

Student perceptions of quality in higher education: effect of year of study, gender and ethnicity

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Keywords: *quality, perceptions, relationships, feedback, teaching & learning*

Abstract

Student expectations with regard to what comprises quality in higher education can impact upon their learning, engagement and overall satisfaction. Perceptions of quality are not always clearly articulated and may vary by gender, ethnicity and year of study. In this study, undergraduate students completed a questionnaire indicating whether they agreed, disagreed or were unsure about 15 statements related to quality in higher education. A total of 340 students across four year groups participated (Levels 3-6), with more female than male participants and a range of ethnicities represented. There was broad unanimity in the recognition of the importance of both teaching and learning and relationships with academic staff in defining quality. Overall, there were low levels of satisfaction with the amount of contact with academic staff and uncertainty about whether students thought they were getting a high quality education. Some differences in relation to support services were seen in different ethnic groups, and more males than females were satisfied with support services although this varied by year group, and student numbers were small. These results suggest the importance of clearly articulating what is available in terms of support (academic, pastoral, study and health) to all students. The teaching and learning experience, and relationships with academic staff are clearly important and given the uncertainty about

overall perceptions of quality, these aspects need to be highlighted to students so that they understand the value of what they are receiving.

Background

What students perceive as quality in higher education is unclear (Hill et al, 2003), and is likely to depend on student expectations and values (Telford & Masson, 2005). Surveys suggest that they value academic competence (Munasinghe & Rathnasiri, 2011), teaching quality and their relationships with academic staff (Neves & Hillman, 2016). Tuition fees were increased by the Coalition government in 2010 in part to increase access, widen participation and drive up teaching standards (Department for Business, Innovation & Skills, 2010), with students now paying for the bulk of the cost of teaching (The Economist, 2017). However, this increase in tuition fees has not necessarily resulted in an improvement in teaching quality and many institutions may be funding new buildings and spending money on marketing rather than investing in support for teaching (The Economist, 2017). The advent of the Teaching Excellence Framework (TEF; <http://www.hefce.ac.uk/lt/tef/>) marks a new stage in the evolution of higher education in the UK. Whereas research has traditionally been recognised as a marker of quality often at the expense of teaching (Blackmore et al, 2016), the TEF attempts to redress this. It is

part of an overall attempt to make choice in higher education transparent for students and their parents (<http://www.hefce.ac.uk/lt/tef/whatistef/>).

However, the use of rankings is controversial and they are not necessarily good markers of quality (Marope et al, 2013). They may implicitly suggest that students are consumers rather than partners in their own learning (Brennan, 2012); for example, it has been argued that the National Student Survey (NSS) reinforces the view of students as customers (Blackmore et al, 2016). This notion of students is potentially highly damaging since achievement in higher education depends on active learning and engagement (Coates, 2006; Carini et al, 2006; Crisp & Cruz, 2009; Tinto, 2012). Garner (2017) suggests that greater press scrutiny of higher education to assess whether students are getting value for money is likely in the coming years. This means that identifying what students perceive as high quality, and ensuring what the university offers is clearly articulated is important both for students and for higher education institutions. Notions of quality may evolve as students' progress through their years of study, and may vary with factors such as gender and ethnicity. Concerns about lower levels of satisfaction among Black and Minority Ethnic (BAME) students have previously been expressed (Neves & Hillman, 2016). However, the impact of year of study, gender and ethnicity on student perceptions of quality in higher education are not clear and this project aimed to identify what students at Kingston University identified as markers of quality, and if discernible differences occurred based on these factors.

Methods

This project received ethics approval from the Centre for Higher Education Research and Practice (CHERP) Research Ethics Committee of Kingston University. All participants received an information sheet explaining the aim of the research, why they had been chosen and how their data would be stored and used.

Questionnaire

Participating students received a questionnaire with a series of 15 statements about different aspects of quality in higher education. The wording of the questionnaire explicitly related to '*the quality of your experience in higher education*'. Only one question specifically related to satisfaction ('*I am satisfied with the amount of contact that I have with academic staff*').

Participants were required to indicate whether they agreed, disagreed or were unsure about each statement. Students filled in their unique university number, allowing their age, gender, ethnicity, course and year of study to be identified from the university database. Data was coded and entered into an Excel spreadsheet; when demographic information was entered, the university identifier was removed so the dataset was anonymised.

Focus groups

All participants were offered the option of attending focus groups to discuss key themes in more detail. Within the focus groups open discussions were held. Each lasted approximately 90 minutes, with refreshments and two facilitators were present for each focus group. Discussions were recorded using a voice recorder, and notes were taken by facilitators during each session. Main themes discussed were identified using basic thematic analysis.

Distribution of questionnaires

Large modules common to several degree pathways taken by first, second and final year students (Levels 4, 5 and 6 respectively) were identified and targeted in order to reach as many students as possible. Permission to distribute the questionnaires in class was sought from module leaders; a short verbal introduction to the project was given and information sheets distributed by the research team. Students who wished to participate did so, completing the activity in-class.

Foundation degree (Level 3) students were reached at their end of year poster presentation event at the university. A short talk outlining the project was followed by distribution of the information sheets and questionnaires. All questionnaires were

completed and returned within the poster session.

Data analysis

All data were entered into Excel spreadsheets in anonymised format. Responses to the 15 statements were collated into 6 specific themes (namely teaching & learning, support, facilities, relationships, peers and feedback). The numbers of questions in each theme are shown in Table 7 and the questionnaire statements and coding used in Table 8 in the Appendix. Students were also asked to respond to the statement: *'I think I am getting a high quality education at university'* (possible responses were agree, disagree or unsure).

In order to analyse the data, 'yes' responses were scored 1, 'no' answers scored 0 and 'unsure' was coded -1. Within each theme the scores for each individual were calculated and divided by the number of statements related to the theme for that group. For example the theme 'teaching and learning' comprised 5 statements, so the overall teaching and learning score was divided by 5 to make scores comparable between themes.

As the data was non parametric, Kruskal-Wallis tests were carried out to explore differences in themes between different year groups. Posthoc analysis was carried out using Dunn's p-values corrected using the Benjamini-Hochberg FDR method to identify specific differences between groups. Data in tables is expressed both as means \pm standard deviations (SD) for ease of understanding, and as medians \pm interquartile range (IQR) since the statistical tests used these parameters.

The possible effect of gender and ethnicity on responses within levels was explored using chi-square tests. For all statistical tests a confidence level of $p < 0.05$ was considered statistically significant.

Results

All year groups were represented with the largest number of participants from Level 4 ($n=128$ participants, 38% of the total student sample) and the smallest number from Level 5 ($n=38$, 11% of the total student sample). In

each year group approximately two thirds of respondents were female and one third male. Considerable ethnic diversity was apparent in the sample, in line with the rich ethnic diversity of the student body. Within each level a wide age range was seen so that differences in average age between each level were small. This was due to a small number of mature students within each level (Table 1). There were no differences in average age between males and females in any level (data not shown).

Overall student responses by theme:

The highest possible score within each theme was 1.0 and the lowest possible score was -1. Students rated academic relationships most highly, followed by interactions with their peers and teaching and learning. By contrast the lowest rating was given to the support category (Table 2).

In responses to the statement *'I feel that I am getting a high quality education'*, the mean \pm SD was 0.56 ± 0.79 . This relatively low score was driven by a high number of 'unsure' responses (unsure responses scored -1). Of the total responses, 19% were unsure, 6% disagreed and 75% agreed that they were getting a high quality education.

Student responses by year of study:

Kruskal-Wallis tests were performed with posthoc analysis using Dunn's p-values corrected using the Benjamini-Hochberg FDR method to ascertain effects of year of study on responses to individual statements by students. For individual statements where statistically significant differences were seen, data is shown in Table 3, whereas those which were not statistically significant are shown in Table 4.

Several statistically significant differences in response to specific statements between different student year groups were seen. The majority of students across all year groups (87.5%) agreed that the methods used to deliver their modules influenced how well they did in them, while 74% agreed that a variety of teaching methods were used to help them learn. Level 4 students agreed that university classroom and laboratory facilities were a good marker of quality with scores significantly higher than in other year groups.

Level	Total Numbers (% of total sample)	Males Numbers (%)	Females Numbers (%)	Age (y) Mean \pm SD	Ethnicity ¹
3	104 (30.5%)	39 (37.5%)	65 (62.5%)	21.9 \pm 4.6 (all)	27 W (26%); 31 A (30%); 28 B (27%); 14 mixed (13%); 4 other (4%)
4	128 (38.0%)	43 (34.0%)	85 (66.0%)	22.1 \pm 5.0 (all)	31 W (24%); 45 A (35%); 32 B (25%); 12 mixed (9%); 8 other (6%)
5	38 (11.0%)	11 (29.0%)	27 (71.0%)	22.2 \pm 4.1 (all)	16 W (42%); 11 A (29%); 6 B (16%); 2 mixed (5%); 3 other (8%)
6	70 (20.5%)	19 (27.0%)	51 (73.0%)	23 \pm 4.5 (all)	28 W (40%); 25 A (36%); 11 B (16%); 5 mixed (7%); 1 other (1%)
Overall	340 (100%)	112 (33.0%)	228 (66.0%)		105 W; 112 A; 77 B; 33 mixed; 20 ns /other

Table 1 Demographic description of student participants. ¹Ethnicity: W= White; A= Asian; B= Black; ns = not stated.

Themes	T & L	Support	Facilities	Relationships	Feedback	Peers
Means \pm SD	0.69 \pm 0.32	0.11 \pm 0.61	0.68 \pm 0.52	0.78 \pm 0.40	0.55 \pm 0.78	0.76 \pm 0.62
Median \pm IQR	0.80 \pm 0.40	0.33 \pm 1.00	1.00 \pm 0.00	1.00 \pm 0.50	1.00 \pm 1.00	n/a

Table 2 Overall means (\pm SD) and medians (\pm IQR) by themes for all students.

Scores for this statement were lowest in Level 3 students (statement 8, Table 3). By contrast, Level 3 students were more satisfied with feedback than any other year group although this only reached statistical significance compared with Level 4 students (statement 10, Table 3). Overall, 72% of students agreed that the quality of feedback they received helped them to do better.

Student satisfaction with their level of contact with academic staff was generally low across all year groups (statement 11, Table 3), and satisfaction with accessibility of university facilities was significantly lower in final year students compared with all other year groups, although this did not reach statistical significance (statement 3, Table 4). Generally low scores were seen in response to the statement that having support networks available improved student experience; no score was greater than 0.2 and negative

scores (indicating a high level of uncertainty) were seen in Level 3 and Level 5 student responses (statement 5, Table 3). Low scores overall were also seen in response to the statement that students had been made aware of their future career options; scores were highest for Level 3 students and lowest for Level 5 where a negative average score was seen, indicating a high level of uncertainty. Level 3 scores were significantly higher than either Level 4 or Level 5 scores, but no average was greater than 0.38 (statement 12, Table 3).

All year groups agreed that the impact of lecturers on the quality of their university experience was high (statement 1, Table 3); this was highest at Level 3 (100% agreement) and lowest at Level 6 (although still a mean score \pm SD of 0.87 \pm 0.45 in Level 6, indicating a high level of agreement with this statement).

Statement	Result (test statistic, (df), p value)	Mean \pm SD by level	Median \pm IQR by level	Differences between levels
1: The lecturers I have impact upon my learning	H=8.915, (df 3), p=0.03	L3: 1.00 \pm 0.00 L4: 0.92 \pm 0.40 L5: 0.89 \pm 0.39 L6: 0.87 \pm 0.45	All: 1.0 \pm 0.0	L3 vs. L6: p=0.037
5: It has improved my experience having support networks e.g. career guidance, available to me	H=10.2, (df 3), p=0.02	L3: -0.15 \pm 1.42 L4: 0.18 \pm 0.90 L5: -0.24 \pm 0.88 L6: 0.2 \pm 0.84	L3&6: 0.0 \pm 2.0 L4&5: -1.0 \pm 2.0	L4 vs. L6: p=0.017
8: The university classroom and laboratory facilities are good markers of quality	H=13.68, (df 3), p=0.003	L3: 0.47 \pm 0.82 L4: 0.78 \pm 0.64 L5: 0.50 \pm 0.83 L6: 0.55 \pm 0.76	All: 1.0 \pm 1.0	L3 vs. L4: p=0.005 L4 vs. L6: p=0.035 L4 vs. L5: p=0.058 (NS)
10: The feedback I get in class and assignments helps me to do better	H=8.68, (df 3), p=0.034	L3: 0.68 \pm 0.69 L4: 0.42 \pm 0.82 L5: 0.50 \pm 0.86 L6: 0.61 \pm 0.75	L3: 1.0 \pm 0.0 L4&6: 1.0 \pm 1.0 L5: 1.0 \pm 0.75	L3 vs. L4: p=0.026 L3 vs. L5: p=0.051 (NS) L3 vs. L6: p=0.056 (NS) L4 vs. L5: p=0.056 (NS)
11: I am satisfied with the amount of contact I have with academic staff	H=13.97, (df 3), p=0.003	L3: 0.47 \pm 0.80 L4: 0.46 \pm 0.79 L5: 0.58 \pm 0.76 L6: 0.45 \pm 0.81	L3,4&6: 1.0 \pm 1.0 L5: 1.0 \pm 0.75	L3 vs. L4: p=0.004 L3 vs. L5: p=0.02
12: I feel I have been made aware of my future career prospects	H=13.97, (df 3), p=0.003	L3: 0.38 \pm 0.84 L4: 0.02 \pm 0.85 L5: -0.05 \pm 0.87 L6: 0.15 \pm 0.88	L3: 1.0 \pm 1.0 L4,5&6: 0.0 \pm 2.0	L3 vs. L4: p=0.004 L3 vs. L5: p=0.019

Table 3 Effects of year group on responses to student questionnaires; statistically significant responses to individual statements using the Kruskal Waller test; posthoc analysis using Dunn's p value adjusted by Benjamini-Hochberg in all cases. Means calculated by scoring as follows: 1=yes, 0=no, -1=unsure.

Statement	Result (test statistic, (df), p value)	Mean \pm SD by level	Median \pm IQR
2: I feel I do better in modules that my favourite lecturers teach on	H=0.6, (df 3), p=0.89	L3: 0.65 \pm 0.72 L4: 0.62 \pm 0.73 L5: 0.68 \pm 0.62 L6: 0.66 \pm 0.61	All: 1.0 \pm 0.0
3: The accessibility of university facilities e.g. library, makes my learning easier	H=7.86, (df 3), p=0.049	L3: 0.81 \pm 0.58 L4: 0.79 \pm 0.58 L5: 0.84 \pm 0.49 L6: 0.59 \pm 0.77	All: 1.0 \pm 0.0
4: I am aware of what support networks are available at university	H=2.94, (df 3), p=0.40	L3: 0.35 \pm 0.89 L4: 0.19 \pm 0.94 L5: 0.24 \pm 0.91 L6: 0.39 \pm 0.87	L3,4&5: 1.0 \pm 2.0 L6: 1.0 \pm 1.75
6: The methods used to deliver my modules influence how well I do in them	H=7.15, (df 3), p=0.07	L3: 0.74 \pm 0.72 L4: 0.85 \pm 0.52 L5: 0.97 \pm 0.16 L6: 0.70 \pm 0.67	All: 1.0 \pm 0.0
7: The interactions I have with my peers have improved my university experience	H=0.84, (df 3), p=0.84	L3: 0.75 \pm 0.62 L4: 0.75 \pm 0.63 L5: 0.71 \pm 0.69 L6: 0.83 \pm 0.54	L3,4&5: 1.0 \pm 0.0 L6: 1.0 \pm 1.0
9: I think I am getting a high quality education at university	H=8.03, (df 3), p=0.05	L3: 0.69 \pm 0.71 L4: 0.48 \pm 0.84 L5: 0.71 \pm 0.69 L6: 0.52 \pm 0.80	L3&5: 1.0 \pm 0.0 L4&6: 1.0 \pm 1.0
13: A variety of teaching methods are used to help me learn	H=3.71, (df 3), p=0.29	L3: 0.73 \pm 0.64 L4: 0.62 \pm 0.71 L5: 0.50 \pm 0.80 L6: 0.58 \pm 0.76	L3: 1.0 \pm 0.0 L4,5&6: 1.0 \pm 1.0
14: I am challenged by what I am learning	H=2.7, (df 3), p=0.44	L3: 0.76 \pm 0.60 L4: 0.77 \pm 0.65 L5: 0.79 \pm 0.62 L6: 0.62 \pm 0.75	All: 1.0 \pm 0.0
15: My curriculum is relevant to me	H=4.11, (df 3), p=0.25	L3: 0.87 \pm 0.46 L4: 0.77 \pm 0.65 L5: 0.68 \pm 0.70 L6: 0.86 \pm 0.49	All: 1.0 \pm 0.0

Table 4 Effects of year group on responses to student questionnaires; responses to individual statements which were not statistically significant using the Kruskal Waller test; posthoc analysis using Dunn's p value adjusted by Benjamini-Hochberg in all cases. Means calculated by scoring as follows: 1=yes, 0=no, -1=unsure.

Statement	Numbers of yes and no/unsure responses by gender & level			Result (test statistic, df, p)
4: I am aware of what support networks are available at university	Level 5			$\chi^2 = 4.42$, (df 1), p=0.04
	<i>Gender</i>	<i>Yes</i>	<i>No/unsure</i>	
	M	9	2	
	F	12	15	
5: It has improved my experience having support networks e.g. career guidance, available to me	Level 5			$\chi^2 = 4.93$, (df 1), p=0.03
	<i>Gender</i>	<i>Yes</i>	<i>No/unsure</i>	
	M	6	5	
	F	5	22	
11: I am satisfied with the amount of contact I have with academic staff	Level 6			$\chi^2 = 4.63$, (df 1), p=0.03
	<i>Gender</i>	<i>Yes</i>	<i>No/unsure</i>	
	M	8	10	
	F	37	14	
14: I am challenged by what I am learning	Level 4			$\chi^2 = 5.23$, (df 1), p=0.02
	<i>Gender</i>	<i>Yes</i>	<i>No/unsure</i>	
	M	31	12	
	F	75	10	

Table 5 Statistically significant effects of gender on student responses within different year groups. Chi square test used in all cases; no and unsure combined.

Effects of gender

Chi square tests of independence were performed to explore effects of gender on responses to the student questionnaires within each year group. For these tests responses were classed as either yes or no/unsure (combined). Within Level 3 students, no statistically significant effects of gender were seen. Within Levels 4, 5 & 6 statistically significant results were found in response to several statements (Table 5).

Statistically significant gender-specific differences were seen in Level 5 respondents both in their awareness of support networks available to students, and whether these had a positive impact on their experience. Level 5 males were significantly more aware of the support available to them but unsure whether these services improved their experience. By contrast, significantly more Level 5 female respondents answered ‘no’ or ‘unsure’ to both statements (statements 4 and 5, Table 5). At Level 6, females were significantly more satisfied than males with their contact time with academic staff (statement 11, Table 5), and at Level 4 significantly more females than males agreed that they were challenged by

what they were learning (statement 14, Table 5).

Effects of ethnicity

Chi square tests of independence were performed to explore effects of ethnicity on responses to the student questionnaires within each year group. Responses were calculated as either yes or no/unsure. Within Level 5 students, no statistically significant effects of ethnicity were seen. Within Levels 3, 4 & 6 the following statistically significant results were found (Table 6).

With regard to the positive impact of support services on quality (statement 5), scores for Asian and Black students were significantly higher than for White students, who had a high number of ‘no’ and ‘unsure’ responses to this statement. All ethnic groups agreed more than disagreed that classroom and laboratory facilities were a good marker of quality but this reached statistical significance only in Level 6 students (statement 8). Also at Level 6, significantly more Asian and White students agreed that they were receiving a high quality education than Black students (statement 9).

Statement	Numbers of yes and no/unsure responses by ethnicity and level			Result (test statistic, df, p)
5: It has improved my experience having support networks e.g. career guidance, available to me	Level 3			$\chi^2=12.48,$ (df 1), p=0.006
	<i>Ethnicity</i>	Yes	No/unsure	
	White	3	23	
	Black	13	15	
	Asian	17	14	
8: The university classroom and laboratory facilities are good markers of quality	Level 6			$\chi^2 =10.28,$ (df 1); p=0.02
	<i>Ethnicity</i>	Yes	No/unsure	
	White	21	6	
	Black	15	6	
	Asian	21	4	
9: I think I am getting a high quality education at university	Level 6			$\chi^2=10.57,$ (df 1), p=0.02
	<i>Ethnicity</i>	Yes	No/unsure	
	White	23	4	
	Black	5	6	
	Asian	19	6	
12: I feel I have been made aware of my future career prospects	Level 3			Level 3: $\chi^2 =8.4,$ (df 1), p=0.04
	<i>Ethnicity</i>	Yes	No/unsure	
	White	12	15	
	Black	17	11	
	Level 4			Level 4: $\chi^2 =10.3,$ (df 1), p=0.02
	<i>Ethnicity</i>	Yes	No/unsure	
	White	8	23	
	Black	17	15	
	Asian	11	34	
14: I am challenged by what I am learning	Level 6			$\chi^2 10.78$ (df 1), p=0.01
	<i>Ethnicity</i>	Yes	No/unsure	
	White	24	3	
	Black	7	4	
	Asian	21	4	
	Other	2	4	

Table 6 Effects of ethnicity on student responses in each year group. Chi square test used in all cases. No and unsure scores combined. Ethnic classifications: White, Black, Asian (including Chinese) and Other (including mixed).

More Asian than White or Black students at Level 3 felt that they were made aware of their future career prospects; however this was not seen at Level 4, where Asian students, along with other ethnic groups, either disagreed or were unsure (statement 12).

More White and Asian students agreed that they were challenged by what they were learning compared with Black students but

this was statistically significant only at Level 6 (statement 14).

Focus groups - students

Three focus groups were held with undergraduate students, one each with Level 4, 5 and 6 students. The major theme which emerged across all levels was the personal qualities of staff, and the importance of enthusiastic and approachable staff. A

perception of caring staff who *'want you to succeed'* was a major positive factor. The positive impact of support services such as library and I.T. as well as career guidance services was also acknowledged.

Discussion

Overall responses:

Overall high scores were given for the quality of feedback, the variety of teaching and learning methods used and their positive impact on student achievement. Both qualitative and quantitative responses suggested that students recognise the contribution of lecturers and teaching and learning provision to their overall experience, which is in agreement with others (Neves & Hillman, 2016; Munsinghe & Rathnasiri, 2011; Voss et al, 2007). It underscores the importance of ensuring that teaching and learning provision is supported, and that staff have the time and resource to develop and maintain positive working relationships with their students. This includes time to think through and develop a range of activities within and outside of the formal curriculum, to give students the opportunity to develop and demonstrate employability skills and engage in active learning. The approaches to learning that students take may be complex (trying to make sense of and applying material) or shallow (reproducing what they are taught without deeper engagement or processing), and this in turn may be influenced by the types of teaching and learning activities offered to them (Prosser & Trigwell, 1999). How the teaching material is organised and delivered to students can encourage their active engagement (NSSE, 2001), and high levels of learning and engagement are reported by students when collaborative learning methods, academically challenging material and enriching educational activities are used (Umbach & Wawrzynski, 2005). In this study, 87.5% of all students agreed that the methods used to deliver their modules influenced how well they did in them and 74% of students agreed that a variety of teaching methods were used to help them learn. This suggests that in this university students recognise and value the multiple types of learning experiences offered to them. This matters because teaching methods which

encourage complex learning enhances employability (Nicol, 2010; Knight & Yorke, 2003), an expectation of higher education (O'Leary, 2016; Swingler et al, 2016; Blackmore et al, 2016). Students need to understand how important graduate attributes are, acknowledge what skills they are developing through different assignments, activities and tasks, and why it is important that they can demonstrate them (Green et al, 2009).

Almost all (95%) of the students surveyed agreed with the statement that *'the lecturers I have impact upon my learning'*. Students were not asked to specifically define what they meant by good academic relationships, but focus group discussions suggested that student perception that they individually mattered to staff, and that staff wanted them to succeed was crucial. This suggests that commodification of education is not necessarily something that students want, rather to be seen as individuals whose progress and achievement matters to the staff. How staff can achieve good relationships with students is likely to be multicomponent, affected both by the personal qualities of the staff member and the students, but also external factors like timetabling and group size. However our students were explicit that feeling that *'staff want you to succeed'* was a major factor for them.

Competence of academic staff was previously shown to be the most important dimension of quality by undergraduate students (Munasinghe & Rathnasiri, 2011). In our study it was the personal qualities rather than specifically competence of academic staff that was highlighted by students (although this is not to say that competence does not matter). Whilst recognising the importance of academic staff in the provision of quality education is essential, the frequent portrayal of students as customers or consumers of higher education may encourage them to see themselves as passive recipients of education rather than active learners and our data hints that students themselves may not want this. This is important because students and teachers are jointly responsible for the achievement of learning outcomes (Biggs, 2001); both invest in learning and have an interest in the outcomes.

Teaching and learning, maintenance of contact hours with academic staff and investment in learning facilities have previously been shown to be more highly rated than smaller class sizes by students, when given a choice (Neves & Hillman, 2016). Results of our study suggest that satisfaction with contact hours was generally low with the highest mean score of 0.58 seen in Level 5 students, and within focus groups students articulated concern over large class sizes on quality, but in our study they were not asked to choose between the two. We did not clarify what students understood as contact with academic staff. Low scores overall were also given for awareness of future career options and positive impact of support networks upon student experience. What students perceive as high quality in higher education is complex and often unclear (Hill et al, 2003). A multitude of different factors may affect student perceptions of the extent to which their higher education experience is of high quality. The wording of our questionnaire explicitly related to *'the quality of your experience in higher education'* and the only question we asked which specifically related to satisfaction was that about contact hours (*'I am satisfied with the amount of contact that I have with academic staff'*). Student satisfaction surveys typically carried out within modules and throughout the degree, culminate in the NSS. This survey, while not specifically exploring perceptions of quality in higher education, clearly relates to many factors which influence both actual and perceived quality. The final question asks about overall level of satisfaction with the quality of the course. Satisfaction and quality are related; students who think they are receiving a high quality education are likely to be satisfied overall and vice versa. However students who think the overall quality is high may still be dissatisfied with specific elements of the course (and vice versa). We related our questions to the quality of the student experience rather than satisfaction because we were interested in exploring what students think contributes to the provision of a quality education. The sole exception to this was the question about contact hours.

Differences between groups:

There was no difference in satisfaction with contact hours between Level 3, 4 and 6

indicating an overall level of dissatisfaction, rather than one driven by high expectations of new undergraduates struggling to deal with the different learning environment of higher education compared with school. Expectations that students engage in self-directed learning and additional (non-classroom) opportunities for contact with staff (e.g. projects, office hours, Personal Tutor Scheme) need to be clearly articulated to students to reduce their possible perception that contact hours with academic staff only means lecture/ practical times.

Differences relating to support were also seen, and may relate to low levels of awareness in students who at the time of the survey had not needed it. The average score for statement 5 (*'it has improved my experience having support networks e.g. career guidance available to me'*), was significantly higher for Level 6 than for Level 4 students, clearly resonating more strongly with Level 6 students in their final year of study than with first year students. It is to be expected that final year students would recognise the pertinence of services relating to their future careers, but these may be seen as less relevant by first year students. Interestingly, in terms of awareness of future career options (statement 12), scores for foundation students (Level 3) were significantly higher than those for first or second years (see Table 3). Our foundation students study at our sister institution Kingston College, a short distance from the university. Their next step is to enter the university as first year students so this higher score may reflect their relative clarity about what comes next. Low scores at levels 4 and 5 may reflect bewilderment at the many options open to them as they study a variety of subjects and topics, before relative clarity descends in their final year.

No differences in scores for awareness or accessibility of support services between different year groups were seen (Table 3). Support for students is especially important for those students who enter university through non-traditional routes, as many do in this university. A recent ranking system looking at the impact of higher education on graduate earnings five years after graduation suggested that one reason for the high

rankings achieved by some non-Russell group institutions was their provision of literacy and maths remedial sessions for their students (The Economist, 2017).

Some differences by ethnicity were seen in response to specific statements (Table 6). It has been suggested that BAME students may have overall lower satisfaction levels than White students and that Asian students may feel less well supported than other ethnic groups (Neves & Hillman, 2016). This suggests that particularly for institutions with a high proportion of BAME students like ours, it is not only the provision of support but articulating this to students and ensuring accessibility that matters.

Student responses to statement 10 (*‘the feedback I get in class and assignments helps me to do better’*) showed that highest average scores were given by Level 3 and Level 6 students, indicating higher levels of agreement with this statement. Lowest levels of agreement were seen in Level 4 students (Table 3). This may reflect the difficulty that some students face in university, understanding what they need to do to do well, and the differences in feedback that they may receive in higher education compared with school. The first year in higher education is a critical transition stage between secondary and tertiary education when students are most likely to drop out (Tinto, 2012). Involvement and engagement of students both within the learning environment and the wider institution encourages retention (Tinto, 1993). Engagement with learning enhances intrinsic motivation and deeper learning (Carini et al 2006), and good feedback given in a timely manner enhances reflective practice (Hill, 2007). It has been suggested that appropriate and well-structured feedback is the single most important factor in enhancing student achievement (Hattie, 2003; Hattie & Timperley, 2007).

Our study showed that in a large undergraduate cohort, a number of factors were identified as important markers of quality. These included relationships with academic staff, the quality of feedback received and the variety of teaching and learning methods used which were

recognized as positively impacting on student attainment. Students were less sure about whether support offered improved their experience or whether they had been made aware of future career options. Low satisfaction ratings for contact with academic staff were seen; this was the only question specifically relating to student satisfaction, and the low score overall suggests that clarification about what students include as contact with academic staff is needed. Overall relatively low levels of agreement with perceived high quality of what they were receiving were seen, but this was largely driven by student uncertainty about this at the time of the study.

Some differences between groups were seen. Further work is needed to ascertain whether in larger groups similar differences by year of study, ethnicity and gender would be found. Future work is also needed to clarify what students mean by academic relationships, and how staff may demonstrate that student attainment matters to them, since this was clearly articulated by our students as important to them.

Conclusion

Across all levels there was high student recognition of the value of academic staff and teaching and learning and their impact on quality. Both in terms of addressing student expectations and for pedagogic reasons, support for teaching and learning provision and the development and maintenance of good relationships with academic staff is important. Work is needed to address student perceptions of low contact hours with academic staff. Differences within and between year groups, and by gender and ethnicity were seen in relation to the impact of feedback and the provision and accessibility of support services. However more studies are needed to confirm whether these findings are replicated in larger groups. In addition, clarification about what students mean by good academic relationships and contact hours with academics is needed.

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Appendix:

Themes	T & L ¹	Support	Facilities	Relationships	Peers	Feedback
<i>No. of questions</i>	5	3	2	2	1	1

Table 7 Themes and numbers of questions within each theme. ¹T & L = Teaching & Learning

Statement given	Coding
The lecturers I have impact upon my learning	Relationships
I feel I do better in modules that my favourite lecturers teach on	Relationships
The accessibility of university facilities (e.g. library) makes my learning easier	Facilities
I am aware of what support networks are available at university	Support
It has improved my experience having support networks (e.g. career guidance) available to me	Support
The methods used to deliver my modules influence how well I do in them	Teaching & Learning
The interactions I have with my peers have improved my university experience	Peers
The university classroom and laboratory facilities are good markers of quality	Facilities
I think I am getting a high quality education at university	Uncoded
The feedback I get in class and assignments helps me to do better	Feedback
I am satisfied with the amount of contact I have with academic staff	Teaching & learning
I feel I have been made aware of my future career prospects	Support
A variety of teaching methods are used to help me learn	Teaching & learning
I am challenged by what I am learning	Teaching & learning
My curriculum is relevant to me	Teaching & learning

Table 8 Questionnaire statements and coding. Instructions to students were as follows: Do you agree or disagree with the following statements in regards to the quality of your experience in higher education? Please circle ONE response for each statement; either A (agree), D (Disagree) or U (Unsure).