

Reading Student Survey 2008

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Acknowledgements

The fieldwork for this survey was conducted by *Ipsos MORI*, where it was led by Karen Darley (Associate Director) and Zanele Ncube (Project Executive). They brought to this project extensive experience of conducting surveys in the HE sector and were extremely responsive and helpful throughout. They also undertook much of the provisional analysis and prepared the data for the University overview in Part 3, the graphs in Part 7 and in Appendix 1.

Within the University of Reading this survey would not have been possible without the co-operation of many individuals within Directorates, Faculties, Schools and the Students' Union. We thank you all.

Confidentiality

This report represents one view of the strengths and weaknesses in student learning at Reading. It is in many respects a commercially sensitive document, so due caution should be taken in the circulation of this information.

A separate subject-level report with restricted information will be circulated to Schools as a PDF which can be circulated to all staff and students to engender discussion.

CETL in Applied Undergraduate Research Skills
Reading University Students' Union
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Forewords

Professor Rob Robson, Pro-Vice-Chancellor for Teaching and Learning



University life these days is regaled with a plethora of surveys, league tables, reports and initiatives, but there is no getting away from the fact that surveys, opinion, feedback, analysis and reflection are key to making progress. At Reading, as in most universities, we learn about what our students think of our courses, our teaching and our facilities, by looking at information ranging from individual module reports all the way to the UK-wide National Student Survey (NSS) which publishes comparative data on almost all UK HEIs across all subject areas. Reading also participates in the International Student Barometer (ISB) which tells us in great detail what our international students think about their experience at Reading. Therefore, there would appear to be a wealth of information available on which to make judgements about what needs to be done now, and in the longer term, to enhance the overall student experience. Do we need more information?

I ask myself these questions. Are we really confident that we know how today's students learn best? Do we know if they are really being stretched and challenged and stimulated by the programmes we provide? Do we know how a student's learning evolves over their years with us, and are we meeting their expectations? I think that the answer to these and other fundamental questions is probably 'no' and that's why, as part of the University Learning and Teaching Strategy, we identified the need to conduct our own survey that goes deeper than the NSS. As a first step we decided that we

should conduct a pilot survey and I was delighted when John Creighton, Director of the Centre for Excellence in Teaching and Learning in Applied Undergraduate Research Skills (CETL-AURS) took up the challenge of designing, running and analysing a pilot survey, in close collaboration with RUSU, the results of which are contained in this report. As you will discover, the survey is based around the highly influential North American survey (NSSE) and uses some of the analytical tools developed therein to probe the deeper questions on student learning. The fact that the survey has also taken root in Australasia is important because we can start to compare data across quite different higher educational systems and thus we will be able to learn from each other. This sets the survey apart from the more limited horizons of the NSS. This is increasingly important in a world where higher education is global and competitive.

There is a danger of surveying students 'to death', but there was an encouraging response rate to this survey which suggests that they were keen to let us know what they think. Likewise I was keen to find out what the pilot would tell us. The results are indeed revealing, so much so that the obvious question that follows is how should we develop this to assess periodically the student learning experience? Another question is whether other universities in the UK would be interested to join us in further developing this survey tool, possibly in association with the NSSE? One thing is certain: this pilot involved a great deal of thought and hard work and it's unlikely to stop here. I'd like to close this foreword by thanking John and his colleagues for all the work that this study involved.

A handwritten signature in black ink that reads "Rob". The signature is written in a cursive, slightly slanted style.

Vicky Clarke – RUSU Vice President Education



We endeavour at the Students' Union to represent students and to ensure that the student voice is heard. This representation can occur in all matter of forms, whether it is campaigning on issues that are central to the lives of students, raising academic issues at committee meetings, or supporting students in liberation groups. We strive to ensure that the student voice is heard and not ignored.

What does this have to do with the Reading Student Survey? I believe that this survey gives students an additional opportunity to speak up on the issues that matter to them; it allows the university to focus on those issues, and to work towards making the improvements necessary for a better learning experience here at Reading. The range of questions asked, from academic achievement right through to campus environment, shows that the University is dedicated to creating the best possible all-round experience for its students. Too often institutions are concerned about various league tables, which focus purely on the academic results, and little else. Not only is

Reading striving to provide students with the best education possible, but also to provide this education in the best possible surroundings. The academic achievements of students studying at the University of Reading certainly do matter, but it also matters that students have good working relationships with staff, are provided with academic support and a high-quality learning environment.

It is reassuring to see that the University recognises that all aspects of university life are imperative to achieving academic success. I welcome this survey report which addresses the key issues that affect students' experience at university and hope that the University of Reading continues to keep the student voice high on its agenda.

Vicky Clarke

Executive summary

Context

The University's Learning and Teaching Strategy 2007-11 has the following vision:

'As an established and highly successful research-led UK university, we aspire to produce graduates who have developed skills and knowledge of life-long value, have the confidence and enthusiasm to fulfil their personal ambitions and seek to make a difference in the world in which they live.

This vision will be enabled by providing a stimulating and challenging educational experience which is responsive to the needs of students and society at large within a welcoming and supportive learning and teaching community'.

How can we tell if we are challenging our students? How supportive is our learning and teaching community? One of the first action-points to implement the strategy was to survey current students about our provision. This is that survey.

Purpose of this report

The aims of the Reading Student Survey 2008 were: (1) to investigate the change in engagement and challenge as students pass through their studies from Part 1, 2 and their final year at Undergraduate level, to tuition in taught masters programmes; and (2) to investigate the comparative strengths and weaknesses of different academic disciplines, providing an evidence-base for where effective practice is taking place within the University, so that managers can foster the transmission of these ideas and practices from one part of the University to another.

Since this survey instrument has some questions in common with surveys in North America and Australasia, an additional purpose is to benchmark ourselves against these institutions, to examine the strengths of our provision in the Anglophone HE market.

Key points

The survey

This was an online census survey of 9,831 undergraduates and taught postgraduates. There were 2,442 valid responses (25%). The survey took place between 11 April and 11 May 2008, after the NSS had effectively closed. In comparison NSS 2008 is based on 1,588 respondents, and the online response rate was virtually the same until telephone-chasing brought it up above the required 50% threshold.

The survey was divided into a series of core themes (the headings below), for each of which a series of questions came together to form an overall indicator. This figure provides a headline for the strengths or weakness of subjects in these core themes. The responses to individual questions can then be analysed to investigate the detail of the data.

All indicators used in the report are on a 100 point scale, 0 representing least engagement and 100 representing most. Figures are always the median response of the student group unless otherwise stated.

Internationally, Reading out-performs the average performance of Australasian institutions in all categories. The picture when compared to the US and Canada is however more mixed with differing strengths and weaknesses.

Level of Academic Challenge

Challenging intellectual and creative work is central to a quality learning experience. Ideally we encourage high levels of student achievement through promoting the importance of academic endeavour and setting high expectations for student performance.

- Students' perception of their level of challenge rises as they progress through their degree. But should this be the case, or should students always feel they are being challenged and stretched?
- Reading students do not feel challenged as much as their US/Canadian counterparts, especially in Part 1, but they are stretched more than students in Australasia. However, our students do feel that during their learning they are asked to make more judgements about the value of information, arguments or methods than students in North America or Australasia.
- Students in FAH perceive lower levels of integration of ideas from one module to another than in other Faculties. By 'ideas', students when answering the question may be thinking of the applicability of 'specific knowledge' rather than the development of transferable and analytical skills that can benefit other modules.

Active and Collaborative Learning

Students learn more when they are intensely involved in their education and are asked to think about and apply what they are learning in different settings. Collaborating with others in solving problems, or mastering difficult material, prepares students to deal with the messy, unscripted problems they will encounter daily during and after University.

- The comparison with the US 'Very Research-Intensive Universities' data suggests broad comparability at Part 1. There does appear to be less collaborative learning in the final year, especially in terms of informal peer-assistance outside the classroom.
- Collaborative working is a key skill sought by employers. FAH consistently has the lowest scores for team-working and, unlike other Faculties, does not show a growth in levels of Active and Collaborative Learning as students' progress. However FAH is consistently ahead of all other Faculties in terms of its students engaging and interacting in other ways in class (e.g. asking questions and seeing themselves as active participants).

Research-based Learning

- At Faculty and University level, a gradual progression from tutor-focused to student-focused teaching can be identified, and a shift from information content to research-based learning. Nonetheless, this masks significant variation at the subject-level.
- Many subjects show a transitional development from slightly didactic teaching in Part 1 to more research-based teaching to Finalists and Masters students. However some show no shift whatsoever.
- There are some subjects that are consistently research-based (e.g. Social Work). However there are others, particularly within some science disciplines, that appear to be very staff rather than student-focused. Without comparative data from other HEIs it is difficult to tell if this is due to the nature of the discipline, or the particular way the subject is taught here.

Student Interaction with Academics

Interaction with academics is a fundamental aspect in the student identifying themselves with their discipline (becoming a member of a 'community of practice'); much of this is done by observing and interacting with academics. Feedback from assignments is one of the key ways in which this takes place.

- Reading compares very poorly against the US in terms of Student Interaction with Academics. This is likely to be more of a cultural divide between UK and US universities than between Reading and the US. Nonetheless in a global market for students these data are instructive.
- The proportion of students who describe themselves as having worked with an academic on a research project is the same for Finalists (23%) as in the most research-intensive US universities, where National Science Foundation research-funding places far more emphasis on undergraduate involvement in research. Unfortunately there is no benchmark data to compare ourselves against Russell Group or other 1994 group members in this respect.
- Interaction with academics generally rises, but is no greater at Masters Level than for Finalists. To benefit retention and give a significant boost to new students, we may wish to see greater interaction in Part 1.

Social Inclusion and Internationalisation

Experiencing diversity teaches students valuable things about themselves and other people's points of view. Many activities can broaden student interaction with diverse communities or perspectives. Some are within the context of a degree programme, but many may also be from opportunities within the broader student life.

- In comparison to the US, Reading students are significantly less likely to interact with students of other faiths, political opinions, values or ethnicity. This may say more about UK vs. US campus environments than about Reading students in particular. Nonetheless it is also noticeable from the International Student Barometer that overseas students at Reading find it harder to make UK-based friends than at other 1994 Group universities.
- Students' interaction with people of different cultures/age groups/belief groups tends to drop off from Part 1. This may reflect the 'melting pot' of the Halls versus the self-selecting peer group of shared houses.
- Reading material in foreign languages is to be expected in Modern Languages and Classics, but it is notable that it is also takes place in certain others disciplines, such as Archaeology.
- While FESS has probably the most diverse student population (and this reveals itself in students talking to more people with other views and perspectives), FAH appears better at getting students to include other perspectives within coursework.

Engagement with E-Learning

Used appropriately, technology facilitates learning and promotes collaboration between peers and instructors. Students will generally be using IT both socially and within the context of degree programmes. Mapping congruence and disparity between personal and degree experience will be worth capturing.

- Blackboard receives a positive response from the vast majority of students, nonetheless this response tails off as students advance. This may be related to students finding Blackboard primarily being used as a repository of information rather than as an interactive medium less satisfying as they develop and become more research-focused.
- Law was one of the pilot Schools to have a student logon-portal created, placing on the front-page a link to their subject-gateway and the library. Unsurprisingly, their students had the highest reported rate of using subject-gateways rather than Google when searching for information. Other Schools should consider this when developing their own portals.

- Across all subjects there is only a very slight rise seen in academic IT literacy as students progress through their degree in terms of ‘the usage of subject-gateways’ and ‘focused online working when preparing assignments’.

Supportive Campus Environment

Students perform better and are more satisfied at Universities that are committed to their success, and that cultivate positive working and social relations among different groups on campus.

- Reading is significantly better than US colleges in providing the support and environment for students to thrive socially; and also better at supporting them with their non-academic responsibilities.
- Students were asked about the quality of their relationships with certain individuals/ organisations, with an opt-out to say ‘there was no relationship’. 20% of students chose to exercise this option in respect of RUSU, and 31% in respect of their Student Academic Representatives (StARs).
- Overall students feel more supported when they arrive than after several years at the University. Some students who spend little time on campus feel less supported than others (e.g. Social Work).

Career Planning and Employability

Students entering graduate-level jobs is the key rationale behind government investment in Higher Education. Developing students’ confidence and preparedness for this, whatever their first degree, is one of our principal obligations. It can also focus the mind of students on the purpose of their own education.

- There is a consistent correlation between the results from first destination data and these results. Broadly speaking FESS performs strongest and FAH the weakest.
- 47% of students say they have *never* had a discussion about career planning with their personal tutor, and 72% say they have *never* had such a discussion with a Careers advisor. Even amongst Finalists the figures are worryingly high; 39% say they have *never* had a discussion about career planning with their personal tutor and 65% say they have *never* had such a discussion with a Careers advisor.

Action required

Various sections of this document will be reported to the relevant University Committees; however, the key place for action is at the subject level by Boards of Studies.

The intention of the report is to facilitate the identification and spread of good practice around the University. While some headlines can be pulled out at an institutional level, it is at the subject-level where the detailed knowledge of provision will exist, and where the data will best be interpreted, drawing on the expertise of both staff and students.

Resources are available to manage change through the Teaching and Learning Development Fund (TLDF), the Centre for Excellence in Teaching and Learning in Applied Undergraduate Research Skills (CETL-AURS), the Centre for Career Management Skills (CCMS), and specific training needs can be discussed with the Centre for Staff Training and Development (CSTD).

1. Background to the survey

The National Student Survey (NSS)¹ is now a well established part of the UK Higher Education scene, administered for government by HEFCE. It is a simple ‘satisfaction’ survey deriving from the work on course questionnaires done in the 1990s by Paul Ramsden in Australia. Since then he has gone on to become chief executive of the Higher Education Academy (HEA). As we all know, the survey is now much used to compile League Tables and inform student choice when applying to Universities.

The aims of the NSS were first to give students ‘an opportunity to make their opinions on their higher education... experience count at a national level’, something widely supported by the National Union of Students; and secondly to enable ‘the participating institutions to identify and improve in areas where they may have let their students down’. It is in this second area that the survey has received less-than-universal applause. Daniel Vockins, the President of the Students Union at the University of Sussex stated: *‘The questions that form the basis of the survey do nothing to help us understand what is happening in our Universities and, worse still, create hollow competition between them on the basis of meaningless data.’* Indeed whilst extra questions can now be added to the survey, it is still very difficult to work out exactly how to improve on satisfaction data. Indeed is satisfaction an appropriate way of measuring the quality of a learning experience? Lee Harvey, former director of research at the HEA, left the organisation over precisely this issue. Some have blamed grade inflation on the focus on satisfaction.

The NSS is here to stay for the medium term, however Paul Ramsden’s work was by no means the only model examined when the national survey was commissioned. Discussions also took place with a team over in the US in Indiana. There a very different survey instrument had been developed in the late 1990s, now called the National Survey of Student Engagement (NSSE, pronounced ‘nessie’)². This instrument is not mandatory for any US college, and yet to date over 1200 have used it in the US and across in Canada. In 2007 a new version of it was created for Australasia under a licensing agreement with NSSE (not surprisingly known by the name AUSSE³). The reason for this popularity with Universities is simple enough – they actually find it useful. The following quotation from the front of NSSE’s annual report for 2007 will convey the general idea: *‘NSSE is an institution’s most trustworthy lens for seeing deeply into the quality of students’ experiences. Its results translate directly into plans for action and strategies of reform and transformation.’*⁴

NSSE focuses not on student satisfaction, imagining them as customers, but on mapping student activities and engagement. It measures the extent to which students participate in educational practices that research has shown have a high correlation with high levels of learning and development. The survey instrument was explicitly based on educational research that had taken place up to that point. In designing their indices of ‘engagement’ the authors, led by George Kuh, wanted to be sure that they were capturing data on practices that really mattered. Since then further cognitive science research has confirmed the importance of the kinds of practices which NSSE measures. Their annual reports show how the survey has developed and maintained a strong linkage with educational research and also how institutions have used the data to improve their own performance.

Alas the NSSE model was not adopted for a UK-wide survey, where the student as a customer-to-be-satisfied approach was taken instead. Nonetheless, at conferences on research into Higher Education, many wistfully ponder what such a survey would have shown at their own institution. But as far as we are aware, to date none has taken the plunge and used the instrument.

What we have done in conducting the Reading Student Survey 2008, is to adapt NSSE to the UK HE context, changing the language, removing some questions, adding others, but remaining basically true to the original inspiration. While NSSE is used in the US to survey first years and Seniors, we have taken the opportunity to survey all taught students with the aim of mapping change throughout a student’s whole development here. NSSE

takes place on a scale which means that colleges can be compared against each other, and with around 2,000,000 student responses each year all the results have a very high level of statistical significance. Our solitary survey has only around 2,000 respondents, so it is in a different ball game. However, a few of the US questions have been retained in an unchanged format, so that direct comparisons can be made between the student experience here and the student experience in colleges in North America as a whole, and the research-intensive colleges in particular.

This survey is in many ways an experiment, but one that will not just be of interest to University of Reading staff, but also to those wishing to influence policy elsewhere. Nonetheless, the key measure of its success will be in how useful academic staff find it in examining their own practice, and obtaining a clear indication of their own strengths and/or weaknesses.

This is the full report, which may take some time to digest, but it is only a starting point. While some headlines can be pulled out at an institutional level, it is at the subject-level where the detailed knowledge of provision will exist, and where the data will best be interpreted.

Aims and objectives

The University's Learning and Teaching Strategy⁵ envisaged a student survey to map current practice around the institution. It tasked CETL-AURS to deliver this, in conjunction with the Students' Union (RUSU).

The aims of the survey are:

- to investigate the change in student engagement with their degrees as they pass through their studies from Part 1, Part 2 and their final year at Undergraduate level, to tuition in taught Masters programmes; and
- to investigate the comparative strengths and weaknesses of different academic disciplines, providing an evidence-base for where effective practice is taking place within the University, so that managers can foster transmission of these ideas and practices from one part of the University to another.

The objective is to provide information on student engagement and experience to several key audiences to help in assessing and improving the quality of provision at this University.

University Management: Apart from the NSS satisfaction data and overall student performance, the University had no common instrument with which to measure teaching quality. While Periodic Reviews take place in each subject-area providing a qualitative judgement on provision, direct comparisons between subject X and Y do not take place. Hence it is not always easy for the University to be sure where 'effective practice' happens in any other way than from anecdotal evidence. This survey attempts to provide that evidence-base. It is also designed to provide base-line data for the University's Learning and Teaching Strategy 2007-11.

Schools, Departments and Boards of Studies: Academics in individual Departments and Schools need to keep their taught programmes competitive and relevant. Providing data to Boards of Studies can help them judge the success of their provision, assessing the strengths and weaknesses of their degree programmes. Where there are weaknesses, it can also indicate in which cognate disciplines effective practice that can be emulated exists.

Reading University Students' Union (RUSU): RUSU is dedicated to ensuring that students leave the University of Reading with a lot more than just a degree. It sees getting students involved with volunteering, media, sports and societies as one of the key ways of obtaining most out of their learning experience, developing transferable skills along the way. They are also strongly engaged in fostering an inclusive environment amongst the diverse student body. Data from the survey relating to the benchmarks on social inclusion

and the creation of a supportive campus environment will provide an evidence-base to monitor this and alert them to potential issues.

CETL in Applied Undergraduate Research Skills (CETL-AURS): CETL-AURS' mission is to work to enhance research-based learning across the University. It is tasked with the first action point in the University's Learning and Teaching Strategy 'to identify and disseminate good practice linking teaching and research'. At present engagement across the University with CETL-AURS is uneven, and methods of identifying 'good practice' rely upon anecdotal evidence. A one-time survey to examine the development of students cognitive and research skills, enabling CETL to work out where to prioritise investment in its final two years, will be very helpful.

2. Survey population and respondents

To reassure students that their response would be anonymous and to encourage open and honest feedback, the fieldwork and preliminary analysis was contracted out to a market research company. The tender was awarded to a team from *Ipsos MORI* who have extensive experience of managing surveys in Higher Education, and currently operate the National Student Survey. The University of Reading does not have access to identifiable individual responses.

The sample

Invitations to take part in the survey were sent to 9,831 undergraduate and taught postgraduate students at the University of Reading. This was a census survey, so for all the programmes we were examining all full-time students received an invitation to participate. However, we excluded from our survey distance-learning programmes, students on short courses, and many (but not all) part-time students. We also tried not to include students who were on a year-abroad or a year-in-industry, though because of the way data is coded on RISIS some got accidentally included in our sample. We particularly wanted to focus our study on students directly under our tuition here on campus, who have spent a whole year of study here. Were this survey to run again, we suggest considering opportunities for broadening the range of students included.

The response rate

Of the 9,831 students invited to complete the survey, 2,543 responses were received of which 2,442 were eligible. 101 were duplicates or ineligible responses (people who were not invited to take part in the survey going to the website and completing it nonetheless, or people doing it twice under the impression this might increase their chances of winning one of the 71 cash prizes).

The fieldwork took place between 11 April and 11 May 2008. Students were contacted using their university email and provided with a personalised link to the *Ipsos MORI* survey page. Non-respondents were emailed again with up to three follow-up communications on a weekly cycle. Students could also access the survey via a University of Reading web page if they had deleted their email (exhibit 1). Of the invitation emails only 30 bounced back indicating some problem with them, which *Ipsos MORI* interpreted as showing our student records were of a high quality (bounce-backs being much higher on surveys elsewhere). 15 of the 9,831 students had 'out of office' turned on.

To increase general awareness of the survey, posters were displayed and postcards placed in coffee-outlets on campus and in Halls. The survey was also advertised on facebook, with it appearing 290,525 times on students' pages. There were 84 clicks on the advert taking individuals to the survey web-page (total cost \$86). School Directors of Teaching and Learning (DTLs) were made aware of progress in their areas, particularly if response rates were low (this was monitored in real time).

On average students took 14 minutes to complete the survey. Very few who started it did not complete it in one go.

The overall response rate was 25%, quite respectable for an online survey. The NSS 2008 online response rate at the University of Reading was 26% before telephone-chasing of finalists began. However the national online figure for the NSS is 38%, suggesting our students are a little more resistant to participating.

There was a survey helpline which received 24 queries, such as: 'I have already taken part over the phone' (confusing this survey with the NSS), and 'as I'm a part-time student I won't be taking part in the survey'. Nine students requested not to take part in the survey.

Exhibit 1: Response rate and mode of response

	Sample	Responses	Resp. Rate
In response to email invitation	9,831	2,084	21%
Through survey webpage (reading.ac.uk/speakout)	9,831	358	4%
University Overall	9,831	2,442	25%

Exhibit 2: Response rate by degree stage

	Sample	Responses	Resp. Rate
Foundation	196	53	27%
Part 1 Undergraduate	2,855	819	29%
Part 2 Undergraduate	2,988	711	24%
Year Abroad / Industrial Placement	156	33	21%
Final Year Undergraduate	2,520	540	21%
Masters-level work	1,116	286	26%
University Overall	9,831	2,442	25%

Exhibit 3: Response rate by Faculty

		Sample	Responses	Resp. Rate
FAH	Faculty of Arts and Humanities	2,438	599	25%
FESS	Faculty of Economic and Social Sciences	2,929	579	20%
FLS	Faculty of Life Sciences	2,225	661	30%
FS	Faculty of Science	2,239	603	27%
	University Overall	9,831	2,442	25%

Exhibit 4: Response rate by subject grouping

	Faculty	Sample	Responses	Resp. Rate
Unit 01: Art	FAH	218	46	21%
Unit 02: Film & Theatre	FAH	157	30	19%
Unit 03: Theatre Arts & Deaf Studies	FESS	61	10	16%
Unit 04: Typography	FAH	82	19	23%
Unit 05: English & American Literature	FAH	551	165	30%
Unit 06: Classics	FAH	296	77	26%
Unit 07: History of Art	FAH	103	17	17%
Unit 08: History	FAH	433	96	22%
Unit 09: Philosophy	FAH	220	45	20%
Unit 10: European Studies	FAH	39	8	21%
Unit 11: French	FAH	132	29	22%
Unit 12: German	FAH	27	7	26%
Unit 13: Italian	FAH	40	7	18%
Unit 14: Linguistics	FAH	140	53	38%
Unit 15: Economics	FESS	602	109	18%
Unit 16: Accounting and Management	FESS	365	87	24%
Unit 17: Real Estate & Planning	FESS	426	78	18%
Unit 18: Social Work	FESS	189	39	21%
Unit 19: Children's Development & Learning	FESS	41	16	39%
Unit 20: Education	FESS	232	47	20%
Unit 21: Law	FESS	544	97	18%
Unit 22: Politics	FESS	299	56	19%
Unit 23: Sociology	FESS	32	7	22%
Unit 24: Agriculture, Policy & Development	FLS	364	84	23%
Unit 25: Botany & Zoology	FLS	152	47	31%
Unit 26: Biological Sciences & Microbiology	FLS	212	47	22%
Unit 27: Horticulture	FLS	42	9	21%
Unit 28: Chemistry	FLS	194	60	31%
Unit 29: Food Science	FLS	263	87	33%
Unit 30: Pharmacy	FLS	238	56	24%
Unit 31: Psychology	FLS	499	173	35%
Unit 32: Speech and Language Therapy	FLS	147	55	37%
Unit 33: Construction Management	FS	377	84	22%
Unit 34: Archaeology	FS	216	57	26%
Unit 35: Environmental Science	FS	79	24	30%
Unit 36: Geography	FS	365	141	39%
Unit 37: Mathematics	FS	241	45	19%
Unit 38: Meteorology	FS	97	27	28%
Unit 39: Physics	FS	75	18	24%
Unit 40: Statistics	FLS	114	43	38%
Unit 41: Computer Science	FS	216	63	29%
Unit 42: Computer Science & Cybernetics	FS	112	22	20%
Unit 43: Cybernetics	FS	132	32	24%
Unit 44: Electronic Engineering	FS	108	17	16%
Unit 45: Informatics & Information technology	FS	134	47	35%
Unit 46: Natural Science Programme	FS	29	6	21%
Unit 47: Science Foundation Programme	FS	58	20	34%
Unit 48: International Foundation Programme	FESS	138	33	24%
University Overall		9,831	2,442	25%

Categorising students by the stage of their degree

We wished to contrast students' experiences of learning at different levels: 'Foundation programmes', 'Part 1', 'Part 2', 'Part 3' and 'Masters'. These categories might seem simple enough, but this is actually a far trickier issue than it at first appears. The challenge was that, while there is a set nomenclature for the level of individual modules based on the national qualifications framework⁶, the same does not exist for stages within a degree programme. Consequently there was no simple field by which to categorise our students.

The variation in our degree-stage nomenclature can be seen in exhibit 5. The terms 'Part 2' and 'Part 3' are not applied consistently, with a year that includes a mixture of Intermediate (I) and Honours (H) level modules being variously called '3a' or '2I'. A fourth year after a year abroad or in industry might be called either 'Part 3' or 'Part 4', but both contain just 'H' level modules.

Exhibit 5: Variation in degree structure and nomenclature at Reading

Term	BA English	MChem Chemistry	BA(Ed) Educational Studies with Art	BA Art	BSc Food Marketing & Business Economics with Industrial Training	BSc Biological Sciences with Industrial Placement	BSc Speech and Language Therapy
1	Part 1	Part 1	Part 1	Part 1	Part 1	Part 1	Part 1
2	C level	C level	C level	C level	C level	C level	C level
3							
4	Part 2	Part 2	Part 2	Part 2	Part 2	Part 2	Part 2
5	I Level	I Level	I Level	I Level	I Level	I Level	I Level
6							
7	Part 3	Part 3		Part 2I	Placement	Part 3	Part 3a
8	H Level	H Level		I & H Level	I Level	Placement	I & H Level
9			Part 3			I Level	
10		Part 4		Part 3	Party 3	Part 4	Part 3b
11		M Level		H Level	H Level	H Level	H Level
12							

Note: C = Certificate, I = Intermediate, H = Honours, M = Masters

We wished to classify students by the types of modules they were predominantly studying, for which we have used the descriptors of 'Foundation', 'Part 1', 'Part 2', 'Finalists', and 'Masters'. To establish which category each student belonged to was therefore a manual exercise, starting with the 'block' field on RISIS which records how many years a student has been at Reading (or at least did until the Foundation Year was inserted as 'block 0').

Exhibit 6: Initial categorisation of the sample by 'block' and the final classification

Block on RISIS		Our category	
0	196	Foundation	196
1	3,851	Part 1	2,855
2	2,919	Part 2	2,988
3	2,571	Finalists	2,520
4	294	Masters	1,116

Many Masters students are on RISIS as 'Block 1' if they are new to Reading, but are on as 'Block 4' if they have stayed on after completing undergraduate studies here. Some of those on RISIS as 'Block 4' might also be four-year undergraduate degrees rather than Masters-level programmes. In conclusion, the 'Block' coding on RISIS can only be used as a starting point to categorise students into meaningful groups for analysis, and subsequent checking of all people enrolled on four-year programmes, Masters and MChem/MPharm degrees needs to take place.

Bias in the data from differential response rates

While the overall response rate was fairly uniform at 25% across the University, there was a significant difference in the male/female response rate. Significantly more females responded than males (exhibit 7) and this imbalance was a university-wide phenomenon. This does tend to happen, but the scale of the difference at Reading was unusually high. It may be that there was a differential response by gender to people responding to their emails or responding to advertising on Facebook and elsewhere. Unfortunately we do not have the data to analyse this. This would not be an issue if males and females responded to the same kind of questions in similar ways, but there is some evidence from NSSE that this is not so, which meant that we needed to consider weighting the responses to reflect the original population.

Exhibit 7: Response rate by gender

Year of Study	Sample		Responses		Resp. Rate	
	Male	Female	Male	Female	Male	Female
Foundation	117	79	25	28	21%	35%
Part 1 Undergraduate	1,327	1,528	310	509	23%	33%
Part 2 Undergraduate	1,323	1,665	246	465	19%	28%
Year Abroad / in Industry	61	95	8	25	13%	26%
Final Year Undergraduate	1,080	1,440	166	374	15%	26%
Taught Masters	597	519	135	151	23%	29%
University Overall	4,505	5,326	890	1,552	20%	29%

NSSE data suggests that females tend to be more academically engaged, though these are patterns of behaviour that are already established by the time students arrive at college.⁷ The major area where there is a differential response is in aspects to do with ‘academic challenge’ where male students in the US indicated they were less engaged. As a result, the NSSE weights for gender balance as a matter of routine.

There are many male : female differences in learning styles. Whether these are due to structures in the brain or learned behaviour is a moot point, but some research shows that on average female students have a more positive attitude to their learning and more attention to detail, but were more anxious about their work than men, whereas males used less information when making decisions. In terms of deep learning females had the advantage; in terms of producing things quickly, males had the advantage⁸.

To see if we had response bias, an analysis was done calculating our headline benchmarks (indicators drawn from the response to a set of 7-13 questions) with the data ‘corrected’ so that the weight of male and female responses were re-balanced to match the sample population. The results are given in exhibit 8. As can be seen, there was a negligible difference between these and the un-weighted results, and this difference is tiny compared to the overall variation in results from subject-to-subject, or year-to-year. The largest changes were of the order of 2 points on the 100 point scale. As an additional check, *ipsos MORI* also ran this analysis at question level, and again there was minimal or no change in responses. ‘Academic challenge’, where the biggest potential discrepancy was expected, revealed no change. The data in this report has therefore been left un-weighted in respect to gender.

A similar analysis was conducted to see if the differential response rates in subject areas adversely affected Faculty-level results. However, again little difference was found and the Faculty results have been left un-weighted (also in exhibit 8).

Exhibit 8: Analysis of Benchmarks: un-weighted vs. weighted by gender and vs. weighted by unit (medians)

		1. Level of Academic Challenge	2. Active & Collaborative Learning	3. Student Interaction with Academics	4. Social Inclusion & Internationalisation	5. Engagement with E-Learning	6. Supportive Campus Environment	7. Career Planning and Employability
Un-weighted	University	57	52	37	37	27	61	41
Weighted by Gender	University	57	52	37	37	27	61	41
Weighted by Unit	University	57	52	37	37	26	61	43
Un-weighted	FAH	55	50	38	37	22	61	36
Weighted by Gender	FAH	55	50	38	37	22	61	36
Weighted by Unit	FAH	55	50	37	37	22	60	36
Un-weighted	FESS	61	55	37	40	30	58	45
Weighted by Gender	FESS	61	55	37	40	30	58	48
Weighted by Unit	FESS	61	55	37	40	29	58	47
Un-weighted	FLS	57	53	35	33	27	62	43
Weighted by Gender	FLS	57	53	35	33	27	62	43
Weighted by Unit	FLS	57	53	37	33	27	63	43
Un-weighted	FS	56	52	37	33	27	63	38
Weighted by Gender	FS	56	50	37	33	27	63	38
Weighted by Unit	FS	56	50	37	33	27	63	38

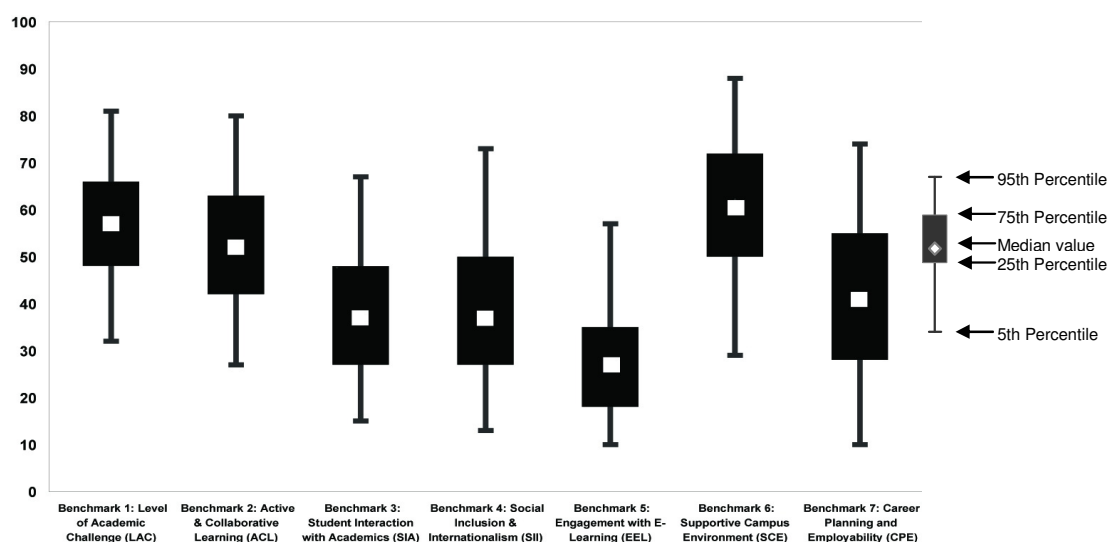
3. The results: an overview

The survey comprised 76 questions covering a range of issues relating to student engagement. Seven benchmarks were created, each of which pulled together 7-13 questions of different aspects of the student experience. The purpose of this was to reduce the amount of data so that ‘headline results’ could quickly be perceived, comparing subject-against-subject and year-against-year. Some of the benchmarks relate more to individual practice within a degree programme, while others relate more to university-wide phenomena.

- Benchmark 1: Level of Academic Challenge (LAC)
- Benchmark 2: Active and Collaborative Learning (ACL)
- Benchmark 3: Student Interaction with Academics (SIA)
- Benchmark 4: Social Inclusion and Internationalisation (SII)
- Benchmark 5: Engagement with E-Learning (EEL)
- Benchmark 6: Supportive Campus Environment (SCE)
- Benchmark 7: Career Planning and Employability (CPE)

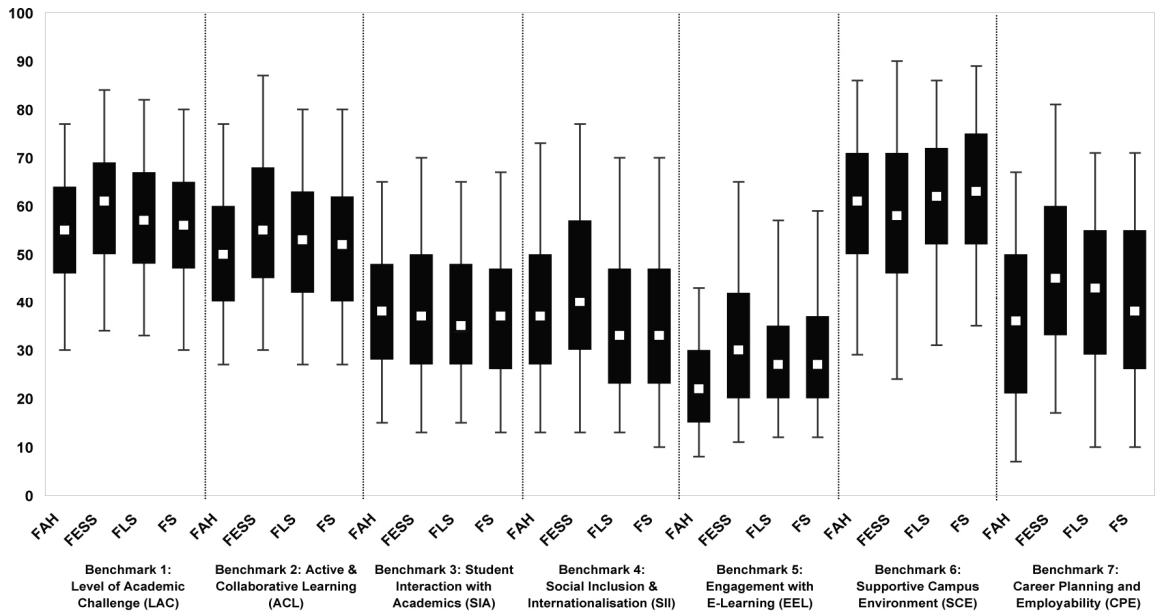
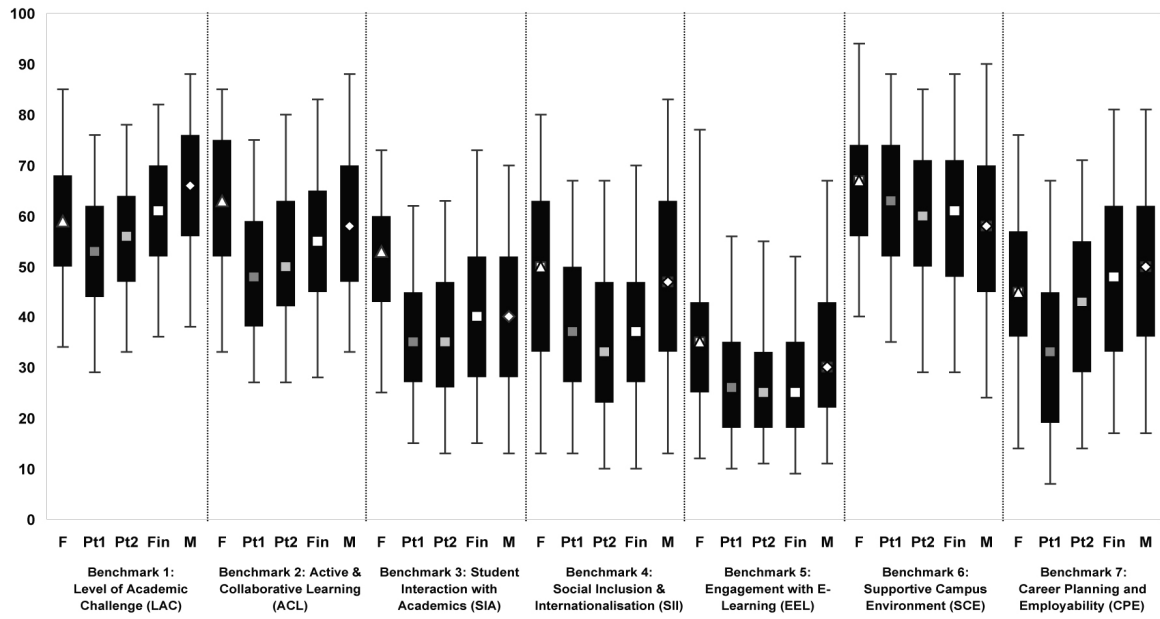
The responses to each individual question were coded on a 0-100 scale, 0 representing least engagement and 100 most engagement (see Appendix 3). For each benchmark, the scores from an individual student for each contributing question were averaged. The range of these averages for specific student groups was then displayed in a series of ‘box-and-whisker’ graphs. The symbol in the middle represents the median (i.e. half of the students gave a higher results and half a lower one). The filled-in box represents the 25-75 percentile range (i.e. half the students gave a response within this range); while the whisker represents the 5-95 percentile range (i.e. 90% of the students gave a response within this range). While it is easy just to look at the median values, the range is also important. A small range indicates all students are having a similar experience, whereas a wide range suggests students are having very diverse learning experiences.

Exhibit 9: The range in benchmark responses across the University as a whole



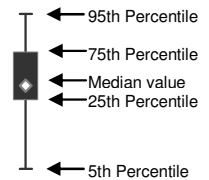
Each benchmark is a stand-alone measure, and direct quantitative comparisons cannot be made between them. As can be seen, the results for Benchmark 5 ‘Engagement with E-Learning’ are much lower than the others. This in no way reflects poor performance in this area. The reason for it is that many of the questions that go to make up the benchmark ask students if they have been using very specific innovative technologies in their learning, so that we can map where this is taking place across the University; hence participation in these activities is naturally lower than for some of the questions feeding in to other benchmarks.

Exhibit 10: The range in benchmark values divided by year and by faculty



Number of Responses by Level
 53 F: Foundation
 819 Pt1: Part 1 Undergraduate
 711 Pt 2: Part 2 Undergraduate
 540 Fin: Final Year Undergraduate
 286 M: Masters level students

Number of Responses by Faculty
 599 FAH: Faculty of Arts and Humanities
 579 FESS: Faculty of Economic & Social Sciences
 661 FLS: Faculty of Life Sciences
 603 FS: Faculty of Science



Divided by year and Faculty we can see the broad overall trends in the data:

1. Level of Academic Challenge

Challenging intellectual and creative work is central to a quality learning experience. Ideally we encourage high levels of student achievement through promoting the importance of academic endeavour and setting high expectations for student performance.

The data shows that this gradually grows as degree programmes progress. In a sense this may not appear to be surprising. However educationally perhaps *all* students should be being stretched throughout their time at University, and this might indicate that we could push and expect more from Part 1 and Part 2 students. It is noticeable in this benchmark, and in others, that our Foundation programmes appear out-of-step, the data suggesting they are more challenging than either Part 1 or 2.

[Full discussion pages 30-40]

2. Active and Collaborative Learning

Students learn more when they are intensely involved in their education and are asked to think about and apply what they are learning in different settings. Collaborating with others in solving problems, or mastering difficult material, prepares students to deal with the messy, unscripted problems they will encounter daily during and after University.

Team working and collaboration amongst students is seen to grow as students progress, though again the Foundation programmes have a far higher rate of 'active learning' than other programmes. The strength of the Foundation programmes may be a consequence of them having been designed relatively recently from first principles, as opposed to many of our other programmes which have been continually adapted over the years, and where Part 1 can occasionally be very didactic rather than participatory.

[Full discussion pages 41-49]

3. Student Interaction with Academics

Interaction with academics is a fundamental aspect in the student identifying themselves with their discipline (becoming a member of a 'community of practice'); much of this is done by observing and interacting with academics. Feedback from assignments is one of the key ways in which this takes place.

Again the Foundation degrees show themselves to be very successful in this respect. Otherwise our Part 1 is characterised by low levels of interaction. This runs counter to educational research which highlights the importance of a high-impact activity in Part 1 involving sustained effort and strong interaction with academics. We might wish to consider if the pattern above is the picture that we really want to see.

[Full discussion pages 58-66]

4. Social Inclusion and Internationalisation

Experiencing diversity teaches students valuable things about themselves and other people's points of view. Many activities can broaden student interaction with diverse communities or perspectives. Some are within the context of a degree programme, but many may also be from opportunities within the broader student life.

This measure has a high degree of variability around the University; different degree programmes attract very diverse students. Variety is naturally greatest where there is a strong international presence such as within the International Foundation Programme and some taught Masters courses.

[Full discussion pages 67-74]

5. Engagement with E-Learning

Used appropriately, technology facilitates learning and promotes collaboration between peers and instructors. Students will generally be using IT both socially and within the context of degree programmes. Mapping congruence and disparity between personal and degree experience will be worth capturing.

This benchmark measures both academic IT literacy and also innovation within E-Learning. Within the survey data FESS comes out the strongest and FAH the weakest. There is little differentiation between years in the undergraduate programmes, which *might* be read as showing that students do not become more academically IT literate as they progress in their studies. However, Masters students perform moderately better.

[Full discussion pages 75-82]

6. Supportive Campus Environment

Students perform better and are more satisfied at Universities that are committed to their success, and that cultivate positive working and social relations among different groups on campus.

Whereas most of the benchmarks show increasing engagement as students progress through their programmes, this is not the case for perceptions about a 'supportive campus environment'. These questions draw on a number of factors, some subject specific and some campus wide. The diversity of students resident in Halls may explain why Part 1 students score this highly. Masters students feel themselves to be a little more isolated.

[Full discussion pages 83-89]

7. Career Planning and Employability

Students entering graduate-level jobs is the key rationale behind government investment in Higher Education. Developing students' confidence and preparedness for this, whatever their first degree, is one of our principal obligations. It can also focus the mind of students on the purpose of their own education.

Unsurprisingly we see a growing engagement with this benchmark as students go through their undergraduate programmes, and both Finalists and Masters Students are equally engaged as they are about to progress on to the world of work or further study. Degree programmes with a clear vocational potential naturally come out with stronger results than others, and the counterpoint is reflected in the low Arts and Humanities results.

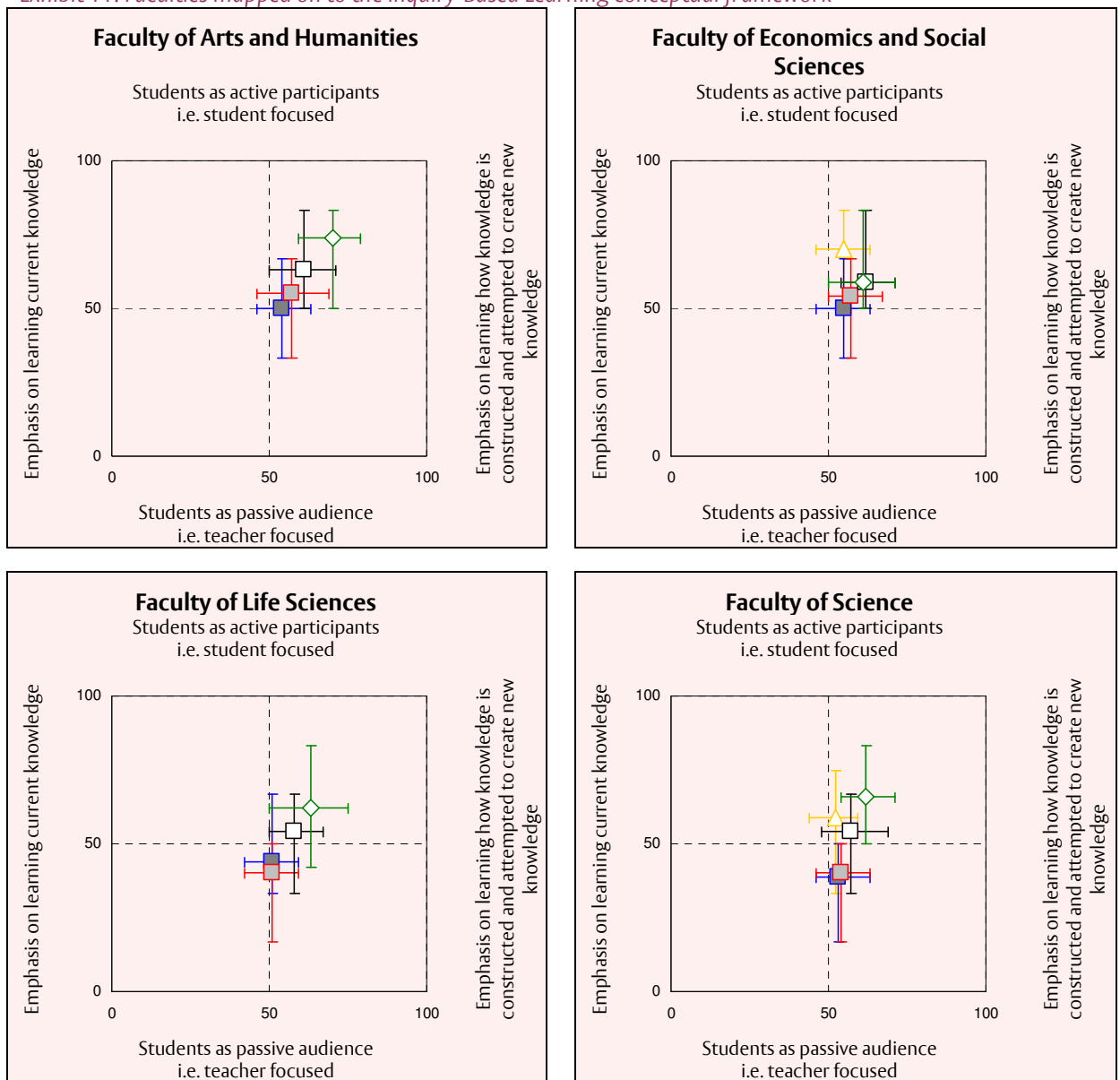
[Full discussion pages 90-96]

Research-based Learning

This survey was co-ordinated by the Centre for Excellence in Teaching and Learning in Applied Undergraduate Research Skills (CETL-AURS). One of our great interests is the nature of inquiry and engagement with the research process at the undergraduate level.

Using a framework developed by CiLASS at the University of Sheffield (Centre for Inquiry-based Learning in Arts, Humanities and Social Sciences), one of the CETLs we are closely working with, Faculties were compared on the basis of a series of questions that students answered to see if there was any shift from staff-centred to student-centred learning; and any transition from 'learning knowledge' to becoming researchers as students progressed. Generally speaking the top-right of the diagram in exhibit 12 represents an active researcher, framing their own questions, constructing knowledge; whereas the bottom-left would be someone being staff-led, learning a body of data.⁹

Exhibit 11: Faculties mapped on to the Inquiry-Based Learning conceptual framework

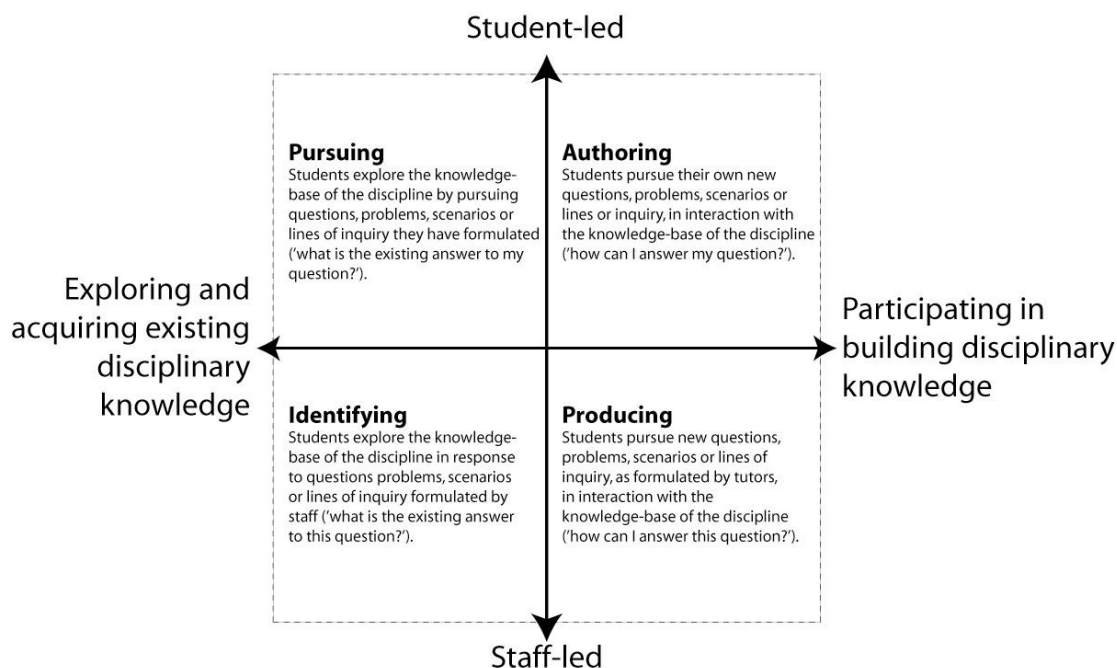


No. of Responses	FAH	FESS	FLS	FS
Foundation	0	33	0	20
Part 1 Undergraduate	204	176	227	212
Part 2 Undergraduate	216	131	199	165
Final Year Undergraduate	136	135	137	132
Taught Masters	31	103	84	68

- △ Foundation
- Part 1
- Part 2
- Final Year
- ◇ Masters

Note: crosses show the median score of respondents, and error bars show the 25-75 percentile ranges (i.e. not the 5-95 percentile ranges as in other types of graph within this report).

Exhibit 12: Forms of inquiry in learning, the CiLASS model



The results from the Faculty of Arts and Humanities provide the clearest trend of students systematically developing their own independent learning skills and progressing to become researchers as they pass through from Part 1, to 2, to Finals and to Masters Level.

The Science Faculties tend to be more didactic in Parts 1 and 2, even though much work has been done to demonstrate the success of inquiry-based learning pedagogies in these disciplines (particularly within Pharmacy and Medicine where techniques of ‘problem-based learning’ originated). However, the Faculty-level picture masks *significant* variation between subject areas.

The Foundation programmes again break away from the trend, showing that new programmes designed afresh can both challenge students and be far more student-centred.

As may be expected, taught Masters students (with the exception of those in FESS) perceive their studies have greater emphasis on both active participation in the learning process and learning how knowledge is constructed and attempting to create new knowledge, compared to their counterparts in earlier years.

[Full discussion pages 50-57]

Overall conclusions

The survey results at Faculty level support the pattern that engagement strengthens as students’ progress through their studies from Part 1 undergraduate studies, through to taught Masters programmes. Students in the Faculty of Economics and Social Sciences appear more engaged with their degrees than their counterparts in other academic disciplines. Levels of engagement are lowest for students belonging to the Faculty of Arts and Humanities, while the results show those studying in the Faculties of Sciences and of Life Sciences display very similar levels of engagement across all benchmarks.

However, these benchmarks are only the beginnings of the information that the survey has to offer on degree programmes at Reading. What follows is a more in-depth analysis with the data broken down in to individual units. Examining each benchmark in turn, and all the questions that go to make it up, enables a more nuanced interpretation of what is happening to be created. But the best interpretation will come from academics within their own subject area, interpreting their own results, in the light of their knowledge of their own practices.

References

- ¹ National Student Survey website: <http://www.thestudentsurvey.com/>
- ² The main NSSE website providing annual reports, copies of survey instruments, links to pedagogic papers is: <http://nsse.iub.edu/index.cfm>
- ³ The Australian Survey of Student Engagement <http://www.acer.edu.au/ausse/>
- ⁴ Lee S. Schulman, President, The Carnegie Foundation for the Advancement of Teaching
- ⁵ University of Reading, Learning and Teaching Strategy 2007-2011, Implementation plan, action point 34.
- ⁶ In the 2001 edition of the Framework for Higher Education Qualifications, the levels were identified as Certificate (C), Intermediate (I), Honours (H), Masters (M) and Doctoral (D) level. These are reflected in all module descriptions. This has now been replaced with: *The framework for higher education qualifications in England, Wales and Northern Ireland*, August 2008, QAA 264 08/08.
- ⁷ NSSE Annual Report 2007: 27; see also: Baxter Magolda, M.B. (1992) *Knowing and Reasoning in College: Gender-related Patterns in Student's Intellectual Development*, Jossey-Bass.
- ⁸ Downing, K., Chan, S.-W., Downing, W-K, Kwong, T. and Lam, T.-F. (2008) Measuring gender differences in cognitive functioning *Multicultural Education & Technology Journal* 2.1: 4-18.
- ⁹ See CiLASS website for more details (<http://www.shef.ac.uk/cilass>) and also: Levy, P. and Petrulis, R. (2007). Towards transformation? First year students, inquiry-based learning and the research/ teaching nexus. In: *Proceedings of the Annual Conference of the Society for Research into Higher Education (SRHE)*, 11-13 December 2007, Brighton, UK.