, the small effect suggests that other factors which were not considered in this study also contribute to living satisfaction, i.e., type or cost of student accommodation. Knowledge of the backgrounds of students, how they are funding their studies, their decision-making when choosing where to study and what they expect to gain from their experience would lend valuable insight into what shapes their experiences. Reviews of existing literature (Petrie et al., 2019; McInnis, 2001) found that, despite the best intentions of researchers to share and compare data, it does not often happen, which prevents the emergence of a larger picture to drive forward policy and practice. This study offers common data – supplied by the students themselves – to help complete the picture of the international student experience.

9 Conclusion

This study contributes to ongoing research on the international student experience, suggesting that it is a multi-level, multi-layer construct where many variables interact in complex ways, changing over time. While we do not know with certainty what higher education will look like after the COVID-19 pandemic has passed, we can be sure that many aspects of the student experience will be altered, if not altogether transformed. In addition to the profound effect of COVID-19, universities will continue to be impacted by innumerable additional forces unique to each institution – in the case of the UK, for example, Brexit will have far-reaching implications for higher education. This study sets the stage for future research and offers new understanding of the international student experience based on data from the students themselves, helping university leaders ensure a high-quality experience under rapidly changing and unpredictable conditions.

References

- Abel, C.F. (2002) ‘Academic success and the international student: research and recommendations’, *New Directions for Higher Education*, Vol. 117, pp.13–20.
- Alnawas, I. (2015) ‘Student orientation in higher education: development of the construct’, *Higher Education*, Vol. 69, No. 4, pp.625–652. Doi: 10.1007/s10734-014-9794-1.
- Altbach, P. (2012) ‘The globalization of college and university rankings’, *Change: The Magazine of Higher Learning*, Vol. 44, No. 1, pp.26–31.
- Bandiera, O., Larcinese, V. and Rasul, I. (2010) ‘Heterogeneous class size effects: new evidence from a panel of university students’, *The Economic Journal*, Vol. 120, pp.1365–1398. Doi: 10.1111/j.1468-0297.2010.02364.x.
- Bastedo, M.N. and Bowman, N.A. (2010) ‘The U.S. news and world report college rankings: modeling institutional effects on organizational reputation’, *American Journal of Education*, Vol. 116, pp.163–184.
- Bean, J.P. (1983) ‘The application of a model of turnover in work organizations to the student attrition process’, *The Review of Higher Education*, Vol. 6, No. 2, pp.129–148.
- Bendall-Lyon, D. and Powers, T.L. (2002) ‘The impact of gender differences on change in satisfaction over time’, *Journal of Consumer Marketing*, Vol. 19, No. 1, pp.12–23.

- Berardo, K. (2006) *The U-Curve of Adjustment: A Study in the Evolution and Evaluation of a 50-Year Old Model*, MA Thesis, Luton Business School, University of Bedfordshire, UK.
- Bhagat, P.S. and Williams, J.D. (2008) 'Understanding gender differences in professional service relationships', *Journal of Consumer Marketing*, Vol. 25, pp.16–22. Doi: 10.1108/07363760810845372.
- Bowman, N. A. and Bastedo, M.N. (2009) 'Getting on the front page: organizational reputation, status signals, and the impact of U.S. news and world report on student decisions', *Research in Higher Education*, Vol. 50, pp.415–436.
- Brewer, D.J., Gates, S.M. and Goldman, C.A. (2001) *In Pursuit of Prestige: Strategy and Competition in U.S. Higher Education*, Transaction Publishers, Somerset, NJ.
- Brewis, A., Wutich, A. and Mahdavi, P. (2020) 'Stigma, pandemics, and human biology: looking back, looking forward', *American Journal of Human Biology*, Vol. 32, pp.1–6. Doi: 10.1002/ajhb.23480.
- Brouwer, J., Jansen, E., Flache, A. and Hofman, A. (2016) 'The impact of social capital on self-efficacy and study success among first-year university students', *Learning and Individual Differences*, Vol. 52, pp.109–118.
- Choudaha, R. (2017) 'Three waves of international student mobility (1999–2020)', *Studies in Higher Education*, Vol. 42, No. 5, pp.825–832. Doi: 10.1080/03075079.2017.1293872.
- Choudaha, R. (2019) *Beyond 300 Billion: The Global Impact of International Students. Study Portals*. Available online at: <https://studyportals.com/intelligence/global-impact-of-international-students/>
- Choudaha, R. (2021) *The Fourth Wave of international Student Mobility*, University World News. Available online at: <https://www.universityworldnews.com/post.php?story=20210111083621946>
- Complete University Guide (2017) *University League Tables 2017*. Available online at: <https://www.thecompleteuniversityguide.co.uk/league-tables/rankings?y=2017>
- De Wit, H., Hunter, F. and Coelen, R. (2015) 'Internationalisation of higher education in Europe: future directions', in De Wit, H., Hunter, F., Howard, L. and Egron-Polak, E. (Eds): *European Parliament*, Directorate-General for Internal Policies, Brussels, pp.273–288.
- Elasz, T. and Gaddy, G. (1998) 'Measuring subjective outcomes', *Journal of General Internal Medicine*, Vol. 13, No. 11, pp.757–761. Doi: 10.1046/j.1525-1497.1998.00228.x
- European Commission (2020) *Inform # 2 – Impact of COVID-19 On International Students In EU and OECD Member States*, European Migration Network. Available online at: https://ec.europa.eu/home-affairs/sites/homeaffairs/files/00_eu_inform2_students_final_en.pdf
- Field, A. (2013) *Discovering Statistics Using IBM SPSS Statistics*, 4th ed., Sage Publications Ltd.
- Finn, M. and Darmody, M. (2017) 'What predicts international higher education students' satisfaction with their study in Ireland?', *Journal of Further and Higher Education*, Vol. 41, No. 4, pp.545–555. Doi: 10.1080/0309877X.2015.1135887.
- Furnham, A. and Li, Y.H. (1993) 'The psychological adjustment of the Chinese community in Britain: a study of two generations', *The British Journal of Psychiatry*, Vol. 162, pp.109–113.
- Griffith, A. and Rask, K. (2007) 'The influence of the U.S. news and world report collegiate rankings on the matriculation decision of high-ability students: 1995–2004', *Economics of Education Review*, Vol. 26, pp.244–255.
- Gullahorn, J.E. and Gullahorn, J.T. (1963) 'An extension of the u-curve hypothesis', *Journal of Social Issues*, Vol. 19, pp.33–47.
- Harzing, A. (2006) 'Response styles in cross-national survey research: a 26-country study', *International Journal of Cross Cultural Management*, Vol. 6, No. 2, pp.243–265.
- Higher Education Policy Institute (HEPI) (2015) *What do home students think of studying with international students?* London, UK. Available online at: <https://www.hepi.ac.uk/2015/06/25/home-students-think-studying-international-students/>

- Higher Education Statistics Agency (HESA) (2017) *University League Tables 2017*. Available online at: <https://www.thecompleteuniversityguide.co.uk/league-tables/rankings?o=Student-Staff+Ratio&y=2017>
- Higher Education Statistics Agency (HESA) (2018) *HE student enrolments by HE provider 2014/15 to 2017/18*. Available online at: <https://www.hesa.ac.uk/data-and-analysis/students/table-1>
- Hsieh, H-F. and Shannon, S.E. (2005) 'Three approaches to qualitative content analysis', *Qualitative Health Research*, Vol. 15, No. 9, pp.1277–1288.
- Human Rights Watch (2020) *Covid-19 Fueling Anti-Asian Racism and Xenophobia Worldwide*. Available online at: <https://www.hrw.org/news/2020/05/12/covid-19-fueling-anti-asian-racism-and-xenophobia-worldwide> (accessed on 25 November 2020).
- Husbands, C. and Day, N. (2020) *Eight Interventions for Mitigating the Impact of Covid-19 on Higher Education*, HEPI (blog). Available online at: <https://www.hepi.ac.uk/2020/03/30/eight-interventions-against-covid-19-for-the-higher-education-sector/> (accessed on 25 November 2020).
- IDP Connect (2020) *Crossroads III reveals international student choices and motivations are increasingly driven by the availability of face-to-face teaching*. Available online at: <https://www.idp-connect.com/newspage/crossroads3> (accessed on 24 November 2020).
- Johnson, T., Kulesa, P., Cho, Y.I. and Shavitt, S. (2005) 'The relation between culture and response styles: evidence from 19 countries', *Journal of Cross-Cultural Psychology*, Vol. 36, pp.264–277.
- Kim, J. and Maloney, E.J. (2020) *The Low-Density University: 15 Scenarios for Higher Education*, Johns Hopkins University Press, Baltimore. Doi: 10.1353/book.77218.
- Klineberg, O. and Hull, W.F. (1979) *At a Foreign University: An International Study of Adaptation and Coping*, Praeger, New York.
- Leask, B. (2009) 'Using formal and informal curricula to improve interactions between home and international students', *Journal of Studies in International Education*, Vol. 13, No. 2, pp.205–221.
- Lenton, P. (2015) 'Determining student satisfaction: an economic analysis of the national student survey', *Economics of Education Review*, Vol. 47, pp.118–127. Doi: 10.1016/j.econedurev.2015.05.001.
- Lundy, K. and Duncan, B. (2020) *Higher Education: COVID-19 and the Associated Economic Crisis*, EY Parthenon. Available online at: https://www.ey.com/en_us/government-public-sector/higher-education-covid-19-and-the-associated-economic-crisis (accessed on 24 November 2020).
- Luo, J. and Jamieson-Drake, J. (2013) 'Examining the educational benefits of interacting with international students', *Journal of International Students*, Vol. 3, No. 2, pp.85–101.
- Mavondo, F.T., Tsarenko, Y. and Gabbott, M. (2004) 'International and local student satisfaction: resources and capabilities perspective', *Journal of Marketing for Higher Education*, Vol. 14, No. 1, pp.41–60. Doi: 10.1300/J050v14n01_03.
- McInnis, C. (2001) 'Researching the first year experience: where to from here?', *Higher Education Research and Development*, Vol. 20, No. 2, pp.105–114.
- Meisenberg, G. and Williams, A. (2008) 'Are acquiescent and extreme response styles related to low intelligence and education?', *Personality and Individual Differences*, Vol. 44, pp.1539–1550.
- Neves, J. and Hillman, N. (2017) *2017 Student Academic Experience Survey*, New York, NY. Available online at: <http://www.hepi.ac.uk/wp-content/uploads/2017/06/2017-Student-Academic-Experience-Survey-Final-Report.pdf>
- Noels, K.A., Pon, G. and Clement, R. (1996) 'Language, identity and adjustment: the role of linguistic self-confidence in the acculturation process', *Journal of Language and Social Psychology*, Vol. 15, pp.246–264.

- Nurunnabi, M. and Abdelhadi, A. (2018) 'Student satisfaction in the Russell group and non-Russell group universities in UK', *Data in Brief*, Vol. 22, pp.76–82.
- OECD (2019) *Education at a Glance 2019: OECD Indicators*, OECD Publishing, OECD. Doi: 10.1787/f8d7880d-en.
- OECD (2020) *What is the profile of internationally mobile students?*, Education at a Glance 2020: OECD Indicators, OECD Publishing, Paris. Doi: 10.1787/974729f4-en.
- Office for National Statistics (2011) *Census*. Available online at: <https://www.ons.gov.uk/census/2011census/2011censusdata>
- Palmer, M., O'Kane, P. and Owens, M. (2009) 'Betwixt spaces: student accounts of turning point experiences in the first-year transition', *Studies in Higher Education*, Vol. 34, No. 1, pp.37–54. Doi: 10.1080/03075070802601929.
- Peat, M., Dalziel, J. and Grant, A. (2001) 'Enhancing the first year student experience by facilitating the development of peer networks through a one-day workshop', *Higher Education Research and Development*, Vol. 20, No. 2, pp.199–215.
- Petrie J., Van der Zanden, A.C., Denessen, E., Cillessen, A. and Meijer, P. (2019) 'Patterns of success: first-year student success in multiple domains', *Studies in Higher Education*, Vol. 44, No. 11, pp.2081–2095.
- Pusser, B. and Marginson, S. (2013) 'University rankings in critical perspective', *The Journal of Higher Education*, Vol. 84, No. 4, pp.544–568.
- Qenani, E., MacDougall, N. and Sexton, C. (2014) 'An empirical study of self-perceived employability: improving the prospects for student employment success in an uncertain environment', *Active Learning in Higher Education*, Vol. 15, No. 3, pp.199–213.
- Rienties, B., Beausaert, S., Grohnert, T., Niemantsverdriet, S. and Kommers, P. (2012) 'Understanding academic performance of international students: the role of ethnicity, academic and social integration', *Higher Education*, Vol. 63, No. 6, pp.685–700.
- Russell Group (2019) "*Our universities*". Available online at: <https://russellgroup.ac.uk/about/our-universities/>.
- Scott, G. (2020) *Can we plan for a socially distanced campus?* WONKHE (blog). Available online at: <https://wonkhe.com/blogs/can-we-plan-for-a-socially-distanced-campus/> (accessed on 25 November 2020).
- Searle, W. and Ward, C. (1990) 'The prediction of psychological and sociocultural adjustment during cross-cultural transition', *International Journal of Intercultural Relations*, Vol. 14, pp.449–464.
- Severiens, S. and Wolff, R. (2008) 'A comparison of ethnic minority and majority students: social and academic integration, and quality of learning', *Studies in Higher Education*, Vol. 33, pp.253–266.
- Sinangil, H. and Ones, D. (2003) 'Gender differences in expatriate job performance', *Applied Psychology*, Vol. 52, No. 3, pp.461–475.
- Spencer-Oatey, H. and Dauber, D. (2015) *How internationalised is your university? From structural indicators to an agenda for integration*, GlobalPAD working papers. Available online at: https://warwick.ac.uk/fac/soc/al/globalpad/openhouse/interculturalskills/how_internationalised_is_your_university.pdf
- Stroebe, W., Lenkert, A. and Jonas, K. (1988) '*Familiarity May Breed Contempt: the Impact of Student Exchange on National Stereotypes and Attitudes*', in Stroebe, W., Bar-Tal, D. and Hewstone, M. (Eds): *The Social Psychology of Intergroup Relations*, Springer, New York, pp.167–187.
- Study.Eu (2020) *UK universities might lose 84% of EU students at higher fees – Survey*. Available online at: <https://www.study.eu/press/uk-universities-might-lose-84-of-eu-students-at-higher-fees-survey> (accessed on 22 November 2020).
- Tandy, J. (2020) *Let's Lose the Deficit Language about Online Education*, WONKHE (blog). Available online at: <https://wonkhe.com/blogs/lets-lose-the-deficit-language-about-online-education/> (accessed on 25 November 2020).

- Taylor, P. and Braddock, R. (2007) 'International university ranking systems and the idea of university excellence', *Journal of Higher Education Policy and Management*, Vol. 29, No. 3, pp.245–260.
- Times Higher Education (2017) *Shanghai ranking academic ranking of world universities 2017 results announced*. Available online at: <https://www.timeshighereducation.com/student/news/shanghai-ranking-academic-ranking-world-universities-2017-results-announced>
- Times Higher Education (2017) *TEF 2017: times higher education metrics ranking*. Available online at: <https://www.timeshighereducation.com/news/tef-2017-results-times-higher-education-metrics-ranking>
- Times Higher Education (2017) *World university rankings 2016–2017*. Available online at: https://www.timeshighereducation.com/world-university-rankings/2017/world-ranking#!/page/0/length/-1/locations/GB/sort_by/rank/sort_order/asc/cols/stats
- Tinto, V. (1975) 'Dropout from higher education: a theoretical synthesis of recent research', *Review of Educational Research*, Vol. 45, No. 1, pp.89–125.
- UCAS (2020) *More students from the most disadvantaged backgrounds across the UK are set to start degrees this autumn | Undergraduate*. Available online at: <https://wwwucas.com/corporate/news-and-key-documents/news/more-students-most-disadvantaged-backgrounds-across-uk-are-set-start-degrees-autumn> (accessed on 24 November 2020).
- Universities UK (2018) *Patterns and Trends in UK Higher Education*, London, UK. Available online at: <https://www.universitiesuk.ac.uk/facts-and-stats/data-and-analysis/Pages/Patterns-and-trends-in-UK-higher-education-2018.aspx>
- Volkwein, J.F. and Sweitzer, K.V. (2006) 'Institutional prestige and reputation among research universities and liberal arts colleges', *Research in Higher Education*, Vol. 47, pp.129–148.
- Ward, C. and Kennedy, A. (1993) 'Psychological and sociocultural adjustment during cross-cultural transitions: a comparison of secondary school students at home and abroad', *International Journal of Psychology*, Vol. 28, pp.129–147.
- Ward, C. and Searle, W. (1991) 'The impact of value discrepancies and cultural identity on psychological and sociocultural adjustment of sojourners', *International Journal of Intercultural Relations*, Vol. 15, pp.209–225.
- Ward, C., Bochner, S. and Furnham, A. (2001) *The Psychology of Culture Shock*, 2nd ed., Routledge, Philadelphia, PA.
- Westwood, M.J. and Barker, M. (1990) 'Academic achievement and social adaptation among international students: a comparison groups study of the peer-pairing program', *International Journal of Intercultural Relations*, Vol. 14, pp.251–263.
- Wilcox, P., Winn, S. and Fyvie-Gauld, M. (2005) '“It was nothing to do with the university, it was just the people”: the role of social support in the first-year experience of higher education', *Studies in Higher Education*, Vol. 30, No. 6, pp.707–722.
- Xu, D. and Jaggars, S. S. (2013) *Adaptability to Online Learning: Differences Across Types of Students and Academic Subject Areas*. Available online at: <https://cerc.tc.columbia.edu/publications/adaptability-to-online-learning.html>
- Yang, B., Teraoka, M., Eichenfield, G.A. and Audas, M.C. (1994) 'Meaningful relationships between Asian international and U.S. college students: a descriptive study', *The College Student Journal*, Vol. 28, pp.108–115.
- Yellow Horse, A. and Leong, K. (2020) *Xenophobia, anti-Asian racism, and COVID-19*, Praxis, Center [Blog]. Available online at: <http://www.kzoo.edu/praxis/racism-and-covid/> (accessed on 25 November 2020).

Notes

- 1 The Russell Group is a self-selected association of 24 public research universities in the UK, established in 1994 and perceived by some as representing the universities with the best reputations in the country, although this is disputed.
- 2 Local population is defined as city size (in thousands) as reported in the 2011 UK census.
- 3 The ISB is a survey launched in 2005 by the International Graduate Insight Group Ltd. (i-graduate) that encompasses nearly 3 million student responses across all student types, levels and years of study including more than 30 countries and 200 institutions.
- 4 Overall Satisfaction was measured by student's answer to the question: "Overall, how satisfied are you with all aspects of your experience at <University Name>?" Learning Satisfaction was measured by student's answer to the question: "Overall, how satisfied are you with the LEARNING EXPERIENCE at this stage in the year?" Living Satisfaction was measured by student's answer to the question: "Overall, how satisfied are you with the LIVING EXPERIENCE at this stage in the year?" Answer choices to each of these questions were: Very dissatisfied, Dissatisfied, Satisfied, and Very satisfied.
- 5 1= ranked, 2= not ranked
- 6 Continuous
- 7 1=0–300, 2=301–600, 3=601–800, 4=not ranked
- 8 1= Russell Group, 2= not Russell Group.
- 9 1=gold, 2=silver, 3= bronze
- 10 Continuous
- 11 2016-17 HESA data obtained via Complete University Guide
- 12 HESA data 2016–2017
- 13 HESA data 2016–2017
- 14 UK Census 2011