

Engaging Students for Success

Australasian Student Engagement Report
Australasian Survey of Student Engagement

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Quick AUSSE facts

Objectives

The primary purpose of the Australasian Survey of Student Engagement (AUSSE) is to develop evidence-based conversations that enhance students' engagement with university education. The purpose of the Staff Student Engagement Survey (SSES) is to capture staff perspectives on students' engagement.

Participating institutions

Twenty-nine higher education institutions — more than half the universities in Australia and New Zealand — participated in the 2008 AUSSE. Ten of these institutions also took part in the SSES.

The questionnaire

The AUSSE instrument, the Student Engagement Questionnaire (SEQ), is designed for online or paper completion by undergraduate students in under 15 minutes.

The SEQ measures six important but relatively untapped areas of Australasian university education: Active Learning, Academic Challenge, Student and Staff Interactions, Enriching Educational Experiences, Supportive Learning Environment, and Work Integrated Learning.

In addition to the engagement scales, the SEQ measures six key outcomes: Higher Order Thinking, General Learning Outcomes, General Development Outcomes, Average Overall Grade, Departure Intention, and Overall Satisfaction.

The SSES instrument, the Staff Student Engagement Questionnaire (SSEQ), provides parallel measurement of these areas from a staff perspective.

AUSSE funding

The AUSSE reflects a collaboration between the Australian Council for Educational Research (ACER) and participating higher education institutions. Data collection, analysis and reporting are funded by participating institutions and by ACER.

Significant new perspectives

Data gathered through administration of the AUSSE provide new insights into areas of higher education that are central to good practice. Before the 2007 AUSSE these areas were not the focus of wide-scale measurement in Australasia.

The AUSSE provides evidence about what students are actually doing, highlights the most critical aspects of learning and development, provides a 'learner-centred, whole-of-institution' perspective, and gives an index of students' involvement in study.

Administration

A technically advanced and efficient survey methodology has been developed to ensure the validity and reliability of results. Survey administration is centrally managed by ACER and key activities are conducted by institutions. ACER verifies each institution's population, samples students using a scientifically designed strategy, and dispatches standardised materials to institutions. These materials are sent from institutions to students and completed responses are returned directly to ACER for verification and processing. The phased management approach includes numerous quality checkpoints and provides a basis for continuous improvement.



“The AUSSE provides new insights into areas of higher education that are central to good practice, but which have not hitherto been the focus of wide-scale measurement.”

Engagement reports

ACER produces AUSSE Institution Reports for participating universities, providing details about the responses from students in their institution and selected benchmark groups. These reports provide a basis for publication and presentation of analyses within higher education communities, at conferences, and in magazines and journals. ACER also produces this Australasian Student Engagement Report (ASER), a series of AUSSE Research Briefings, and a series of AUSSE Enhancement Guides. These public documents are intended to convey general results to wider audiences.

Data availability

In November 2008, participating institutions were provided with their AUSSE Institution Reports, which included a file of each institution's own survey data and a series of explanatory tables. The same file format was used for all institutions to facilitate sharing the production of cross-institutional files. The file format mirrors that used by a large number of USA and Canadian institutions, enabling benchmarking with institutional results in these countries.

New opportunities

As a large-scale international survey of the engagement of currently enrolled students, the AUSSE facilitates cross-institutional benchmarking and cross-national comparison. It provides data on growth in students' engagement in learning, and information for attracting, engaging and retaining students.



Summary report

Introduction

It is vital that advanced knowledge societies like Australia and New Zealand include greater numbers of people – regardless of their background – in university education, and engage them in ways that develop high-quality outcomes. Each country's prosperity depends on this, not least because of their major export trade in higher education.

The Australasian Survey of Student Engagement (AUSSE) supports universities in this important mission. It provides a practical lens for assessing and responding to the significant dynamics,

constraints and opportunities facing higher education institutions. It stimulates evidence-based conversations about students' involvement in activities and conditions that empirical research has linked with high-quality learning and development.

The AUSSE reflects a collaboration between the Australian Council for Educational Research (ACER) and participating institutions. Twenty-nine institutions took part in the 2008 AUSSE – more than half the universities in Australia and New Zealand. The AUSSE is linked in formative ways with the 722-institution USA National Survey of Student Engagement (NSSE), facilitating cross-



institutional benchmarking and cross-national comparison.

In 2008, 101,141 first- or later-year onshore bachelor degree students were randomly sampled from a total population of 167,456 spread across the 29 institutions. A target response rate of 20 per cent was specified and 25,633 usable responses were received, reflecting a yield of 25.3 per cent. This rate varied from 11.8 per cent at one institution to 52.6 per cent at another. Post-stratification weighting was used to ensure that results represent the target population.

Ten institutions complemented their student collection with a parallel survey of teaching staff. Run for the first time in 2008, the Staff Student Engagement Survey (SSES) asks academics to report their expectations for the engagement of the typical first- or later-year student they had taught that year.

Tracking learner interactions

The SEQ asks students to respond to items that measure around 100 specific aspects of engagement. These items underpin six engagement scales.

Scale	Description
Academic Challenge	Extent to which expectations and assessments challenge students to learn
Active Learning	Students' efforts to actively construct their knowledge
Student and Staff Interactions	Level and nature of students' contact with teaching staff
Enriching Educational Experiences	Participation in broadening educational activities
Supportive Learning Environment	Feelings of legitimization within the university community
Work Integrated Learning	Integration of employment-focused work experiences into study

Results for the AUSSE scales are reported on a metric ranging from 0 to 100. It is important to read the figures below – particularly the international comparisons – with reference to differences in systemic and institutional contexts.

Please note that all figures reported in the ASER have been rounded to the nearest decimal place.

In summary, the 2008 Australasian results reveal that:

- The mean Academic Challenge score was 47.0, rising from 45.9 for first-year students to 48.1 for later-year students. Staff perceptions match those of their students, with cross-national averages of 46.8 and 48.7 for those teaching mostly first- or later-year students. As in 2007, the 2008 AUSSE figures are slightly lower than the NSSE 2008 first- and later-year means of 52.9 and 56.5.
- The average Australasian Active Learning score was 37.9, up slightly from 35.7 in 2007. This average varied from 35.9 for first-year students to 40.0 for later-year students. The USA year level figures are 42.5 and 50.8 respectively.
- The average score for the Student and Staff Interactions scale was just 22.2 – 19.8 for first year rising to 24.5 for later-year students. Interestingly, staff see themselves as having more interaction with students than do students, with the average score for staff being 41.3. Comparative student figures for the USA are notably higher at 34.6 and 42.3.
- Results for the Enriching Educational Experiences scale are low, with the cross-national mean being 25.0. This mean reflects a slight increase from 23.2 for first-year students to 26.8 among later-year students. In the USA, first- and later-year mean scores increased from 27.5 to 40.5.
- The mean for the Supportive Learning Environment scale was 53.1 – cross-national figures were almost identical to those reported in 2007. This was the only scale that saw a decrease across year levels, with first-year Australasian students having a mean of 55.0 (up from 51.2 in 2007) and later-year students having a mean of 51.3 (up marginally from 49.9 in 2007). Interestingly, this same decrease is evident in the NSSE year-level estimates, which decline from 61.1 to 58.0.
- The average Work Integrated Learning score for Australasia was 45.2, around the same as the 2007 score of 44.4. The scores rose from a mean of 40.1 for first-year students to 50.1 for later-year students – a similar trend to that found in 2007. This scale is unique to the AUSSE and, consequently, there are no NSSE reference values available for comparison.

A focus on outcomes

The 2008 Student Engagement Questionnaire measured six educational outcomes in addition to the defined engagement scales.

Scale	Description
Higher Order Thinking	Participation in higher-order forms of thinking
General Learning Outcomes	Development of general competencies
General Development Outcomes	Development of general forms of individual and social development
Average Overall Grade	Average overall grade so far in course
Departure Intention	Non-graduating students' intentions on not returning to study in the following year
Overall Satisfaction	Students' overall satisfaction with their educational experience

On the 0-100 point reporting metric:

- The average Higher Order Thinking score for Australasia was 64.0, rising from 62.4 for first-year students to 65.6 for final-year students. The perceptions of staff are slightly higher than those for students, with a cross-year average of 66.1.
- For learning outcomes such as communication, writing, speaking and analytic skills, the Australasian average score rises from 60.1 to 65.0. Staff expectations are set at the top of this range, with a combined year average of 64.5.
- Compared with learning outcomes, Australasian students report lower levels of general development. Average scores rise from 42.4 for first-year students to 44.1 for later-year students. As for general learning outcomes, the average for staff – 44.5 – is on par with the later-year student average.
- Formal grades average 71.7 for later-year students, very close to the average score of 72.1 for first-year students. This stability is not surprising given the calibration of grade

distributions that typically takes place within universities.

- The AUSSE 2008 results suggest that around a third of all students (34.5 per cent in first year and 31.6 per cent in later year) consider leaving their institutions before graduation. Compared with students, staff perceive that only 10.9 per cent of students intend to depart prior to graduation.
- Satisfaction is one of the most commonly used measures of educational quality in contemporary higher education. Australasian average satisfaction scores decreased between first- and later-year students from 70.7 to 66.5. The staff average for Australasia as a whole is 66.0.

This report provides an in-depth analysis of early departure. The analysis suggests that satisfaction, support and learning outcomes are the most important correlates of pre-graduation institutional departure. Importantly for retention, cultivating climates – those environments that reflect high levels of challenge and support, and which are enriching – are related to increased student outcomes. The analysis proposes that by monitoring identified indicators, institutions can reduce early departure and set conditions that enhance educational success.

Investigating diversity

Aggregate cross-national figures are useful for institutional benchmarking, for tracking systemic change, and as points of reference for the analysis of subgroup or individual results. Ultimately, engagement data needs to be read using the institutional or educational frames which assist the understanding of policy and practice, and which stimulate ideas for shaping change. Broad trends for several subgroups are reported here as a springboard for such analysis.

In terms of results for selected demographic subgroups:

- Females reported more academic challenge and greater participation in work integrated forms of learning than their male counterparts, as well as more high-order thinking, general learning and general development.
- With the exception of support, students over 20 years of age reported being more

engaged than their younger counterparts. They reported higher general learning outcomes and lower departure intentions, but lower overall satisfaction.

- Having a disability accounted for very little variation in the engagement or outcomes reported by students. The notable exception to this was students who report having a disability are more likely to consider departing before the completion of their degree.
- International students were equally, or perhaps a little more, engaged than their domestic counterparts, with the exception of their participation in work integrated forms of learning. International students reported more general development, lower average overall grades, slightly greater intentions of departing before degree completion, and lower satisfaction.
- Speaking a language other than English at home appears to be associated with greater interaction with staff and participation in enriching educational experiences, but less engagement in work integrated forms of learning. General development outcomes were lower, as were average grades and overall satisfaction.
- Socioeconomic disadvantage – measured as being the first in the family to attend university or (for Australian students) residing in a lower socioeconomic area – was not associated with differences in engagement or outcomes.
- The location of Australian students' home residence was not linked with variations in engagement. But students from provincial or remote areas were less likely to report higher order forms of thinking, and were more likely to consider departing before degree completion.
- Compared with their non-Indigenous peers, Indigenous Australians reported slightly more participation in active and work integrated learning, greater interactions with staff, and considerably higher early departure intentions. Māori students reported similar engagement and outcomes to other Australasian students, although they reported notably higher departure intentions. Pasifik Islanders reported a greater sense of support, higher general learning and development outcomes than

other students, yet their departure intentions were on a par with Māori students.

In terms of selected educational characteristics:

- People studying full-time generally reported greater engagement and outcomes than their part-time peers, although they had less engagement in work integrated learning and the same average grades, departure intentions and overall satisfaction levels.
- Campus-based students reported more active learning, less participation in work integrated learning, and more overall satisfaction.
- At the cross-national level, there was no difference in engagement or outcomes between those whose study was funded by the government and those who paid their own fees.
- People living on campus in university colleges or halls of residence felt more supported, participated less in work integrated learning, reported greater general development outcomes, and reported greater overall satisfaction.
- Field of education provides a powerful lens for interpreting many aspects of university life. Education and humanities students felt most challenged to learn, while agriculture and science students felt most supported. Architecture, education and creative arts students reported the greatest participation in active learning, as did health and education students in work integrated learning, agriculture students in terms of staff interaction, and health and education students in terms of participation in enriching experiences. There was very little variation among fields for average overall grade, with the exception of business students who reported lower grades than others. Humanities students reported more higher-order thinking, and agriculture and education students reported higher general learning outcomes. The average scores for general development were higher for health, education and humanities students. Those studying science and agriculture were the most satisfied. Architecture, education and creative arts students reported being most likely to depart prior to degree completion.



Guides for shaping change

Developing strategies to use engagement data for continuous quality improvement is central to the AUSSE. Information about student engagement can play a valuable role in enhancing the quality of higher education, if only by stimulating conversations about how students engage in high-quality learning, or by exposing students and teaching staff to inventories of good learning practices.

Institutions need to make informed, professional decisions about what data they will act on and about how to take necessary action. To assist with this process, a series of initial AUSSE Enhancement Guides have been developed to help institutions make the most use of their AUSSE data and results. The final chapter of this report provides an overview of these Enhancement Guides which, as with many other AUSSE resources, can be downloaded from: www.acer.edu.au/ausse.



Improving learning and educational development

Planning for engagement

The Australasian Survey of Student Engagement (AUSSE) provides data that Australian and New Zealand higher education institutions can use to attract, engage and retain students. It reports on the time and effort students devote to educationally purposeful activities and on students' perceptions of other aspects of their university experience.

The AUSSE is a quality enhancement activity managed by the Australian Council for Educational Research (ACER). It builds on foundations laid by the North American National Survey of Student Engagement (NSSE). The report of the 2008 NSSE (NSSE, 2008a) provides an overview of the development of the USA collection, which has been administered at more than 1,300 institutions in the USA and Canada. A recently published special edition of *New Directions for Institutional Research* (Gonyea & Kuh, 2009) provides further information. The NSSE's rigorous methodologies and research foundations offer solid grounds for ongoing development of the AUSSE.

The AUSSE was conducted for the second time in 2008 with 29 higher education institutions in Australia and New Zealand. By providing information that is generalisable and sensitive to institutional diversity, and with multiple points of reference, the AUSSE generates information that institutions can use to monitor and enhance the quality of education.

The AUSSE measures student engagement through administration of the Student Engagement Questionnaire (SEQ) to a representative sample of first- and later-year students at each institution. With formative links to the NSSE, the AUSSE

provides data that complement and extend current collections which focus on satisfaction with teaching and support. It makes available to higher education institutions a new means for measuring and monitoring the effectiveness of learning and teaching.

The AUSSE was developed to bring together existing work in the field and to leverage benefits from a collaborative, cross-institutional approach. It is critical that surveys involve validated instruments and processes so that they provide the kind of high-quality data that can be used to improve practice. It is also critical to have meaningful points of reference, such as cross-institutional and cross-national benchmarks, to get the most value from reports, along with well-tested strategies for interpreting results and improving practice.

The cross-national comparisons facilitated by the AUSSE are important. While higher education is an increasingly internationalised activity, data limitations have to date constrained comparative analyses. Specifically, very little student-level and process- or outcomes-focused data is available. Through its links with the NSSE, the AUSSE represents a trend towards developing more educationally nuanced cross-national collections and interpretations.

The AUSSE is conducted *by, for and with* participating Australasian institutions. The intention is to provide institutions with new and significant perspectives for managing and enhancing the quality of education. Each participating institution receives an AUSSE Institution Report detailing its own results. The Australasian Student Engagement Report (ASER) provides a broader cross-institutional and cross-national perspective of the results.

Helping teachers engage students

The Staff Student Engagement Survey (SSES) complements the AUSSE. In 2008, for the first time, all institutions that participated in the AUSSE were invited to take part in the SSES. Ten institutions chose to do so. Parallel to the AUSSE, the SSES measures academics' expectations for student engagement in educational practices that have been linked empirically with high quality learning and development.

The SSES is a survey of academic staff about students. Technically, while academic staff are the respondents, the 'typical student' that they teach is the 'unit of analysis'. The SSES focuses on:

- academics' perceptions of how often students engage in different activities
- the importance staff place on various areas of learning and development
- the nature and frequency of staff-student interactions
- how academics organise their time, both in and out of the classroom.

The SSES builds directly on the Faculty Survey of Student Engagement (FSSE), a survey run since 2004 by Indiana University's Center for Postsecondary Research. To date, around 100,000 academic staff from more than 485 universities have taken part in the FSSE.

Compared with student feedback, relatively little information from academic staff (particularly from academic staff about students) is collected in Australasian higher education. Such information can help:

- identify gaps between student engagement and staff expectations
- engage staff in discussions about student engagement
- provide information on staff awareness and perceptions of student learning
- enable benchmarking of staff responses across institutions.

The SSES is run as an online survey only. The research instrument, the Staff Student Engagement Questionnaire (SSEQ), parallels the SEQ but incorporates revisions to capture the staff perspective. In broad terms, the population for the SSES includes on-shore academic staff working in faculties, but does not include adjunct, casual

or honorary staff. Emails inviting staff to take part in the survey are sent by each institution to their sampled academic staff. Responses to the online survey are returned directly to ACER. These are weighted by key variables to ensure their representativeness at the institution level.

SSES reports follow those produced for the AUSSE. In summary, institutions are provided with a customised institution report containing staff responses and norms (if possible given response characteristics), and a de-identified unit-record data file containing staff responses. Ensuring the confidentiality of responses plays a critical role in assuring the validity of survey outcomes. Only de-identified data and reports are provided to institutions. Where respondent numbers are very small, the data are made anonymous, including the removal of demographic data.

The 2008 SSES was one of the first occasions – perhaps the first – in which a comprehensive sample of teaching staff in multiple Australasian universities was asked to report on the educational characteristics of their students. Hence the SSES adds a new student-focused staff perspective to the data available for evidence-based quality enhancement of university education in Australasia. SSES data can be used in a range of ways to enhance educational practice, some of which are summarised in the AUSSE Enhancement Guides. While not primarily designed to provide cross-institutional baseline data, the SSES does add an important new perspective to the study of student engagement in Australasia. Insights drawn from this perspective are included in this report.

Developing new insights into education

Capturing data on student engagement builds on a long tradition of searching for more valid and reliable insights into educational processes. The contemporary social indicator movement began in the 1960s in the USA as a response to increased demand for information about the effectiveness of large-scale publicly funded programs. A key early publication, *Social Indicators* (Bauer, 1966), discussed the development of social indicators, their relationship to social goals and policy making, and the need for systematic statistical information on social phenomena.

The indices that shape our understanding of education today grew out of this milieu.

Assessment and evaluation has always formed part of education, but publication in the USA in 1983 of *A Nation at Risk* (National Commission on Excellence in Education, 1983) greatly stimulated interest in using indicator data as evidence for educational policy, planning and practice.

The decade following the late 1980s saw rapid growth in the design and development of indicators and data collections in higher education. Demand came from government, university leaders and managers, teachers and students, employers and industry. Rapid internationalisation, economic growth and technological advancement set new expectations for the provision of timely data on educational services. Indicator systems were designed by social researchers, policymakers, and international agencies (see, for instance: Cave, Hanney & Kogan, 1997; Johnes & Taylor, 1991; Cuenin, 1988; Kells, 1993; Linke, 1991; Henkel, 1991; Davis, 1996).

Data collections proliferated in the 1990s, in step with the global expansion of higher education and growth of the international quality movement. Most universities in developed countries implemented internal quantitative feedback systems. Research agencies developed statistics on student markets and employment outlooks. Governments developed quantitatively oriented performance-based funding mechanisms. Production of national and international rankings of institutions (Coates, 2007) could be seen as the culmination of this work.

Numbers can cast an allure of certainty, but the existence of data does not guarantee veracity or relevance. As evidence-based planning, practice and quality enhancement further develop, universities and their communities are seeking more sophisticated ways of focusing, collecting and using data on education. Greater emphasis is being placed on ensuring the conceptual and empirical validity, methodological rigor, and effective use, of the information that is used to shape educational development. This underpins a need for data that measures what matters for monitoring and improving high-quality education.

A perspective on student involvement

University educators have always had a core interest in understanding and managing students'

engagement in effective learning. Since 2007 the AUSSE, building on decades of empirical research and deploying advanced methodologies, has provided new insights to help Australasian universities monitor and enhance this aspect of their mission.

'Student engagement', defined as students' involvement with activities and conditions likely to generate high-quality learning, is increasingly understood to be important for high-quality education. The concept provides a practical lens for assessing and responding to the significant dynamics, constraints and opportunities facing higher education institutions. It provides key insights into what students are actually doing, a structure for framing conversations about quality, and a stimulus for guiding new thinking about good practice.

Although central to many aspects of education, information on student engagement has not been readily available to Australasian higher education institutions. Prior to 2007, existing collections tended to focus on satisfaction with provision and the broader aspects of the student experience. The lack of information on student engagement has limited the potential to plan and improve key aspects of student learning and development.

Student engagement is an idea specifically focused on students and their interactions with their institution. While the concept was considered behaviourally in terms of 'time on task', contemporary perspectives now touch on aspects of teaching, the broader student experience, learners' lives beyond university, and institutional support. Students lie at the heart of conversations about student engagement – conversations that focus squarely on enhancing individual learning and development.

The concept of student engagement is based on the premise that learning is influenced by how an individual participates in educationally purposeful activities. While students are seen to be responsible for constructing their knowledge, learning is also seen to depend on institutions and staff generating conditions that stimulate and encourage involvement.

As noted, this perspective draws together decades of empirical research into higher education student learning and development.

This research has confirmed the importance of ensuring appropriate academic challenge, and it has emphasised the importance of examining students' integration into institutional life and their involvement in educationally relevant 'beyond class' experiences.

In short, measures of student engagement provide information about individuals' intrinsic involvement with their learning, and the extent to which they are making use of available educational opportunities. Such information enhances knowledge about learning processes. It is a reliable proxy for learning outcomes. It provides excellent diagnostic measures for learning enhancement activities.



2

A quality-assured approach

The research and enhancement cycle

The AUSSE survey methodology is designed to be valid, efficient and innovative. It deploys approaches rarely, if ever, used before in Australasian higher education research. For those with an interest, the Programme for International Student Assessment (PISA) 2006 Technical Report (OECD, 2009) offers a background on aspects of the approaches used for student and item sampling, cultural translation, and quality assurance.

The AUSSE reflects a collaboration between participating institutions and ACER. While centrally managed by ACER, key activities are conducted by institutions. This devolved and controlled approach is common in many large-scale national and international surveys.

Preparation for the AUSSE is led by ACER. It involves refining instruments and systems, securing any necessary approvals, liaising with participating institutions, drawing the student sample, and despatching materials to institutions. Participating institutions and the AUSSE Advisory Group play an important role in shaping key aspects of survey design and management.

The AUSSE is conducted according to the 2007 National Statement on Ethical Conduct in Human Research (NHMRC, ARC & AVCC, 2007) and the ACER Code of Ethics. ACER routinely collects sensitive test, evaluation and other data and has well established and tested procedures for protecting sensitive materials. Participating institutions are responsible for securing internal human research ethics or other approvals.

AUSSE fieldwork is designed to be efficient and to produce valid results. It involves an iterative

and multimodal approach which is sequenced to maintain the momentum of student participation and survey returns. From late July to late August, materials are sent from institutions to students and staff. Completed responses for Australian institutions are returned directly to ACER. For New Zealand institutions, paper forms are returned to ACER via the New Zealand Council for Educational Research (NZCER). ACER prepares and analyses the AUSSE data, and produces the institutional and cross-institutional reports.

Analysing, interpreting and acting on survey results are the most significant components of the AUSSE cycle. This report contributes to a growing body of resources which provides ideas for how institutions might use the data for quality enhancement and improvement. As with all data collections, it is important that AUSSE results are used in technically and educationally appropriate ways. The AUSSE is intended to provide a source of evidence for each institution's conversations about engagement.

Measuring engagement

From an analytical perspective, education is often viewed as involving inputs, processes and outcomes at a range of different levels – typically systems, institutions, teachers and students. The Organisation for Economic Cooperation and Development (OECD), for instance, uses the Indicators of Education Systems (INES) framework to structure its annual report, *Education at a Glance* (OECD, 2008).

Figure 1 sketches the INES framework, with shaded cells identifying those areas measured by

the AUSSE and SSES. Together, the collections provide information about learners' demographics and teachers' backgrounds, learners' involvement in educational practices, and pedagogical and institutional supports. The surveys capture indirect measures of learning and development outcomes. A reprint of the 2008 SEQ (paper format) is included in Appendix 1.

	Outcomes	Processes	Inputs
Learner	Learning outcomes	Learning involvement	Learner background
Teacher		Teaching approaches and support	Teacher backgrounds
Institution		Institutional supports	
System			

Figure 1 AUSSE coverage of the INES framework

The six areas of student engagement explored through the AUSSE include aspects related to institutional support as well as those focused on student involvement:

Academic Challenge	Extent to which expectations and assessments challenge students to learn
Active Learning	Students' efforts to actively construct their knowledge
Student and Staff Interactions	Level and nature of students' contact with teaching staff
Enriching Educational Experiences	Participation in broadening educational activities
Supportive Learning Environment	Feelings of legitimation within the university community
Work Integrated Learning	Integration of employment-focused work experiences into study

A critical aspect of these scales is their foundation in empirically validated theories of student learning. Reports of this developmental work have been published by Kuh, Pace and Vesper (1997), Kuh, Schuh and Whitt (1991), Kuh (2004, 2008), Pascarella and Terenzini (2001, 2005), Ewell and Jones (1996), Pace (1979, 1988, 1995), Tinto (1993), Astin (1985, 1990, 1993), and Coates (2006). This research foundation assures the educational importance of the phenomena measured by the instrument.

The six outcome measures focus on broader forms of learning and development. All six areas are measured in the SEQ, and the SSEQ measures all but average overall grade.

Higher Order Thinking	Participation in higher-order forms of thinking
General Learning Outcomes	Development of general competencies
General Development Outcomes	Development of general forms of individual and social development
Average Overall Grade	Average overall grade so far in course
Departure Intention	Non-graduating students' intentions on not returning to study in the following year
Overall Satisfaction	Students' overall satisfaction with their educational experience

The SEQ is based on the College Student Report, the instrument used at over 1,300 North American institutions which have participated in the NSSE. The SEQ is designed for administration to undergraduate students in under 15 minutes, either online or in paper form. The same SEQ content is provided to all students. To manage and reduce levels of item-level non-response, sampled students were randomly distributed one of three different online versions, each containing different rotated orderings of the items. All students who submit an online form are presented with an overview of student engagement, a summary of key findings, and information about what universities have done with the results.

ACER further developed and validated the College Student Report before deploying it in Australia and New Zealand. Validation included item design and development, focus groups, cognitive interviews, pilot testing and expert review. A range of psychometric and conceptual analyses were conducted. This work builds on the extensive validation undertaken in the USA. The SEQ will further develop with ongoing development of the AUSSE. Evolution of the instrument depends on evidence of the kinds of engagement that are linked with high-quality learning outcomes.

Like the SEQ, the SSEQ also has its roots in the USA. It is based on the instrument used for the Faculty Survey of Student Engagement (FSSE) which has been run since 2004 by Indiana University's Center for Postsecondary Research. Links between the two instruments, and between the SSEQ and the SEQ, provide a basis for benchmarking.

The structure and content of the SSEQ closely mirror the SEQ. Results for most of the SSEQ items can be compared directly to those for the SEQ. Participating staff are asked to respond to questions about student engagement based on a 'typical first-year' or 'typical later-year' student they have taught in the last two academic years.

The SSEQ was administered for the first time in 2008. Prior to its deployment in Australia and New Zealand, ACER further developed and validated the FSSE instrument. A range of new

and redesigned items were included. Validation included pilot testing and expert review. A range of psychometric and conceptual analyses were conducted. This work builds on the extensive validation in the USA of the FSSE instrument. The SSEQ is designed for online administration to academic staff in under 15 minutes. The same SSEQ form is used for all academic staff.

Institution, student and staff samples

The AUSSE was conducted for the second time in 2008, building on more than a decade of national use of the NSSE in the USA. In total, 29 higher education institutions chose to participate, with 23 from Australia and six from New Zealand – four more than in 2007. Participating institutions are listed in Table 1.

In addition, ten institutions participated in the SSES. These institutions are identified in Table 1 by

Table 1 AUSSE 2008 participating institutions

Australian institutions	New Zealand institutions
Australian Catholic University	Massey University
Central Queensland University (SSES)	UNITEC New Zealand
Charles Sturt University	University of Auckland
Deakin University	University of Canterbury
Flinders University	University of Waikato
Griffith University	Victoria University of Wellington (SSES)
La Trobe University (SSES)	
Macquarie University (SSES)	
Murdoch University	
Queensland University of Technology (SSES)	
Southern Cross University (SSES)	
Swinburne University of Technology	
University of Canberra	
University of New England (SSES)	
University of Newcastle (SSES)	
University of Queensland	
University of South Australia (SSES)	
University of Southern Queensland	
University of Tasmania	
University of Technology Sydney	
University of Western Australia (SSES)	
University of Wollongong	
Victoria University	



the inclusion of '(SSES)' following the institution's name. Appendix 3 provides a complete list of institutions which have participated in AUSSE 2007, AUSSE 2008 or SSES 2008. Around 35 institutions are scheduled to take part in AUSSE 2009.

Review of this list indicates the AUSSE covers a reasonable range of each country's universities (research-intensive Australian institutions were under-represented in AUSSE 2008). This general representativeness is important because it facilitates the production of meaningful benchmarks and provides a solid foundation for cross-institutional conversations.

The SSES is not intended to provide generalisable cross-institutional norms, and the results presented in this report are not necessarily reflective of the national populations of staff.

Conducting a census of all students has traditionally been the default means of collecting feedback from university students in Australasian higher education. A census may give every student 'the chance to have a say', and can facilitate analyses of small sub-populations of students. When used indiscriminately, however, a census can lead to an enormous waste of resources, collection of data that adds little value to analysis, overburdening of potential respondents, and results with unknown levels of bias or precision.

In many, if not most instances, a well-designed sample can more efficiently yield results which are as good as those provided by a census. Rather than a census of all students, efficient and robust sampling strategies are used to identify students and staff who are then invited to take part in the AUSSE. Stratified systematic sampling strategies are deployed to produce powerful, generalisable and representative estimates of first- and later-year student engagement. These sampling strategies are important because they reduce the number of students and staff that need to be approached, and because they build in scientific techniques that help ensure the quality of results.

ACER's management of the sample provides assurance of the validity of AUSSE results. In summary, institutions supply ACER with a de-identified list of students in the target population. ACER validates this list, draws the sample, and returns the sampled list to institutions.

Institutions re-attach student contact details to the list and prepare it for survey distribution. This same sampling process is repeated for the staff survey. This sample verification process, and the conversations that surround it, is a major form of quality assurance in the survey design and fieldwork. In 2008 it prevented administrative errors at participating institutions.

The target population for the AUSSE is not the same as the total Australasian higher education student population. In 2008, the target population included 83,720 first-year students and 83,736 later-year students, giving 167,456 students in total across the 29 institutions. In broad terms, this population consisted of:

- on-shore students in their first year of an undergraduate qualification who have not previously been involved in or completed a higher education qualification
- on-shore students in their later (third) year of an undergraduate qualification who have completed around five full-time equivalent semesters of an undergraduate degree.

In 2008, different sample sizes were defined for different sizes of institution. Institution size was based on the number of domestic first-year students. Up to 2,500 first- and later-year students were surveyed at institutions with 1,500 or less domestic first-year students. Up to 3,000 first- and later-year students were surveyed at institutions with between 1,500 and 5,000 domestic first-year students. Up to 3,500 first- and later-year students were surveyed at institutions with more than 5,000 domestic first-year students. A certain amount of oversampling is built into these specifications to reduce the need for complex follow-up of replacement samples. In addition, a further oversampling option was provided in 2008 to assist with the generation of estimates for specific subgroups within the student population.

A total of 101,141 students at 29 institutions were invited to take part in the 2008 AUSSE. A small number of mail and email surveys were undeliverable and returned to ACER and institutions. The actual target population might be conservatively estimated to be around 100,500. A link to the online survey form was sent to all sampled students. The ACER sample design also allowed for 69,100 students to be sent a paper survey form.



Table 2 Population and sample demographic characteristics

		Population		Sample		
		N	%	n (unweighted)	n (weighted)	% (weighted)
Year level	First	83,720	50.0	12,811	87,167	50.6
	Later	83,736	50.0	12,822	85,164	49.4
Sex	Male	70,129	41.9	7,347	65,787	41.3
	Female	97,326	58.1	16,307	93,493	58.7
Residency	Domestic	141,615	84.7	21,430	143,420	90.2
	International	25,631	15.3	2,176	15,663	9.8
Age	Under 20			8,496	59,378	37.3
	20 or over			15,158	99,929	62.7
Language background	English			19,868	133,333	84.0
	Not English			3,695	25,305	16.0
Indigenous	Indigenous			1,408	7,245	4.2
	Non-Indigenous			24,225	165,085	95.8

Table 3 Population and sample educational characteristics

		Population		Sample		
		N	%	n (unweighted)	n (weighted)	% (weighted)
Field	Science	13,622	8.3	2,038	14,363	9.1
	Information technology	5,122	3.1	722	5,850	3.7
	Engineering	10,484	6.4	1,296	11,139	7.0
	Architecture and building	4,781	2.9	598	3,590	2.3
	Agriculture	2,631	1.6	465	3,161	2.0
	Health	24,019	14.6	3,856	25,717	16.2
	Education	15,330	9.3	2,813	17,747	11.2
	Management and commerce	37,823	22.9	4,374	29,782	18.8
	Humanities	31,794	19.3	5,258	33,262	21.0
	Creative arts	13,291	8.1	1,975	13,033	8.2
Attendance mode	Internal	117,590	85.0	19,478	135,563	85.3
	External/mixed	20,764	15.0	4,101	23,286	14.7
Family background	First in family			12,139	79,384	50.5
	Not first in family			11,202	77,791	49.5
Disability	Identified disability			1,401	9,148	5.8
	No disability			22,128	149,326	94.2
Study finance	Government funded			18,067	123,511	78.2
	International fees			2,158	15,546	9.9
	Domestic fees			3,165	18,813	11.9
Residential status	Residential student			2,461	14,718	9.3
	Non-residential			21,142	144,283	90.7

A total of 25,633 usable responses were received prior to production of the final data file. This included 8,040 paper and 17,593 online responses. The stratified random allocation of the three versions of the online instrument to sampled students ensured that roughly equal numbers completed each version (5,799, 5,685 and 6,109), reducing the impact of item non-response on data quality.

The sample design for the student collection included a target response rate of 20 per cent. The secured Australasian response rate, not adjusted for undeliverable contacts, was 25.3 per cent. The response rate varied from around 11.8 per cent at one institution to 52.6 per cent at another. In total, 20 of the 29 institutions secured more than the 20 per cent target response rate. The middle 70 per cent of institutions received response rates ranging between 18 and 31 per cent.

These response rates are an improvement on those achieved in 2007, affirming the steps that institutions and ACER have put in place to enhance practice in this area. Engaging the student voice in institutional research activities is vital (Scott, 2006), and response rates are an index of the extent to which this has been done. To this end, an AUSSE Enhancement Guide has been prepared to help institutions engage students in survey processes. Follow-up with institutions receiving very high response rates has affirmed the strategies outlined in the AUSSE Enhancement Guide.

By way of comparison, the average institutional response rate in the USA was 35 per cent for institutions using the same mix of online and paper surveying used for the AUSSE, with 70 per cent achieving response rates between 24 per cent and 49 per cent. Forty-seven Canadian institutions from nine provinces participated in NSSE 2008. The average Canadian institutional response rate for NSSE 2008 was 39 per cent, ranging between 17 per cent and 56 per cent for all institutions.

Post-stratification weighting of AUSSE responses is used to ensure that responses represent the target population. As far as possible, given available information, AUSSE data is weighted within institutions for year level, attendance type, and respondent sex.

Table 2 reports demographic data for the AUSSE population and sample, and Table 3 summarises educational characteristics. Note that two small fields of education are not reported in Table 3. The population parameters are drawn from the population lists supplied by participating institutions, and information is only available on selected variables. The figures provide useful background for subsequent analyses and affirm the representative of the sample on these marker variables.

Probabilistic sampling is also used in the staff survey, although the small number of staff at many institutions means that the collection is effectively run as a census. As noted, the target population for the SSES is not the same as the total Australasian higher education population of academic staff. In broad terms, it consists of on-shore academic staff working in faculties, but does not include adjunct, casual or honorary staff. In 2008 the target population used for sampling purposes included 10,286 staff. Given complexities associated with the definition of staff roles within the population frame, it was necessary at one institution to supplement its population once fieldwork had commenced.

The sample size for the SSES was calculated by taking account of technical considerations, institutional requirements, analysis and reporting processes, and survey response contexts. In summary, depending on the size of the institution, the design sought to secure responses from either 225 staff (based on a survey of 750) or 450 staff (based on a survey of 1,500 staff). These yields assume a 30 per cent response rate. It is preferable to secure responses from at least 50 per cent of academic staff if there are fewer than 750 at an institution.

The sample design for the SSES included a target response rate of 30 per cent. A total of 2,330 responses were received, meaning that the secured Australasian response rate, not adjusted for undeliverable contacts, was 28.4 per cent. The response rate varied from around 11.5 per cent at one institution to 44.8 per cent at another. In total, responses were secured from 30 per cent of sampled staff at five of the ten participating institutions.

Like the student collection, post-stratification weighting is used to ensure that responses represent the target population. As far as possible, given available information, the SSES data is weighted by level and sex.

It is important to emphasise that, as with all large-scale surveys, the AUSSE and SSES offer indicative rather than definitive evidence of the phenomena being measured. Results should be treated with caution, especially when respondent sample sizes are small.

3

Engagement patterns and trends

Tracking learner interactions

Summary results are provided in this report to emphasise key aspects of student engagement. A large number of analyses and findings could be reported given the breadth of phenomena measured and the comparatively small amount of existing information on student engagement in Australasia. The results given here are offered as initial insights and prompts for further analysis. Please note that all figures reported in the ASER have been rounded to the nearest decimal point.

Attention is focused on summarising patterns of engagement in terms of the six AUSSE scales. Results for each scale are analysed in turn, as comparisons are best made across student and educational groups for each scale, rather than between scales. The items underpinning each of these scales are listed in Appendix 2. Further scale-level statistics are provided in Appendix 3. Selected SSES and comparison FSSE results are presented to complement the student perspectives.

Different technical perspectives could be used to interpret AUSSE item and scale statistics. Given the large size of the cross-national sample and the magnitude of the scale standard deviations, most group differences of 0.5 score points or greater on the reporting metric outlined below are likely to be 'statistically significant'. Statistical significance is not the same as educational relevance, however, and to establish the latter, an 'effect size' (Cohen, 1969) perspective is useful in large-scale survey contexts. From this perspective, differences of around a quarter of a standard deviation may be considered 'small', differences around a third 'moderate', and those greater than half 'large'.

Scale standard deviations are reported to facilitate effect size analysis.

The Student Engagement Questionnaire invites students to respond to two open-ended questions:

- 'What are the best aspects of how your university engages students in learning?'
- 'What could be done to improve how your university engages students?'

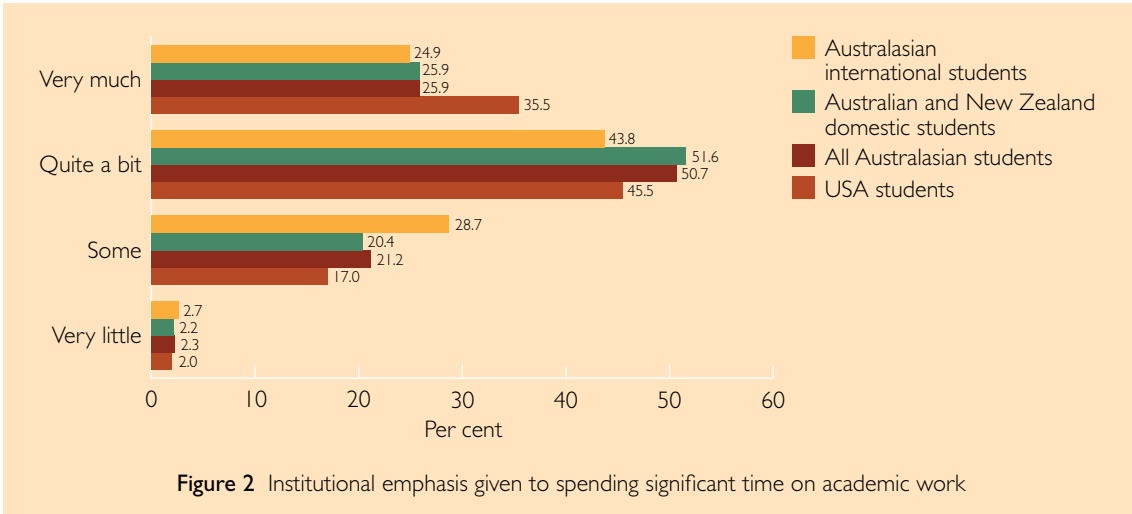
Comments are reproduced in this chapter to frame the statistical results.

Academic Challenge

Appropriate levels of intellectual challenge and educational support play an important role in stimulating successful learning outcomes. The Academic Challenge scale brings together items that reflect the extent to which expectations and assessments challenge students to learn.

Scores for each of the AUSSE scales are reported on a metric ranging from 0 to 100. The mean Academic Challenge score was 47.0, rising from 45.9 for first-year students to 48.1 for later-year students. The Australasian standard deviation was 12.5. Staff perceptions match those of their students, with cross-national averages of 46.8 and

The lecturers are very good and provide good feedback and are genuinely interested in your progress. They stimulate the students to find out more as well. – First-year female law student

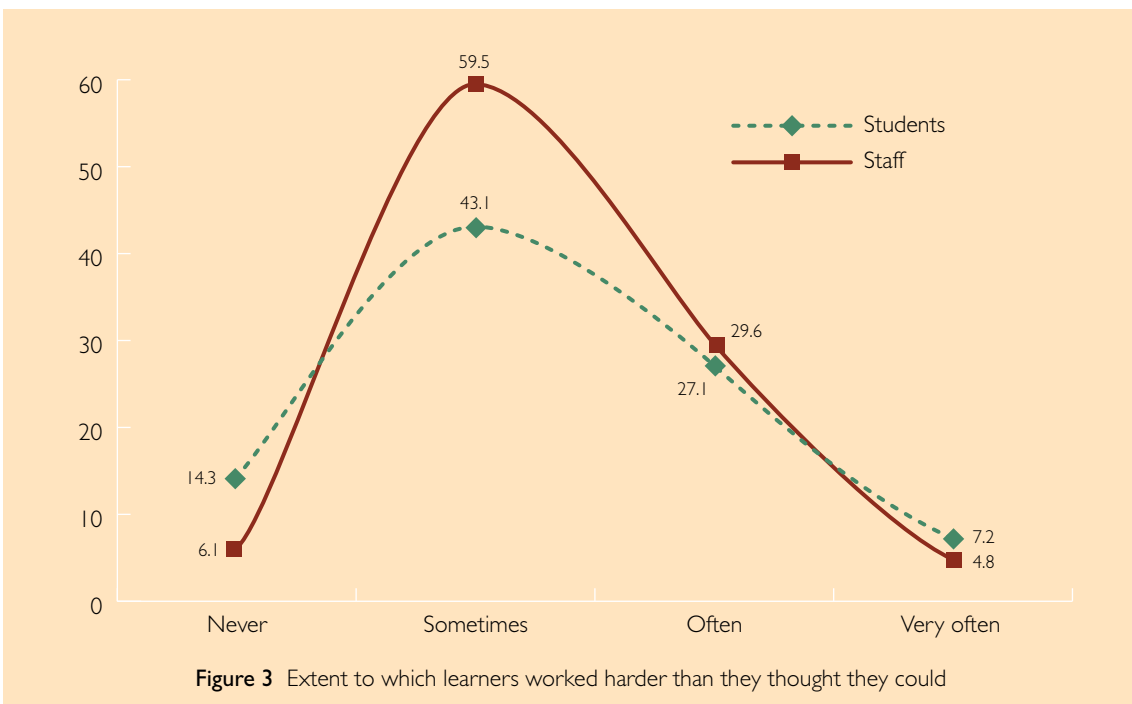


48.7 for those teaching mostly first- or later-year students. These figures are very similar to those recorded in the 2007 AUSSE, as is the difference between year-level means. As in 2007, the 2008 AUSSE figures are slightly lower than the NSSE 2008 first- and later-year means of 52.9 and 56.5.

The cross-national comparisons between Australasia and the USA are informative given the increasingly internationalised nature of contemporary higher education. Such comparisons highlight gaps and areas in need of investigation. They do need to be read, of course,

with reference to differences in systemic and institutional contexts.

Figure 2 presents an encouraging finding regarding institutional emphasis given to spending significant time on academic work. Half (50.7%) of responding students reported that their institution places 'quite a bit' of emphasis on this issue, and just over a quarter (25.9%) reported this is 'very much' emphasised by their institution. These results suggest that Australasian students feel their institutions are encouraging them to learn. However, the numbers show that international



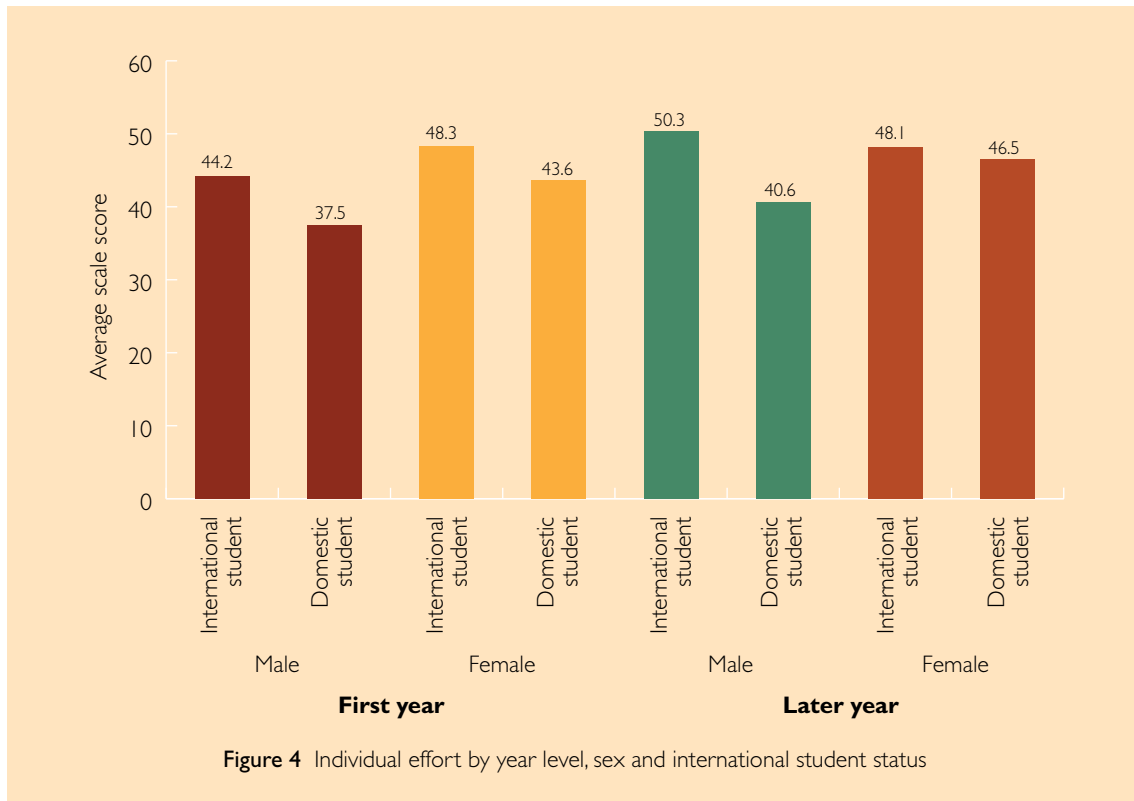


Figure 4 Individual effort by year level, sex and international student status

students at Australasian institutions see less emphasis being placed on this area compared with their domestic counterparts. Similarly, results for Australasian students are lower than those for USA students.

Intellectual challenge requires input from learners as well as institutions. Reassuringly, Figure 3 shows that 34.3 per cent of learners reported that they 'often' or 'very often' worked harder than they thought they could. The data shows that 43.1 per cent of students only pushed themselves to work in this way 'sometimes' – the most common response. Staff, perhaps unsurprisingly, thought that students were working harder than did students themselves. Indicative SSES results suggest that staff perceive that only 6.1 per cent of students 'never' worked in this way. Clearly, there would be value in identifying the individual and educational characteristics linked with those 14.3 per cent of respondents who indicated that they 'never' pushed themselves to work harder than they thought they could. These figures were similar to those found in the 2007 AUSSE.

Figure 4 deconstructs the variation in Figure 3 in terms of year level, sex and international student

status. The results show that female students tend to report challenging themselves more than males, later-year students more than first-year learners, and international more than domestic students. The item average for Australasia as a whole is 43.2.

Broadly, Australasian students reported feeling comfortable with the academic standards expected by their institution. 72.4 per cent of first-year students and 68.1 per cent of later-year students reported that they were 'often' or 'very often' able to keep up-to-date with their studies. Similarly, students reported that examinations had challenged them to do their best work, returning a mean score of 66.2 on a metric where zero reflects a response of 'very little' and 100 'very much'. This rating varies across fields, from around 60 for creative arts and architecture students, to around 70 for science and health students.

By itself, the institution a student attends accounts for only a little of the variation in perceptions of challenge. At the aggregate institutional level, average scores ranged from 43.5 to 49.0. For the most part, perceptions of challenge appear to be underpinned by other individual or contextual



Less lecture time and more tutorial/workshop time.
– First-year male accounting student

I enjoy problem-based learning that enables students to research and come up with answers for themselves and then to evaluate their answers with the assistance of the tutors.
– Later-year female human services student

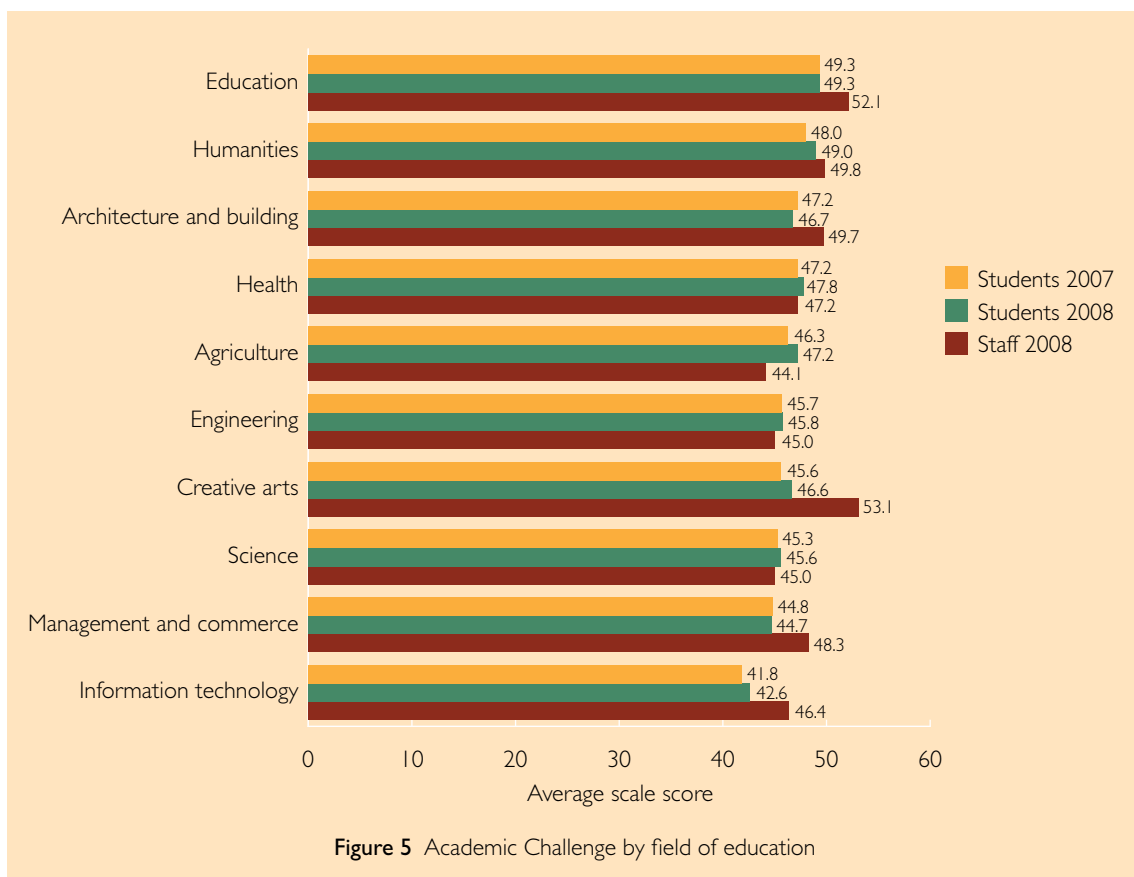
factors. This is the case with many aspects of student engagement, reinforcing the importance of detailed follow-up analysis by institutions. It is often the particularity that counts. A slight difference between year levels (45.9 for first-year students and 48.1 for later-year students) implies a very small increase in students' perceptions of the extent to which they are being challenged to learn. While the relationship between Academic Challenge and age is not direct, a similar difference is evident between students under 20 years of age (45.9) and those 20 years and over (47.7). As a group, females (48.0) report experiencing more educational challenge than their male counterparts (45.5).

Family educational background played a very small role in the perceptions of challenge reported by 2008 Australasian students, with average scores ranging from 46.8 for those whose parents do not have a university-level qualification, to 47.2 for those whose parents are university educated. Trivial differences such as this could also be observed when disadvantage (for Australian students) was calculated using a postcode, for

Indigenous students, and for students reporting a disability.

Unless it was over 30 hours, participation in paid work off campus was associated with a slight increase in perceptions of intellectual challenge, with scale scores rising from 46.8 for those who did not work to a high of 48.3 for those working around 23 hours. While very few students reported on-campus employment (9.3% – a rise from 6.9% in 2007), those working on campus for more than 26 hours per week had average Academic Challenge scores of 59.0 compared with 48.2 for others.

Compared with the demographic factors reviewed so far, broad field of education explains a relatively large amount of variation in Academic Challenge scores. Students see certain disciplines as more challenging than others. For instance, Figure 5 shows that 2008 Australasian average scores varied from 42.6 for the information technology field to 49.9 for education. The figures for 2007 are very similar, as is the ordering among fields.



As a point of reference, Figure 5 also includes average scores for staff teaching in each field. Health, engineering and science teaching staff view matters in a similar way to the students they teach. Students working in the field of agriculture see their work as more challenging than do their teachers. Interesting variations between students and staff can be seen in architecture, creative arts, business and IT – fields in which staff see the work as more challenging than students.

When considered at a narrower level of classification, the fields with the lowest scores – between 41 and 43 – are computer science, general management and commerce, information systems, and banking and finance. Conversely, scores between 50 and 53 were registered for political science and policy studies, human welfare studies and services, justice and law enforcement, law, and education.

Full-time students (44.7) reported a slightly higher average score than their part-time peers (47.4). Interestingly, Academic Challenge scores increased slightly with the proportion of study conducted online, possibly because learners were using online resources to push themselves to learn. Students reporting no online study had an average score of 45.8 on this scale, while those reporting that they undertook all or nearly all of their study online had an average score of 47.6. While online interactions correspond with modest increases in Academic Challenge scores, studying on campus (47.0) or via distance (47.0) made little difference. Such a finding may affirm the creative work that has been undertaken by distance educators in developing pedagogies in ways that help students learn. Similarly, living on campus or not made no difference to perceptions of challenge, with a mean score of 47.0 for both groups.

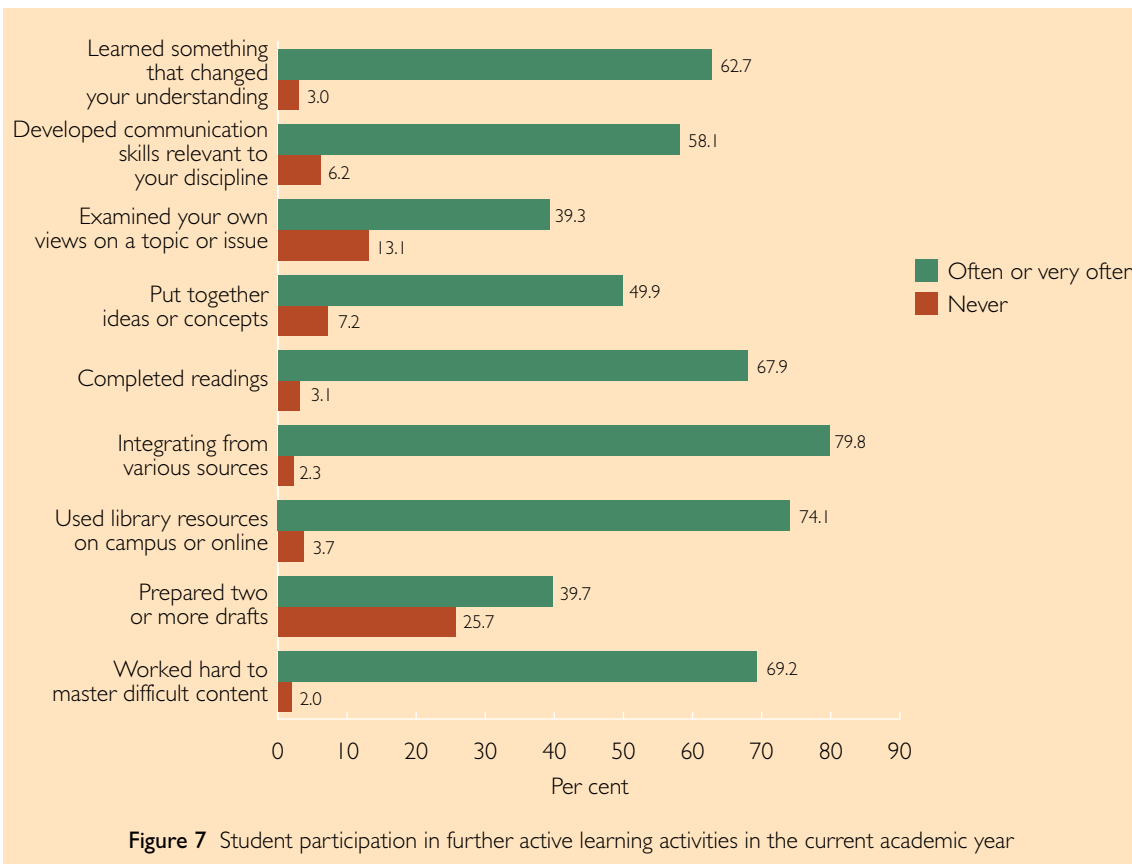
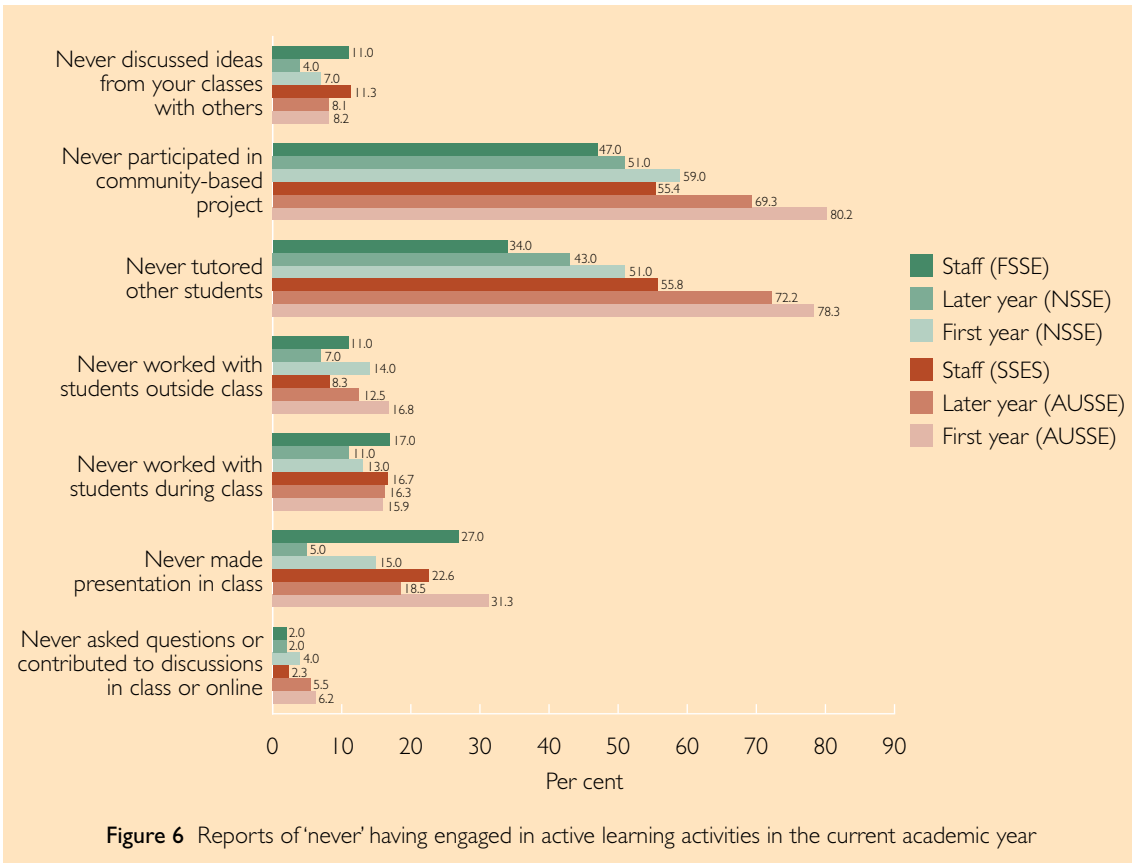
Active Learning

Engaging students in active learning lies at the heart of effective education. The AUSSE's Active Learning scale examines students' participation in experiences that involve constructing new knowledge and understanding. Seven items underpin this facet of engagement, focusing on whether students participate in class discussions and presentations, collaborate with and teach other students, and extend their learning beyond formal classroom contexts.

On the 0 to 100 reporting metric, the Australasian Active Learning average score was 37.9, up slightly from 35.7 in 2007. This average varied from 35.9 for first-year students to 40.0 for later-year students. Staff perceptions were on par with students', with averages for staff involved with first- and later-year students being 37.0 and 38.7. The standard deviation of the Australasian figures was 15.7. The USA year-level figures are 42.5 and 50.8 respectively.

Examining the percentage of students who report 'never' engaging in specific active learning activities helps expose areas in need of improvement. Figure 6 shows the proportion of first- and later-year students who report 'never' having engaged in these activities. Only 5.9 per cent (down from 9.6% in 2007) of all students reported never asking a question in class, but a quarter (24.9%) reported not having made a class or online presentation during the current academic year. As with communication, collaboration is important in many areas of professional work, yet 16.1 per cent (down from 23.2% in 2007) of Australasian students reported never having worked with other students during class, a figure similar to that for out-of-class work (14.6%). Teaching fellow students is an excellent way to learn, yet 75.3 per cent of all respondents indicated that they have never tutored or taught other students. A similar number (74.7) reported never having taken part in a community-based project. This figure reduces from 78.3 in first year to 72.2 in the later year, but it is of concern that the vast majority of Australasian students have not had the opportunity to expand their learning through service or community work. Participation in community-based projects is likely to increase in coming years as a result of the curriculum redesigns that are planned or underway at many Australasian universities.

Average results for staff are incorporated into Figure 6 for the purposes of comparison. Staff perceptions appear to be generally similar to those of students with the exception of service learning and peer-tutoring activities. Figure 6 also includes results for USA (NSSE) students and faculty (FSSE). Interestingly, the relationship between students and staff is similar in Australasia and the USA with the possible exception of working with students during class or making a presentation in class. In these two areas, the expectations of USA faculty tend to be lower



than the perceptions of USA students. Further indicative analyses of this nature can be pursued by reference to the FSSE 2008 Total Grand Frequency Report (NSSE, 2008b).

Figure 7 presents summary statistics for a number of further active learning activities. It displays the extent to which students report 'never' or 'often or very often' participating in the activities. Each of these items, as with all SEQ items, is underpinned by an empirically proven theory on effective learning, and the results here are presented as a springboard for further analysis. Just over an eighth of responding students report never examining their own views on a topic or issue and around a quarter reported never preparing two or more drafts of an assignment before handing it in. Only around a third of Australasian first- or later-year students prepare drafts on a frequent basis. Around three-quarters of students use library resources on a frequent basis, and just over two-thirds frequently push themselves to master difficult content.

The institution at which a student is enrolled explains 4.5 per cent of the variation in Active Learning scale scores, with scores ranging from 29.4 at one institution to 45.1 at another. Regardless of their year of enrolment, students aged 20 years or older tend to have marginally higher results (38.9) compared with younger learners (36.3). The difference between males (37.8) and females (38.0) is small, as is the difference between students for whom English was the main home language (37.9) or those who spoke another language at home (38.3). International students reported slightly higher levels of active learning (39.5 compared with 37.8 for others)

Engaging in active forms of learning does not appear to be influenced by having a disability (37.9 compared with 38.4 for others), by family education background (38.2 for first-in-family students compared with 37.7 for others), by being Aboriginal or Torres Straight Islander (40.4 for ATSI students, compared with 37.9 for other students) or by being Māori or a Pasifik Islander (38.0, compared with 36.0 for other students).

Like Academic Challenge, Active Learning scores do vary across different fields of education. Humanities (34.9) and science (36.4) students report the lowest scores, in contrast to

architecture (42.5) and education (43.4) students – similar patterns to those found in the 2007 AUSSE. While the way in which a student finances their study appears to have little relationship to active engagements in learning, those studying on campus had higher levels than others (38.7 compared with 33.2), as did those studying full time (38.9 compared with 31.6 for part-time students). Living on campus was linked with a marginally greater amount of participation in active learning (38.8, compared with 37.8 for non-residential students).

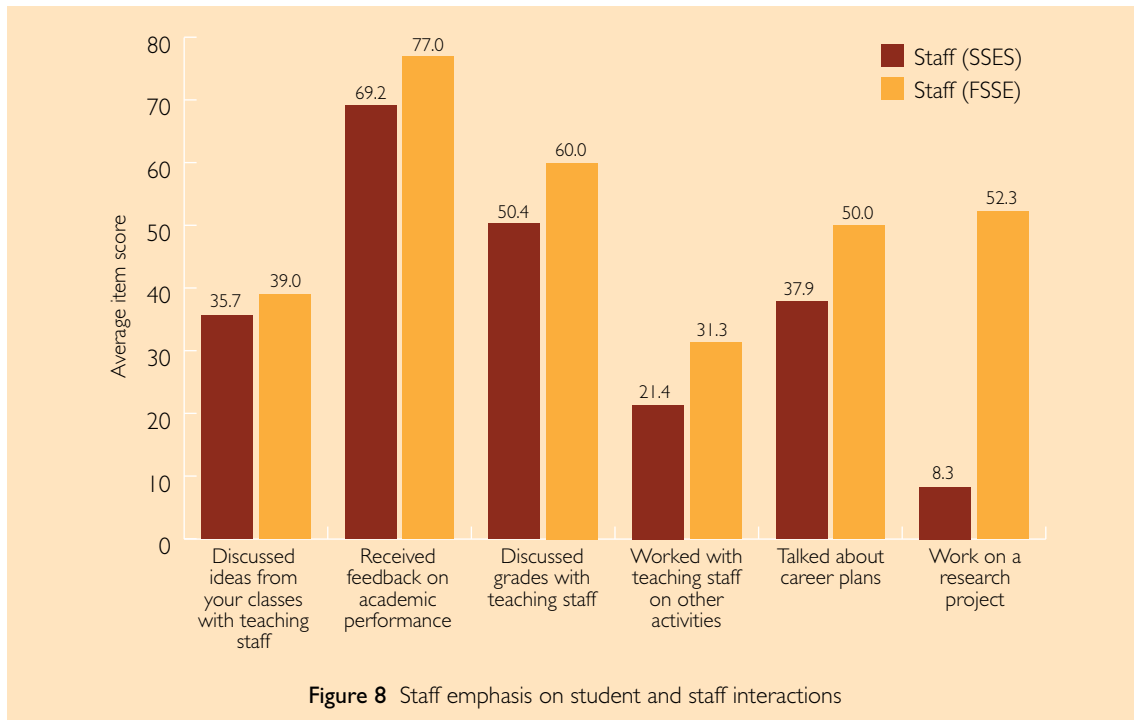
Active learners tended to spend more time each week preparing for class, were working for pay on- or off-campus, participated in extracurricular activities, spent fewer hours relaxing and socialising, spent more time managing their personal business, and spent more time travelling to and being on campus.

Student and Staff Interactions

The interactions that students have with staff have been shown in numerous research studies to be among the most important determinants of high-quality learning. Learning and development has been shown to improve when students have opportunities to contact academics – particularly beyond class, when such contact is academic rather than administrative in nature, when interactions extend beyond the formal curriculum into more general intellectual territory, and when academics can engage with the learner as an individual (Astin, 1993; Kuh & Hu, 2001).

The AUSSE Student and Staff Interactions scale measures both the level and nature of students' contact with teaching staff. On the 0-100 point reporting metric, the average score for the Student and Staff Interactions scale was just 22.2 – 19.8 for first-year students, rising to 24.5 for later-year students – and with a standard deviation of 15.5. These results are marginally higher than in 2007, which found average scores for first- and later-year students of 18.3 and 23.9 respectively. Interestingly, staff see themselves as having more interactions with students than do students, with means varying from 40.6 and 41.8 across the two year levels. Comparative student figures for the USA are notably higher at 34.6 and 42.3.

Clearly this is an area in which it is useful to compare the perceptions of USA and Australasian



academic staff. Figure 8 reports average staff scores for the items in the Student and Staff Interaction scale. The results, which are sorted by difference in item averages, suggest that the greatest divergence in staff emphasis is for those aspects of student and staff interaction that extend beyond the classroom. These areas – which, as noted, are among the most important in terms of contributing to student learning and development – are emphasised more by USA staff.

Analysing item-level responses illuminates the characteristics of this aspect of engagement. Despite emphasis in policy-level conversations about research-led teaching, only 2.2 per cent of first-year students and 5.9 per cent of later-year students reported working on a research project with a staff member outside of coursework requirements. While a range of factors limit student engagement in this area, clearly these numbers are very low, and pose a challenge for researchers and practitioners who are searching for ways to better connect these pillars of university work.

Figure 9 reports on five items in the Student and Staff Interactions scale for first and later-year students. These results are concerning. Only around a fifth of responding students report discussing grades with teaching staff 'often' or 'very often'. It is troubling that 60.8 per cent of first-year

and 46.0 per cent of later-year students report 'never' talking about career plans with teaching staff or advisors, and that a similar number (43.5 and 54.7 for each year level) report never discussing ideas from readings or classes with teaching staff outside class. Such conversations can play important socialising and motivating roles, and help students endorse or review their educational choices. Higher education research has shown beyond-class interactions play a formative role in student learning. In this area, 81.7 per cent of first-year students reported they had never worked with teaching staff on activities other than coursework. This figure fell to 71.7 per cent for later-year students.

It might be expected that this is a facet of engagement that students and staff perceive in different ways. To that end, Figure 9 presents indicative results from the SSES. Indeed, there is a divergence between student and staff views for all reported items. For most items, staff predict that around a third fewer students report that they never take part in an activity than is actually the case. At the other end of the scale, they perceive that more students take part in the measured activities on a very frequent basis.

Figure 10 explores the AUSSE figures from another perspective, this time by comparison with results from the 2008 NSSE. The chart shows

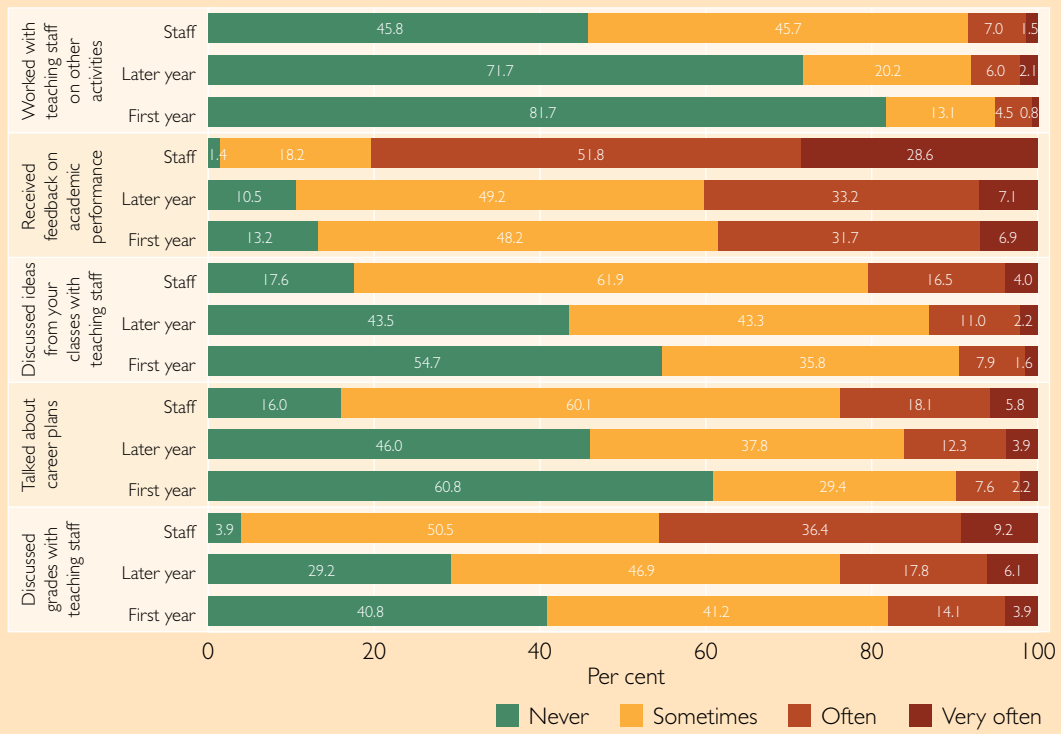


Figure 9 Student and staff perceptions of their interactions by year

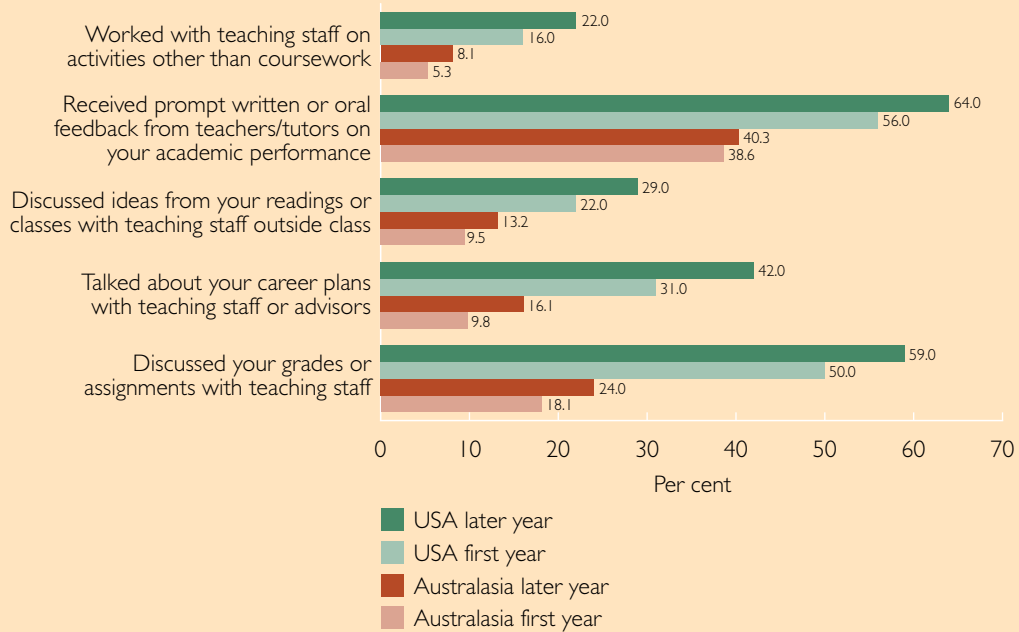
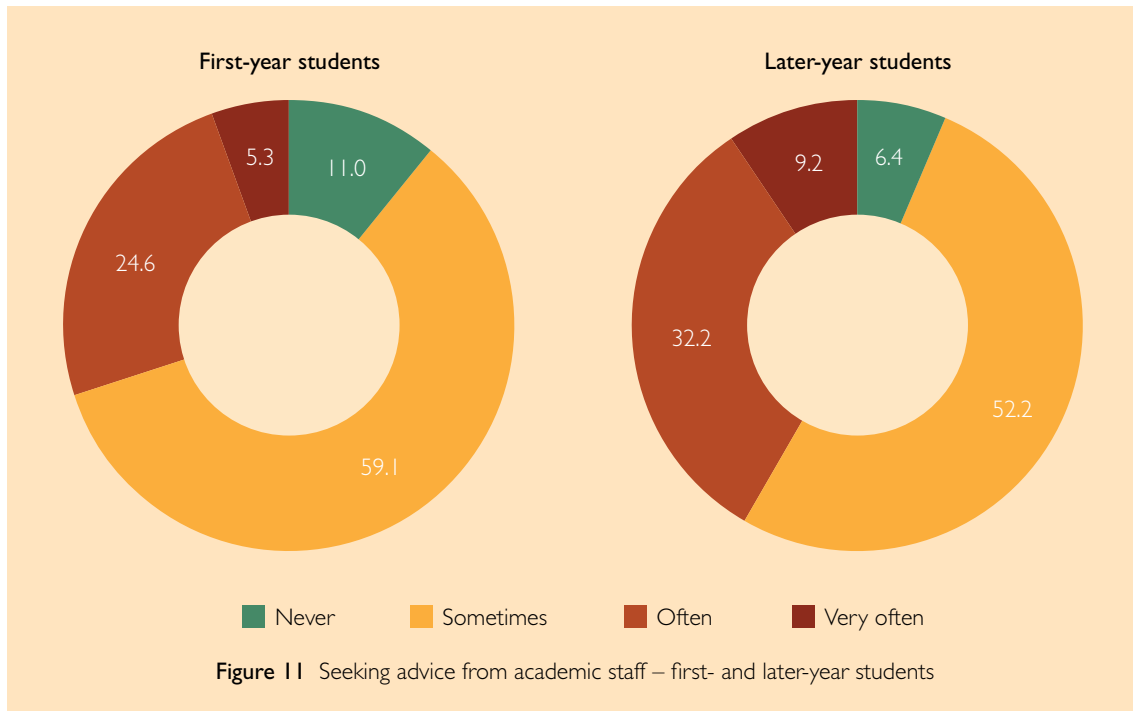


Figure 10 Interactions with staff 'often' or 'very often' – Australasian and USA students



the extent to which students report engaging 'often' or 'very often' (as opposed to 'never' or 'sometimes') in various staff interactions for both first- and later-year respondents to each survey. Clearly the NSSE results are significantly higher, as is the growth between year levels. These high level cross-national statistics would appear to emphasise the value of undertaking more detailed comparative analysis in this area.

Later-year students are more likely than first-year students to seek advice from academics, possibly due to their maturity as learners, smaller class sizes, and the intellectual demands associated with later-year study. Although the absolute figures are pleasingly small, Figure 11 shows that first-year students were nearly twice as likely to report never seeking advice from staff – 11.0 per cent compared with 6.4 per cent. Overall, 41.4 per cent of later-year students reported 'often' or 'very often' seeking advice from staff, compared with under a third (29.8%) of first-year students. Similarly, while 61.8 per cent of later-year students reported using email or a forum to communicate with teaching staff on a frequent basis, less than half (48.1%) of Australian first-year students reported such engagement.

International students reported higher levels of interaction with staff than domestic students – 27.8 compared with 21.5 – as did students with a

home language other than English (25.4 compared with 21.5). Both these patterns were observed in 2007. Age-related variation in average scores ranged from 19.0 for learners 20 years and under to 23.9 for those aged 20 years or older.

Other demographic factors tended to explain relatively low levels of variation in Student and Staff Interactions scores. The influence of gender, for instance, was small, with average scores of 21.4 for females and 23.0 for males. Indigenous Australians reported higher interaction with staff (26.4) compared with non-Indigenous Australian students (22.0), a difference not repeated for Māori or Pasifik Islanders. Students' family education background or home postcode bore no relationship to their interaction with staff. Students with a disability (24.5) reported slightly higher levels of staff interaction than others (21.9).

There is a reasonable amount of variation among institutions on this facet of student engagement, with average scores ranging from 19.2 at one institution to 27.0 at another. As discussed in an AUSSE Enhancement Guide, this points to the likely value of cross-institutional benchmarking in this area. Discussions at the AUSSE seminars and workshops undertaken in 2008 exposed a range of different policies and approaches used by institutions in this area.

In relation to broad field of education, average Staff and Student Interactions scores ranged from 19.4 for respondents in engineering to 26.7 for agriculture. Full-time students (22.4) and part-time students (20.2) varied very little in terms of their interactions with staff. Interestingly, people studying on campus had the same score as those studying externally (22.1). Students living on campus (22.8) tended to interact with teachers more than those living off campus (20.0). Unexpectedly, given the emphasis on student-staff interaction in the online learning research literature, the proportion of study undertaken online had very little relationship to this area of engagement. Respondents who reported taking no study online had a mean score of 21.2, while those taking all or nearly all of their study online had a mean score of 22.3 on the Student and Staff Interactions scale.

At the cross-national level, students who work for pay on campus, participate in extracurricular activities, or spend longer preparing for class are more likely to interact with staff than others. These results are consistent with research that affirms the educational value of working on campus and participating in extracurricular activities. On-campus employment is proposed to offer students a greater sense of community inclusion as well as opportunities directly related to interactions with academics.

Similarly, working off campus had a small but positive relationship to students' interactions with staff. The mean score for students not working was 21.7, compared with 23.2 for those working between 21 and 30 hours. People who worked off campus for many hours per week may take more deliberate steps to make contact with staff beyond formal teaching hours.

The importance of this facet of engagement was affirmed during the AUSSE workshops held in 2008. There is no question that educational interactions with staff are seen as important. Given the relatively low engagement levels on this scale, it is important to identify practical and effective interventions that are likely to enhance practice in this area. This is a complex but significant aspect of engagement. Any solution is likely to be multifaceted and necessarily shaped by each institution's unique environment. Two AUSSE Enhancement Guides have been prepared to help planning and improvement in this area.

Enriching Educational Experiences

A considerable amount of learning at university takes place outside formal learning environments (Griffin, Coates, McInnis & James, 2003; Scott, 2006; Krause & Coates, 2008). While this aspect of university education appears to have dropped off significantly in the last few decades, participation in beyond-class experiences plays an important role in the broader developmental outcomes of higher education. The AUSSE Enriching Educational Experiences scale measures this critical aspect of student engagement.

Across Australia and New Zealand, results for the Enriching Educational Experiences scale are low, with the cross-national mean being 25.0 and standard deviation 12.9. This mean reflects a slight increase from 23.2 among first-year students to 26.8 among later-year students – about the same as in 2007. Interestingly, the indicative staff observations of student engagement in this area are greater than students themselves report, with average scores of 45.1 for those teaching more first-year students to 45.9 for those teaching more later-year students. In the USA, mean scores for first- and later-year students increased from 27.5 to 40.5.

Of the six AUSSE scales, this area of engagement may be the most culturally specific. For instance, USA first-year students routinely live on campus, often as a matter of institutional policy. In Australia and New Zealand, only 13.4 per cent of first-year and 5.2 per cent of later-year students reported living on campus in a university college or hall of residence. In the USA context, many Australasian institutions could be stereotyped as 'large urban commuter institutions'. This may have flow-on implications for students' participation in certain 'enriching experiences'. This point is made to contextualise comparisons between NSSE and AUSSE results, not to downplay the fundamental importance of this facet of engagement.

Figure 12 reports a series of such comparisons. It shows, for example, that compared with USA students only a small number of Australasian students report participating in internships, community service, culminating final-year experiences and foreign language study. Given the considerable internationalisation of Australasian higher education (AEI, 2008; RBA, 2008; INS, 2008), the number of students who take part in study abroad and exchange programs is also very low.

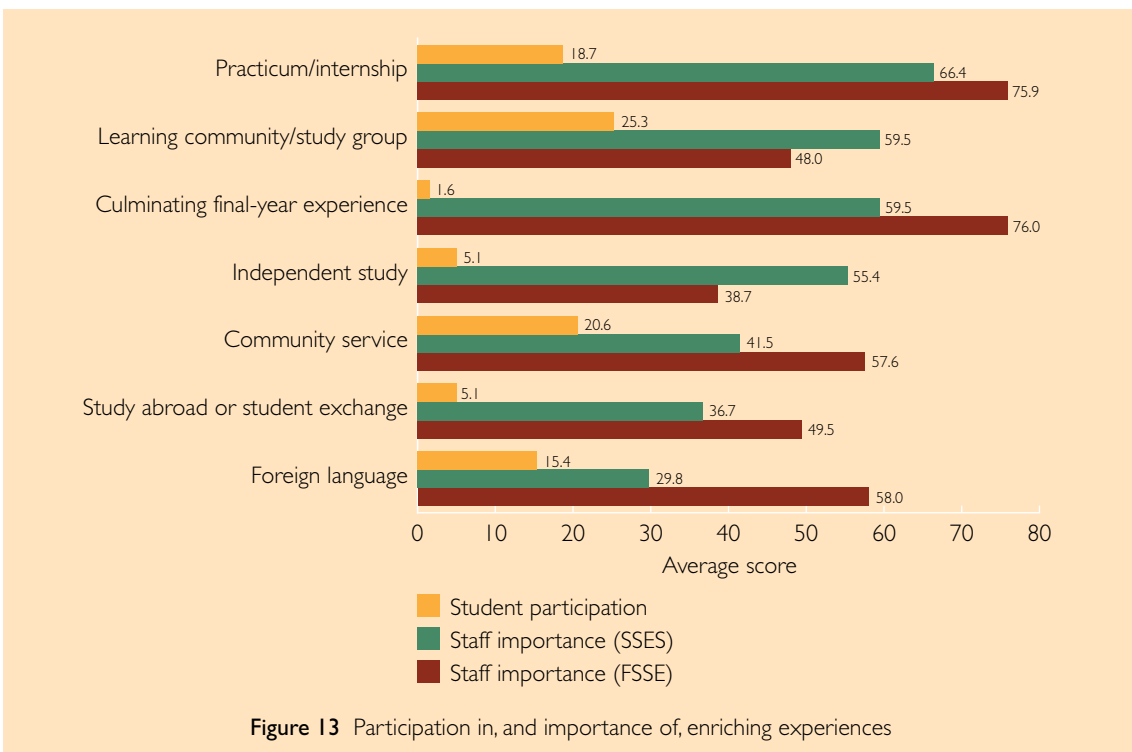
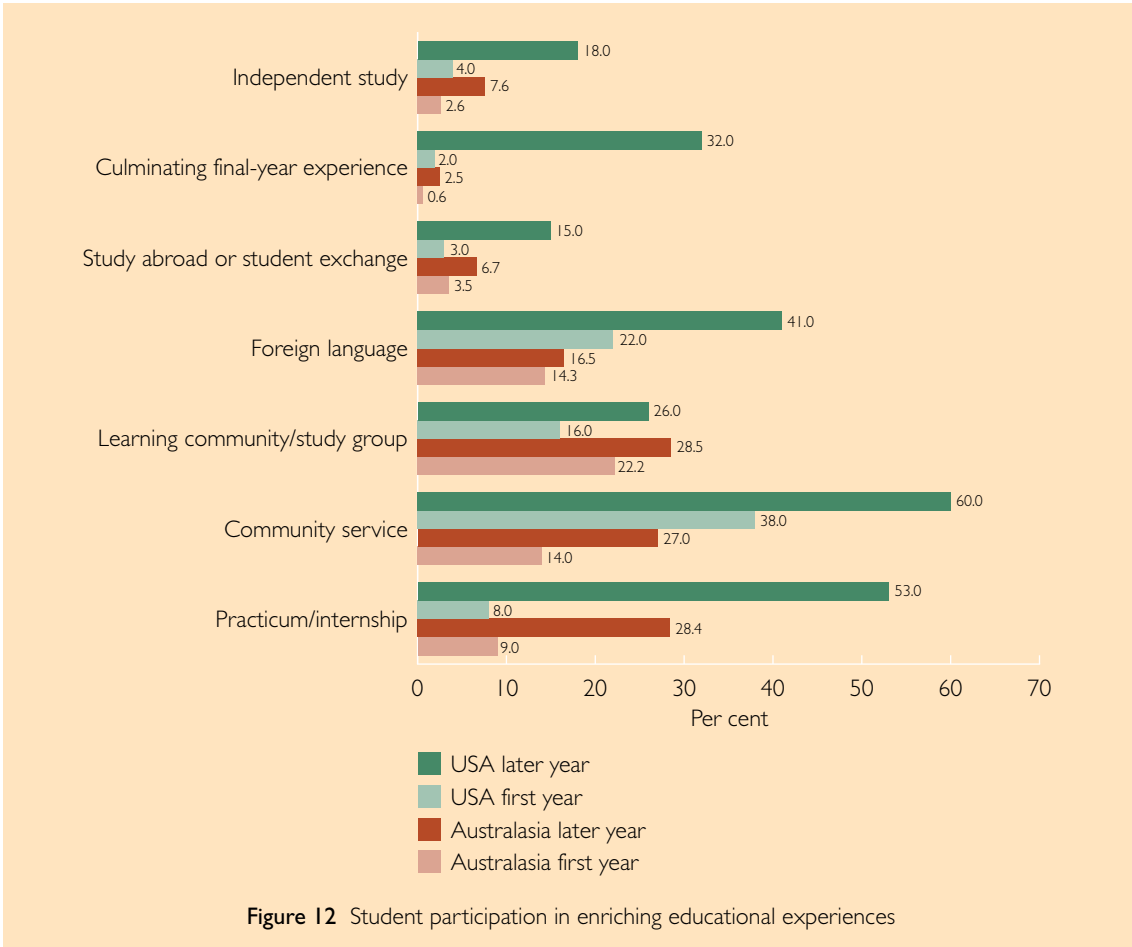
Living on campus is a good way to learn to motivate self learning and to have others around you who are doing the same helps.

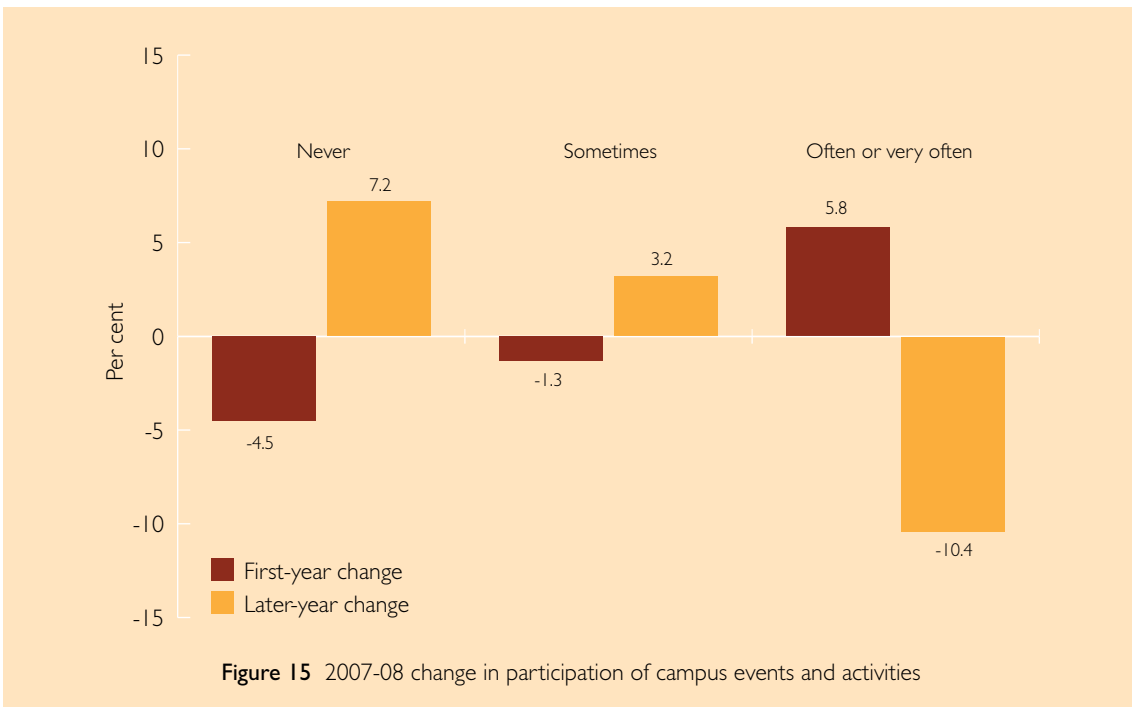
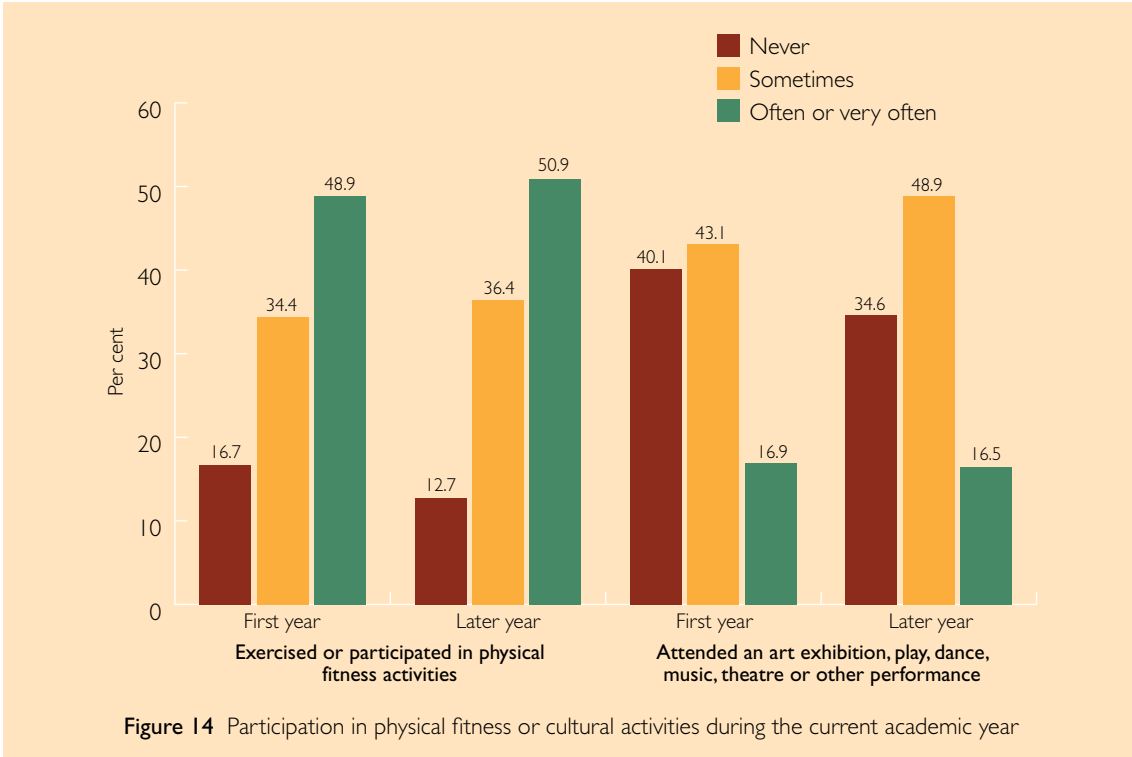
– Later-year female nursing student

There should be more group projects and teachers should encourage local students to engage with students from different ethnic backgrounds while working on these projects. There is hardly any interaction between local and international students.

– Later-year male engineering student







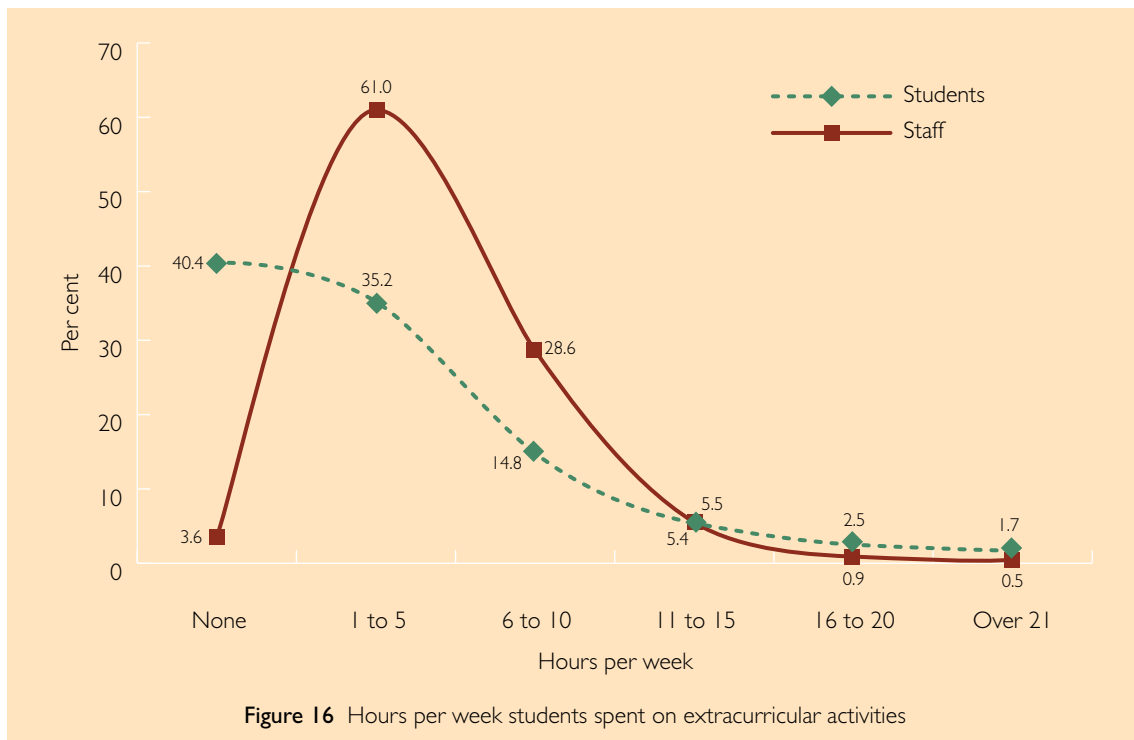
The results shown in Figure 12 are concerning because, as Figure 13 reveals, teaching staff generally place a considerable amount of importance on these activities (academics were asked to rate the importance rather than frequency of student participation). Figure 13 includes average participation scores for all students, showing a discontinuity between the emphasis given by staff and the engagement of students. Results for USA faculty, captured via the FSSE, are also reported in Figure 13. Broadly, USA staff appear to place greater importance than their Australasian colleagues on out-of-class experiences. Explored in greater detail at the institutional level, results such as this can be used to inform the management and change of university curriculum.

As a counterbalance to these figures, Australasian students report frequent interaction with students from different ethnic groups, and with those who have different religious beliefs, political opinions or personal values. This is encouraging, suggesting that universities provide space for people to encounter diversity and experience difference. As Figure 14 shows, around half of all Australasian students reported participating in physical fitness activities (not necessarily at the university) 'often' or 'very often' during the current academic year;

with the percentage rising slightly between first-year students and later-year students. The rate of attendance at cultural events also rose.

Figure 15 reports the change in first- and later-year students' participation in campus events and activities. These high level results are for all Australasian universities combined. These difference statistics show that between 2007 and 2008, 5.8 per cent more first-year students reported participating 'often or very often' in such activities – a positive sign. Conversely, compared with 2007, in 2008 10.4 per cent fewer final-year students reported frequent participation in campus events and activities. These high level results are interesting given the considerable amount of attention focused on these aspects of university education in the last five years. Building a full picture of this aspect of students' engagement, however, requires deeper analysis involving exploration of rates of participation in terms of various individual and educational characteristics.

Figure 16 shows that Australasian students spend on average only a very small amount of time participating in extracurricular activities, with 40.4 per cent reporting no such engagement, and the second highest group (35.2%) spending between



one and five hours per week. Teaching staff have a different perspective, however, predicting that only 3.6 per cent of students take part in no extracurricular activities, and that around 90 per cent would take part for around one to 10 hours each week.

Results hovered around the Australasian average of 25.0 for different age groups (23.7 for respondents under 20 years of age and 25.9 per cent for others), and males (24.2) and females (25.6). There was some variation in mean scores for extracurricular participation across institutions (ranging from 21.9 to 27.7), citizenship (international students had a higher mean of 27.2), and language background (26.4 for those with a main home language other than English). Disability, family education background and being Indigenous had little influence on participation in extracurricular activities.

As might be expected, full-time students reported participating in more enriching experiences than part-time students (a mean score of 25.6 compared with 21.3), as did on-campus students compared with those studying by distance (mean scores of 25.2 and 24.3 respectively). Of interest was the finding that living on campus made little difference to this aspect of student engagement (26.6 compared with 24.9 for students living off campus).

As in 2007, students in the health and education fields reported the highest levels of participation in extracurricular activities (27.7

and 27.2 respectively), compared with students in architecture and building and information technology fields (22.3 and 22.7 respectively).

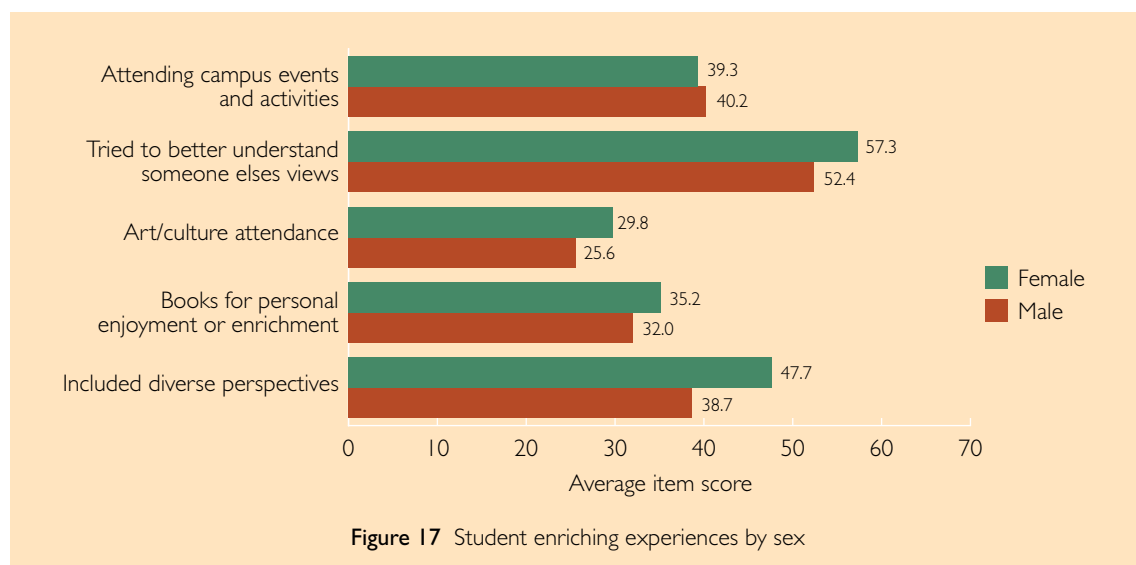
Participation in enriching activities remained constant irrespective of the number of hours spent in off-campus paid work, the exception being when paid work commitments were more than 30 hours per week. As noted elsewhere, off-campus employment does not appear to be linked with decreased perceptions of engagement. In comparison, working for pay on campus is associated with greater participation in enriching experiences.

The Student Engagement Questionnaire captures information on a wide range of enriching experiences in addition to those that underpin the AUSSE scale. Figure 17 shows, for instance, that in many of these additional areas, females report higher mean scores than males.

Supportive Learning Environment

Students' perceptions of the extent to which their institution has supported their learning is an important index of their sense of inclusion within a university learning community. Such institutional support, measured by the AUSSE Supportive Learning Environment scale, balances the individual qualities of engaging with learning.

The Australasian mean on the 0 to 100 reporting metric for the Supportive Learning Environment scale was 53.1, with a standard deviation of 17.2



– cross-national figures almost identical to those reported in 2007. This was the only scale that saw a decrease across year levels, with first-year Australasian students having a mean of 55.0 (up from 51.2 in 2007) and later-year students a mean of 51.3 (up marginally from 49.9 in 2007). Interestingly, this same decrease is evident in the NSSE year level estimates, which decline from 61.1 to 58.0. While academic staff who took part in the SSES reported broadly similar views to students, the year level averages did not follow the same trend (57.6 for first-year students, and 58.1 in relation to later-year students).

Figure 18 presents results from a selection of three of the six items in this scale, highlighting the degree to which respondents reported their institutions had emphasised a range of supports. A total of 64.4 per cent (up from 56.6 in 2007) of Australasian students reported that their institutions provide them with the support they need to succeed academically 'quite a bit' or 'very much'. By contrast, only 18.1 per cent (around the 15.7 average reported in 2007) reported feeling the same level of support in relation to help coping with non-academic responsibilities. The responses suggest that students generally do not feel they are given supports that would help them to socialise. As before, this may be linked to the common lack of on-campus living and associated activities for the majority of students.

Australasian students see themselves as being supported more by their peers than by teaching staff or administrative personnel and services. Around three-quarters (75.4%) report feeling high levels of support from other students, compared

with around two-thirds (67.4%) from teaching staff and just over half (53.2%) from administrative personnel. These results are consistent across year levels. Intuitively, this makes sense. Given the importance of supporting learners, however, it reinforces the value of generating conditions which enhance academic collaboration and social interaction.

To tease out differences in perceptions of the quality of students' supportive relationships, Table 4 reports percentage figures for both student and staff responses. The figures are reasonably well aligned, although staff perceive that students, teaching staff and administrative personnel all provide greater support to students than do students themselves. Interestingly, the greatest difference is in relation to student and staff perceptions of the support students receive from other students.

These findings highlight the importance of institutions putting in place conditions that provide students with the support that they need to socialise. Universities are large and foreign places for many students and, particularly with an increasingly diverse student body, it is important that structures are in place to assist people to enculturate into institutional life. Figure 20 reports average scores for this item. The response category for this item ranges from 'very little' (scored 0), 'some' (33.3), 'quite a bit' (66.7) and 'very much' (100). The average scores highlight that first-year males feel the most supported, and that there is not much difference between first-year males and females. Students' sense of being supported by their institution declines in later

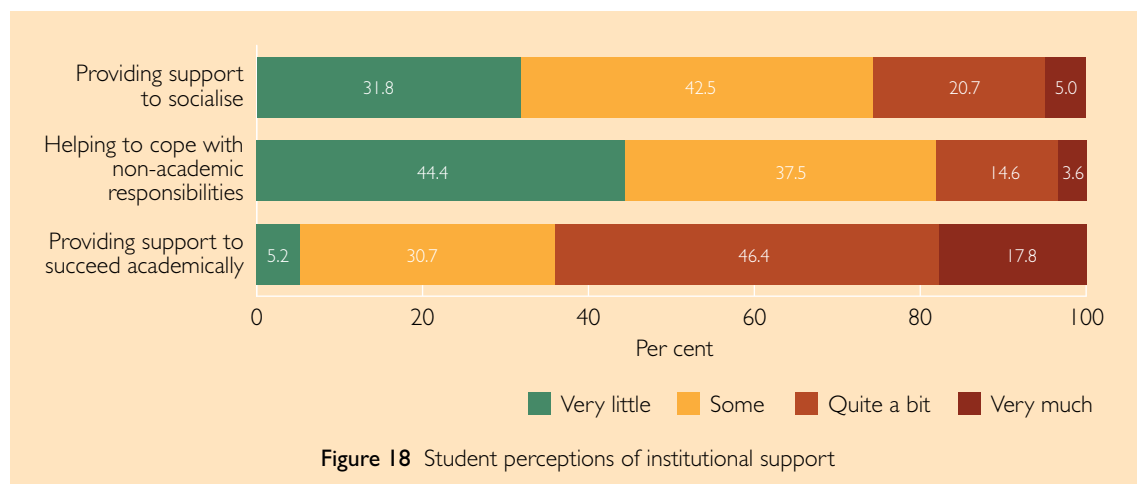
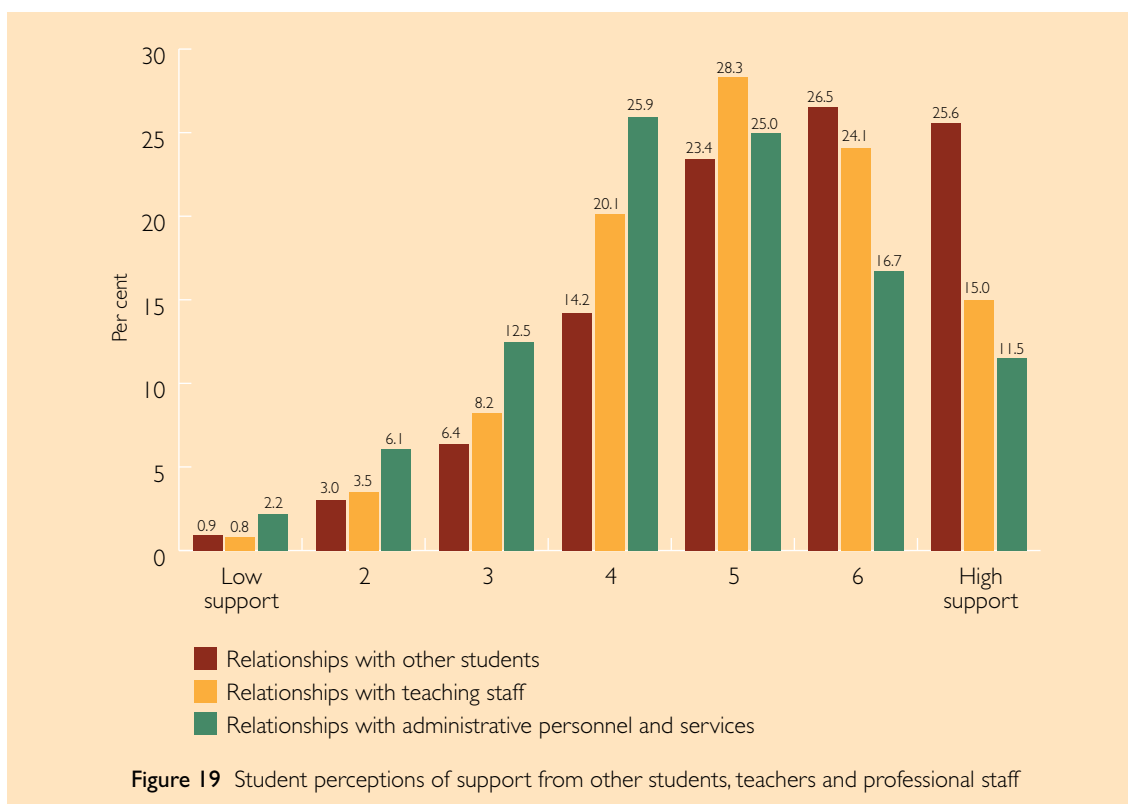


Figure 18 Student perceptions of institutional support



year, however, by around six to seven percentage points. The decrease is similar for males and females.

As with the phenomenon of student engagement itself, the Supportive Learning Environment scale emphasises the institution-wide nature of student engagement. This is a general characteristic of many of the AUSSE scales, and an AUSSE Enhancement Guide has been developed that sets out how this perspective could be used to inform planning and practice.

Table 5 reports the participation of students from different fields and year levels (first year (FY), later year (LY)) in three different support activities. The year/field groups are sorted in ascending order by item mean scores for each group. By way of example, of the groups shown, first-year business students are the least likely to seek advice from academic staff, while later-year agriculture students are the most likely. While later-year architecture students are the least likely to use student support services, first-year business students are the most

Table 4 Staff and student perceptions of the quality of relationships

	Students			Staff		
	Other students	Teaching staff	Administrative personnel and services	Other students	Teaching staff	Administrative personnel and services
Low support	0.9	0.8	2.2	0.1	0.0	1.2
2	3.0	3.5	6.1	0.9	0.9	3.1
3	6.4	8.2	12.5	2.8	3.4	8.7
4	14.2	20.1	25.9	16.6	15.3	25.3
5	23.4	28.3	25.0	34.1	33.5	29.7
6	26.5	24.1	16.7	29.5	29.1	20.1
High support	25.6	15.0	11.5	16.0	17.8	11.8

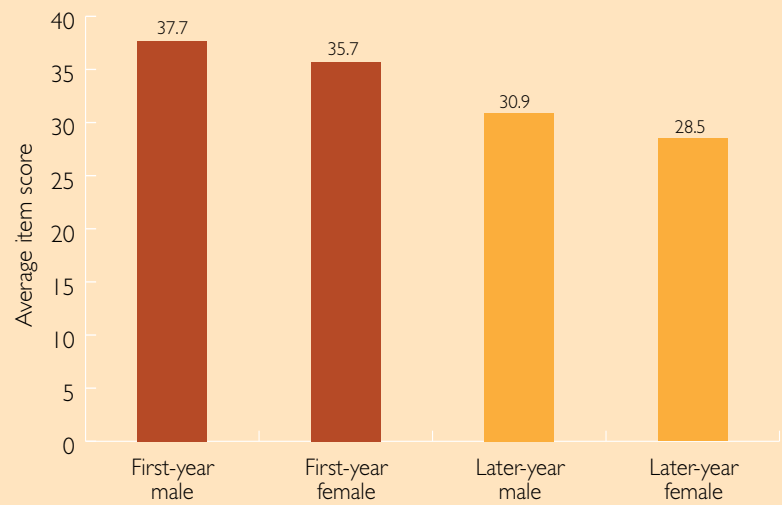
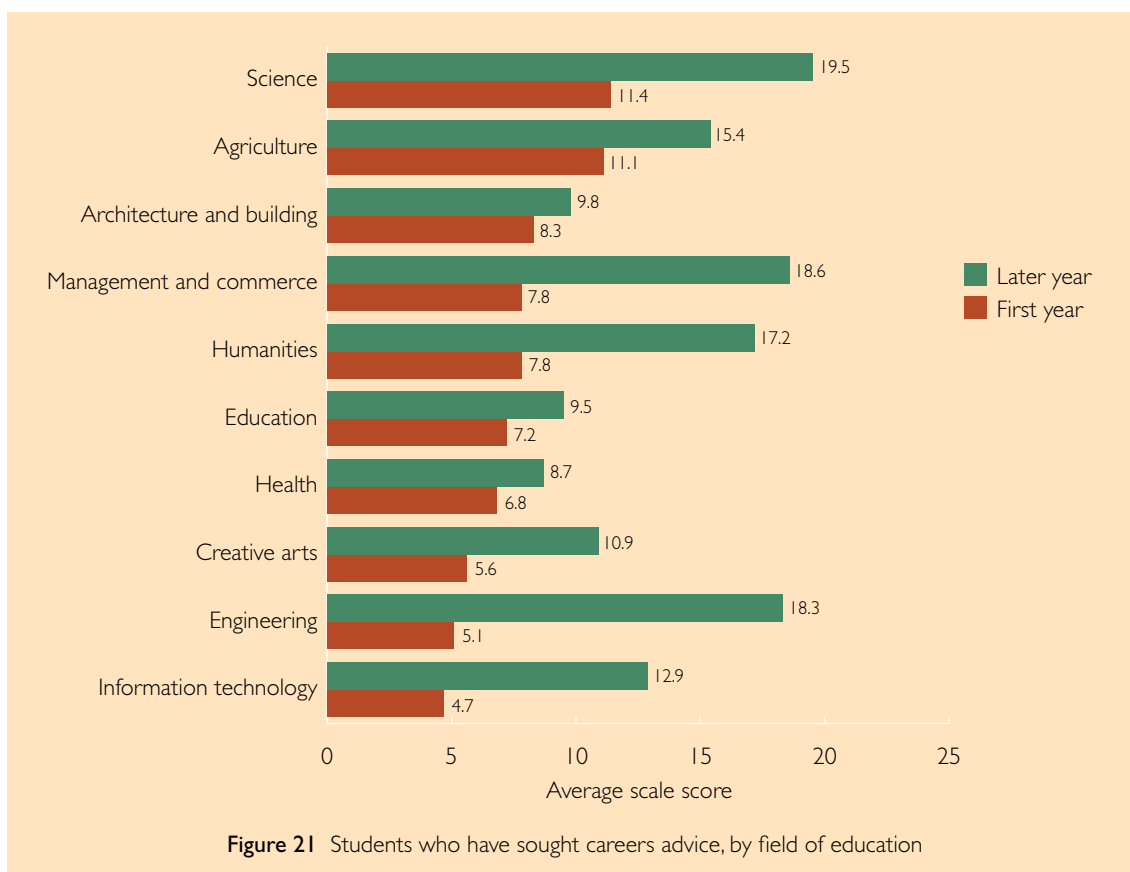


Figure 20 Student perceptions of the support needed to socialise

Table 5 Use of support services by field and year

Sought advice from academic staff	Used student learning support services	Consult a university careers service for advice
Business (FY)	Architecture (LY)	IT (FY)
Engineering (FY)	Education (LY)	Engineering (FY)
Science (FY)	Engineering (LY)	Creative Arts (FY)
Humanities (FY)	IT (LY)	Health (FY)
Health (FY)	Creative Arts (LY)	Education (FY)
All fields (FY)	Creative Arts (FY)	All fields (FY)
IT (FY)	IT (FY)	Business (FY)
Business (LY)	Science (LY)	Humanities (FY)
Agriculture (FY)	Architecture (FY)	Architecture (FY)
Architecture (FY)	Humanities (LY)	Health (LY)
Engineering (LY)	All fields (LY)	Education (LY)
Humanities (LY)	Engineering (FY)	Architecture (LY)
Education (FY)	Humanities (FY)	Creative Arts (LY)
Creative Arts (FY)	Agriculture (LY)	Agriculture (FY)
IT (LY)	Education (FY)	Science (FY)
All fields (LY)	Science (FY)	IT (LY)
Health (LY)	Agriculture (FY)	All fields (LY)
Education (LY)	All fields (FY)	Agriculture (LY)
Science (LY)	Health (LY)	Humanities (LY)
Architecture (LY)	Health (FY)	Engineering (LY)
Creative Arts (LY)	Business (LY)	Business (LY)
Agriculture (LY)	Business (FY)	Science (LY)



likely. Later-year students from most fields are more likely than first-year students to consult a university careers service for advice, although agriculture and science students reported high rates of consultation in their first year. As with other aspects of the AUSSE, results such as these provide a basis for monitoring, planning and managing students' engagement and aspects of service provision.

Interestingly, very few individual or educational characteristics were associated with student perceptions of overall institutional support, implying that most variation may reside within individual respondents themselves. Institutional averages varied from 50.1 to 57.6. While the difference is small, students aged less than 20 years reported slightly higher average levels of engagement on this scale than their older counterparts. The average score was 55.3 for those less than 20 years (up from 51.9 in 2007), compared with 51.8 for those 20 years or older (up from 49.7 in 2007).

Differences between fields of education ranged from a score of 51.5 for architecture and building

students to 54.6 for science students. Students studying online felt just as supported as others, while those living on campus reported higher means (57.9) than non-residential students (52.6). Respondents studying full-time and part-time tended to have similar perceptions of institutional support (50.6 and 53.4 respectively), as did those studying on campus (53.4) and those studying externally (51.4).

While students working for pay on campus reported greater feelings of support from their institution (an average of 58.5) than those not taking part in such work (52.6), the hours spent working for pay off campus were correlated with slight, but steady, decreases in perceptions of support. The 28.1 per cent reporting no off-campus work activities had an average score of 54.0 (up from 51.8 in 2007). This dropped to 49.1 (46.9 in 2007) for those working more than 30 hours a week.

The 2008 Student Engagement Questionnaire invited respondents to report whether they had sought advice from a university careers service. Overall, very few students reported such contact,

the cross-national mean score being 11.1 on the 0-100 point scale. New Zealand (13.4) students had slightly higher averages than their Australian (10.7) counterparts, as did later-year students (14.7) compared with first-year students (7.5). There was, however, considerable variation across institutions, with average scores ranging from figures of 5.5 and 5.7 at two institutions to 16.6 and 16.8 at others. While most aggregate demographic and educational characteristics had little relationship with seeking careers guidance, Figure 19 shows that there was variation among fields, and often within each field between year levels. This variation appears greatest for students taking more generalist degrees in fields like science, agriculture, engineering, the humanities and IT, and least for students enrolled in professional qualifications for fields like education, health and architecture.

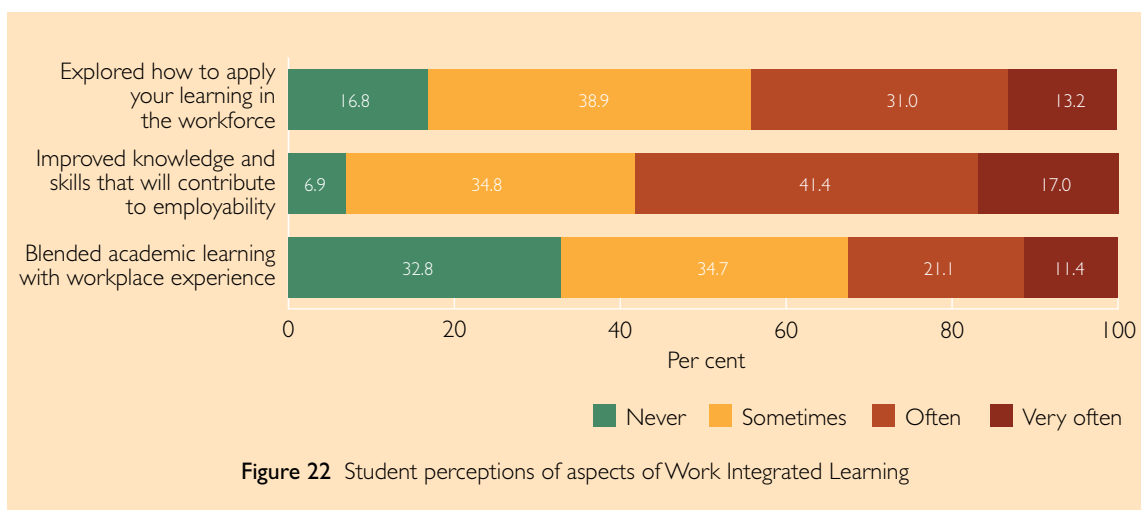
More generally, the AUSSE asks about the use of student learning support services. Australian students (30.8) reported greater use than their New Zealand colleagues (25.6). The difference between year levels was marginal, however, with average scores falling from 30.1 to 29.0 between first and later years. Certain student groups reported greater use of student learning support services than others, such as disabled students (34.4 and 29.4 for those not reporting a disability), international students (42.5, compared with 28.4 for domestic students) and students without English as their home language (38.0 compared with 28.2 for all other students).

Work Integrated Learning

The Work Integrated Learning scale measures the extent to which learners have blended academic learning with workplace experience. Developing work-ready graduates is an increasingly important function of higher education, even in institutions and areas of study that emphasise more general or liberal forms of education.

In 2008, the average Work Integrated Learning score for Australasia was 45.2, around the same as the 2007 score of 44.4. The standard deviation was 22.4. The scores rose from a mean of 40.1 for first-year students to 50.1 for later-year students – a similar trend as that found in 2007. This scale is unique to the AUSSE and, consequently, there are no NSSE reference values for comparison. The perceptions of staff do provide a comparative perspective, however, with perceptions in relation to the work readiness of first- and later-year students increasing from 53.2 to 59.1. This suggests that staff who teach first-year students see their material as more 'work relevant' than students, but that the staff-student perceptions are more aligned by later years.

Figure 22 separates students' responses to three items in the Work Integrated Learning scale which ask students how often they have done certain activities in the current academic year. Across Australasia, 16.8 per cent of all students reported that in the current academic year they have never explored how to apply their learning in the workforce – down from 19.1 in 2007. Of all students, 58.4 per cent reported 'often' or 'very



often' improving knowledge and skills that will contribute to their employability – around the same number as 2007. Almost a third of students, 32.8 per cent, reported never blending academic learning with workplace experience.

Scale scores for this facet of student engagement varied considerably across institutions, ranging from 36.5 at one to 55.0 at another. While association with a particular institution explained around four per cent of the variation in the scale scores, review of this variation does not suggest an obvious relationship between students' perceptions of their engagement in Work Integrated Learning and stated institutional mission.

Average scores for this dimension of engagement varied from 38.3 for learners under 20 years of age to 49.1 for those 20 or over. Such a difference might be expected given that older students are typically more advanced in their study and working lives and thus have had more access to opportunities to blend their learning with the workplace.

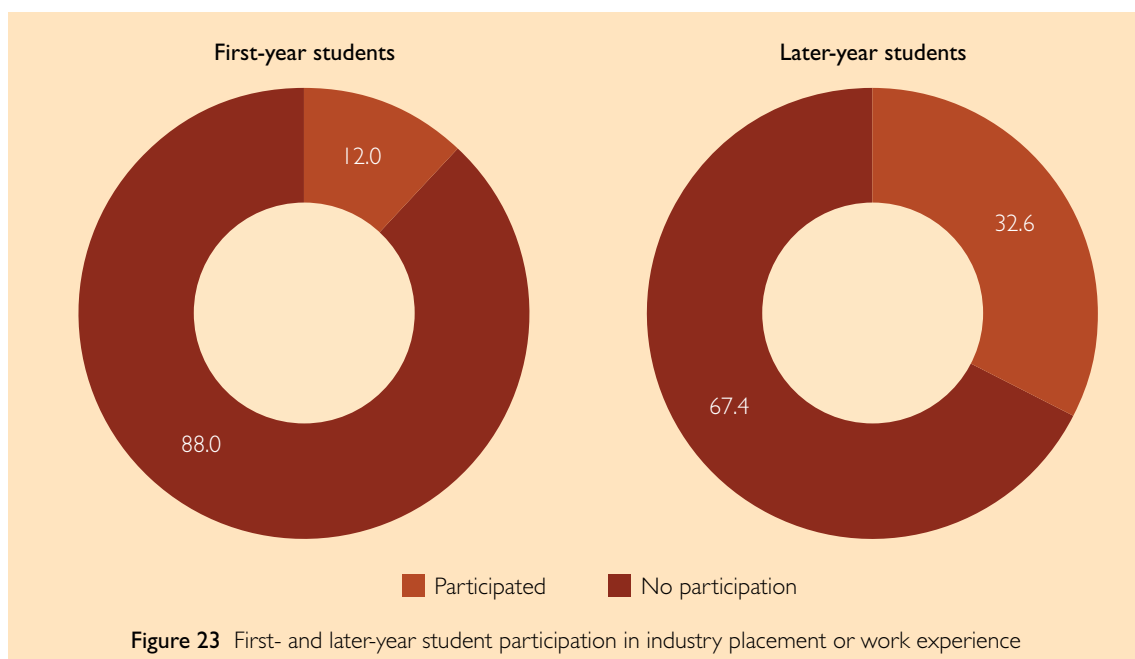
Similarly and as noted earlier, later-year students (50.1) had higher levels of Work Integrated Learning, compared with students in their first year of study (40.1). Five per cent of the variation in scores on this scale was associated with year level, indicating that institutions are succeeding in

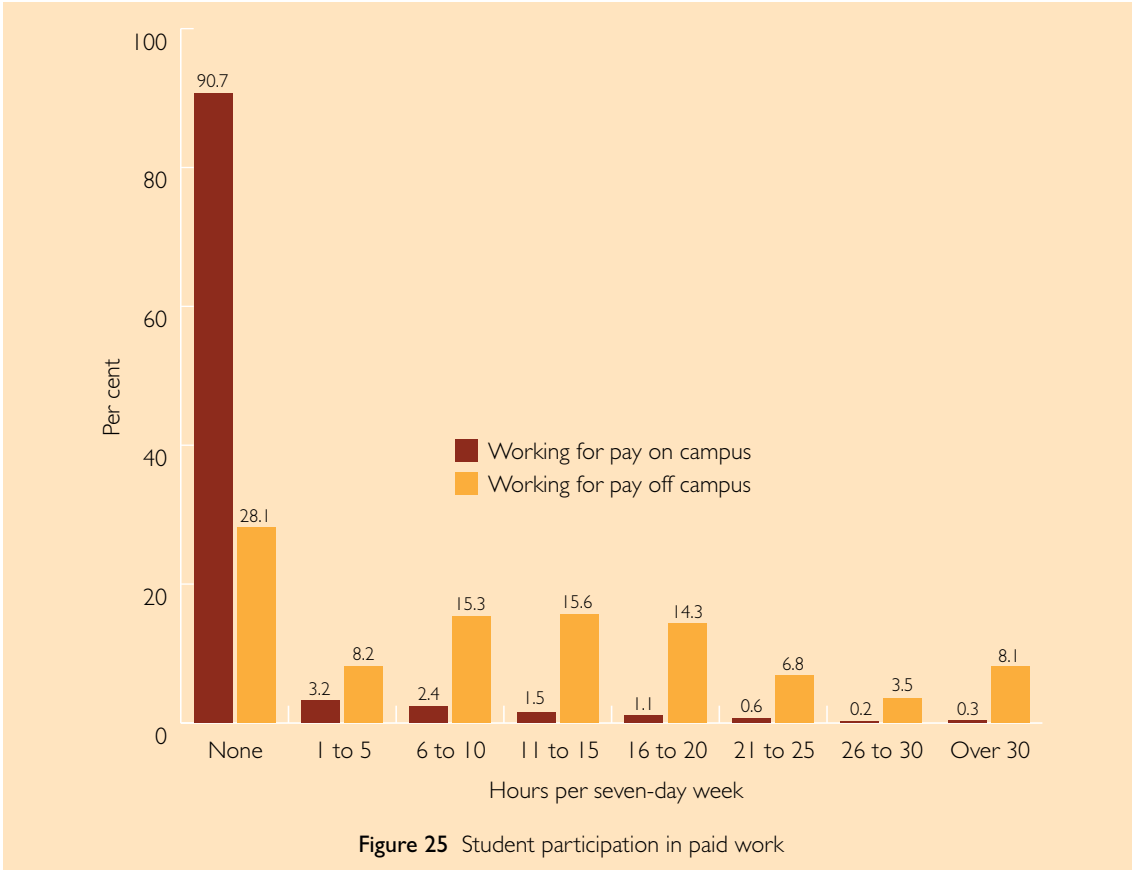
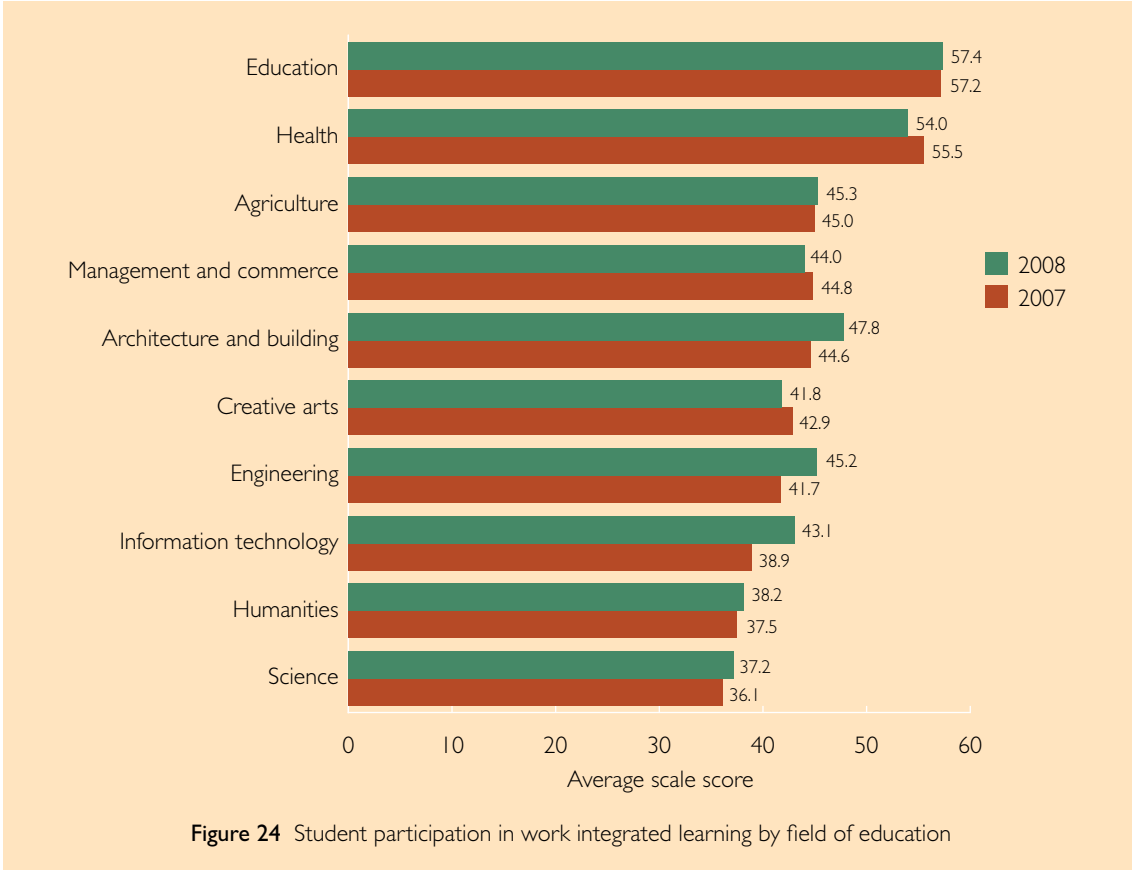
developing students' awareness of the workplace and how it relates to their academic learning as they progress in their courses.

By way of example, Figure 23 presents the proportion of first- and later-year respondents indicating they had participated in industry placement or work experience as part of their education. The figure for first-year students is 12.0 per cent, rising to 32.6 per cent for later-year students – figures very similar to those in 2007. Even though the proportion of students taking part in such experiences is more than two and a half times higher for later-year students, the overall percentage remains low, with just under a third of all later-year learners engaging in such experiences.

Females report higher levels of Work Integrated Learning than their male counterparts (46.3 and 43.7 respectively). This difference remains after variation associated with field of education, which often display gender differences, is removed using statistical regression analysis.

While family education background bears little relationship to respondents' perceptions of their work-integrated learning, students with English as the main home language (46.2) displayed higher levels than for those with other home languages (40.1). International students (41.5) reported less participation in work-integrated learning than domestic students (45.6). Only marginal





differences were associated with being Indigenous or having a disability.

As may be expected, participation in work-based learning activities varies across fields of education. Figure 24 shows that average scale scores range from 37.2 for the sciences to 57.4 for education. The results are consistent for 2007 and 2008, with the exception of architecture, engineering and IT fields.

Results were higher for part-time students on this scale (49.1) compared with those studying full time (44.7), and for distance students (51.4) as opposed to on-campus students (44.1). Students living off campus had a marginally higher score (45.5) than those living on campus (42.2).

As might be expected, participation in paid employment, both on and off campus, was associated with higher Work Integrated Learning scores. While the numbers were relatively small, students with paid on-campus work of around 26 or more hours had average scores of around 60, up from 44.8 for those with no campus-based employment. Average scores for off-campus paid work rose steadily from 40.2 for those without such work to 57.1 for those working more than 30 hours a week. The difference in Work Integrated Learning scores between those working on campus and those working off campus shows that students working on campus tend to have more positive responses to items in this scale, especially those working 26 or more hours per week.

Participation in paid work can confer a range of benefits on students, from enhancing their development of more general skills such as communication and time management, the acquisition of discipline- or industry-specific competencies, and facilitating the socialisation of students into scholarly and professional communities. Figure 25 presents summary statistics for these activities, showing that off-campus paid work is far more common than on-campus employment. These figures are similar to those recorded in the 2007 AUSSE.

As part of the SSES, staff were asked to suggest how many hours the typical student should spend in a typical seven day week working for pay on and off campus. On average, staff proposed that students should work for around 3.3 hours on

campus and 8.9 off campus. The student averages, derived from the results in Figure 25, are 1.0 and 11.3. The emphasis placed by staff on off-campus work is interesting, and comparison of student and staff perspectives highlights the value for institutions of undertaking their own further analysis of this matter.



4

Developing student engagement

While universities are responsible for academic standards and educational provision, higher education is a co-produced activity that requires the involvement of students to succeed. The key premise underlying work on student engagement is that effective education requires both institutional support and individual engagement.

With this perspective in mind, this chapter explores the link between educational engagement and outcomes, focusing in particular on 'early departure'. It uses this analysis to document various risk factors and 'at risk' groups, and turns finally to identify conditions which appear to be linked with educational success.

Understanding how to manage and reduce early departure is vital for universities. Attracting all students who are capable of success to university study is very important. But the impact of such work, including the returns to individuals and to society as a whole, is diminished if people are not retained through to graduation.

A focus on outcomes

The 2008 Student Engagement Questionnaire measured six educational outcomes in addition to the defined engagement scales. These outcomes include students' development of higher order thinking, general learning and general development skills, students' average overall grades, overall satisfaction, and their early departure intentions. Summary statistics for these measures are explored below, before turning to examine early departure in more depth.

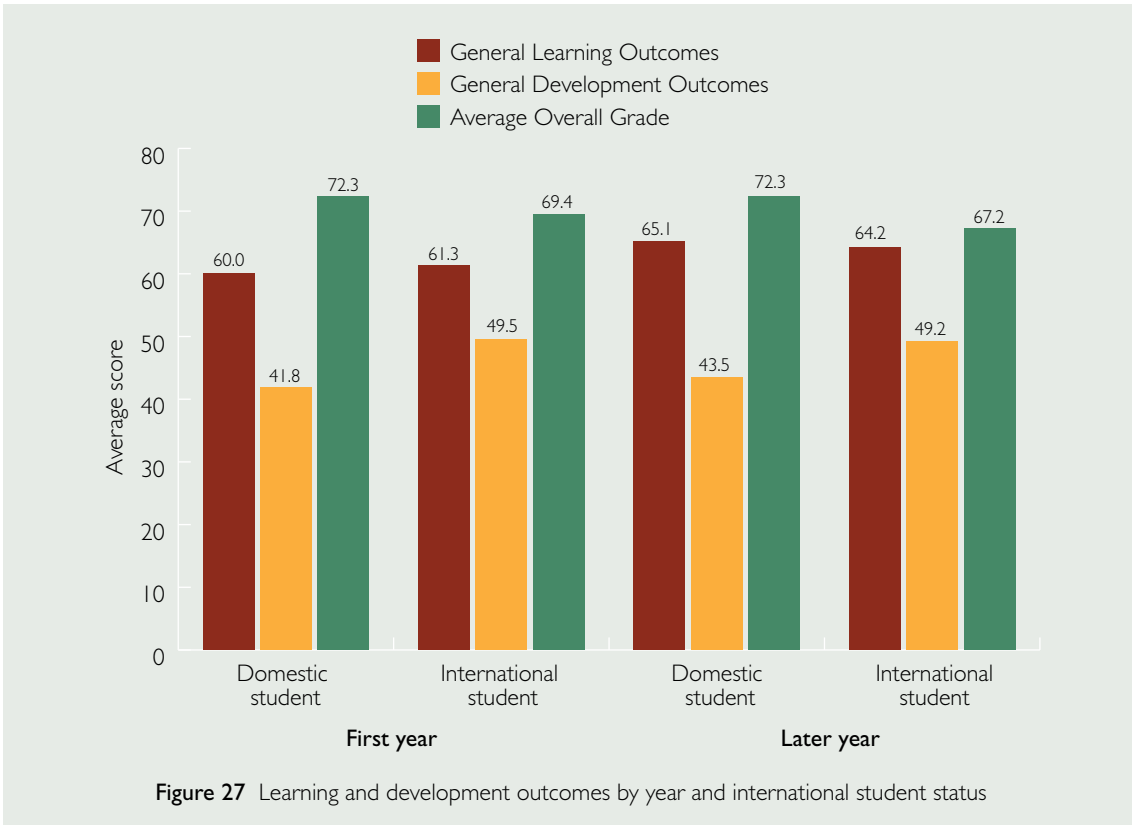
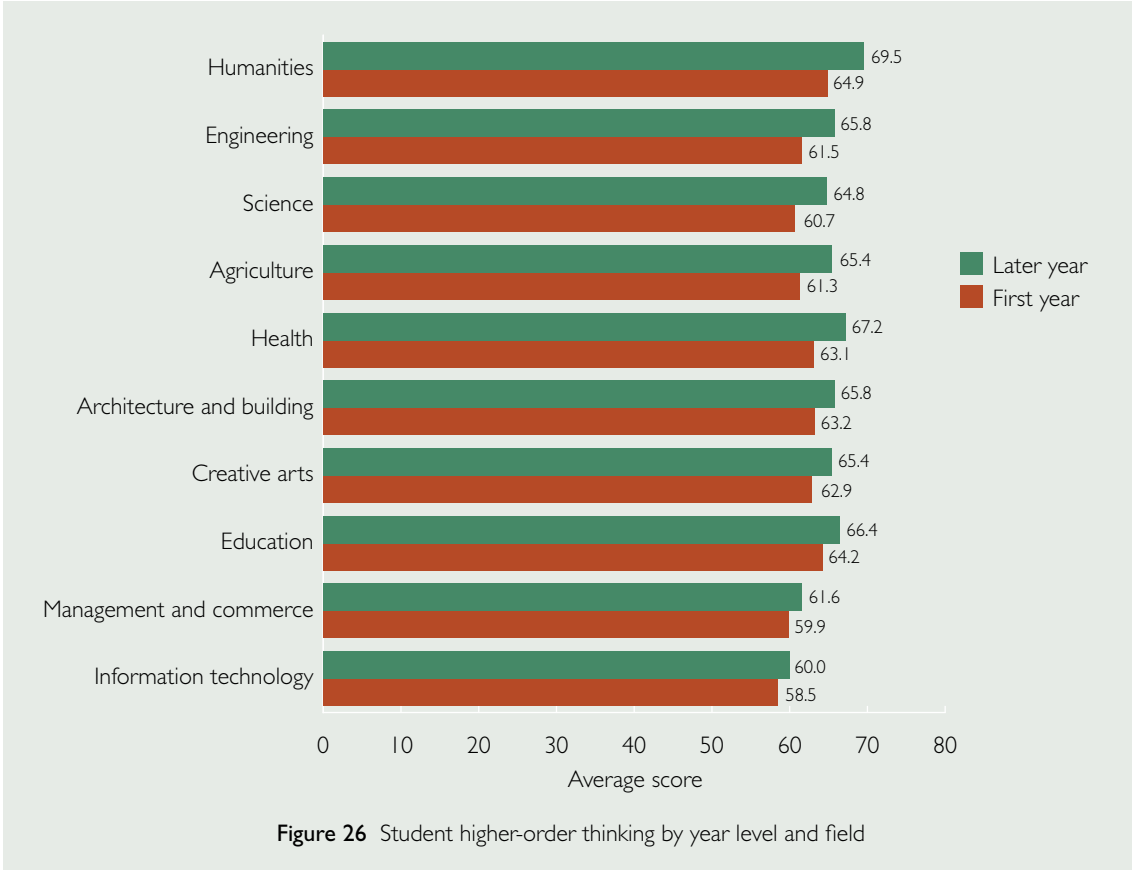
Figure 26 reports average first- and later-year student scores for students' development of

higher-order thinking – analysing, synthesising, judging and applying. Average scores increase between first year and later years, although more so in some fields (health, agriculture, science, engineering and humanities) than others (information technology, management and commerce, education, creative arts, and architecture and building).

Students report greater general learning and development outcomes across year levels, although not in relation to their formal grades. For learning outcomes such as communication, writing, speaking and analytic skills, the Australasian average score rises from 60.1 for first-year students to 65.0 for later-year students. The averages and extent of growth are less for more general forms of development like understanding people from different backgrounds, civic participation, and developing values and ethics – a rise from 42.4 to 44.1. Formal grades, however, average 71.7 in later year, very close to the average score of 72.1 in first year. This stability is not surprising given the calibration of grade distributions that typically takes place within universities.

Figure 27 shows that learning and development outcomes show interesting patterns of variation for domestic and international students. Both groups report similar year level trends in terms of general learning. International students, however, report greater developmental growth and lower formal grades.

Satisfaction is one of the most commonly used measures of educational quality in contemporary higher education. It is important that students are happy with the educational services they have



received. While students may be uninformed about many aspects of these services, they are nevertheless the target users of them and a large number of validation studies have affirmed the reliability and validity of the student perspective.

Three items on the SEQ underpin a composite measure of student satisfaction – an item focused on the quality of academic advice, an item on the entire educational experience, and an item asking people if they would attend the same institution were they to begin their studies again. Australasian average satisfaction scores decreased between first and later years from 70.7 to 66.5. This pattern was evident for all constituent items, but was most apparent for the item asking students if they would attend the same institution again. While counterfactual in nature, questions such as this are important for they signal students' global perceptions of what an institution has delivered. Of course such difference will vary across institutional and demographic groups.

The NSSE does not offer USA comparison figures for the AUSSE outcome measures, but the perspectives of academic staff captured by the SSES provide a useful point of reference. Figure 28 shows comparison figures for the five outcomes tapped by the SEQ and SSEQ (in 2008, staff were

not asked to report on students' average overall grades). The concordance between academic and student perspectives for most measures is significant and reassuring, suggesting that staff are in tune with the students they teach. But the difference in perceptions of early departure is striking. In 2008, about 30 out of every 100 Australasian students seriously considered departing their institution before graduation, yet staff saw the number as closer to 10 out of 100. This highlights a considerable divergence in views. It highlights an issue that, over time, needs considerably more (and perhaps ongoing) investigation, and affirms the importance of building greater understanding of students' early departure intentions.

It is particularly important to monitor the educational outcomes of people who entered university with disadvantage. The AUSSE records whether students were from a language background other than English (LBOTE), the first in their family to attend higher education (FiF), from a lower socioeconomic (LSES) area, or provincial/remote (PROV/REM) area (for Australia only (Jones, 2004)), Indigenous (Aboriginal or Torres Strait Islander (ATSI), Māori or Pasifika Islander (Pasifika)), or identified as having a disability, impairment or long-term condition.

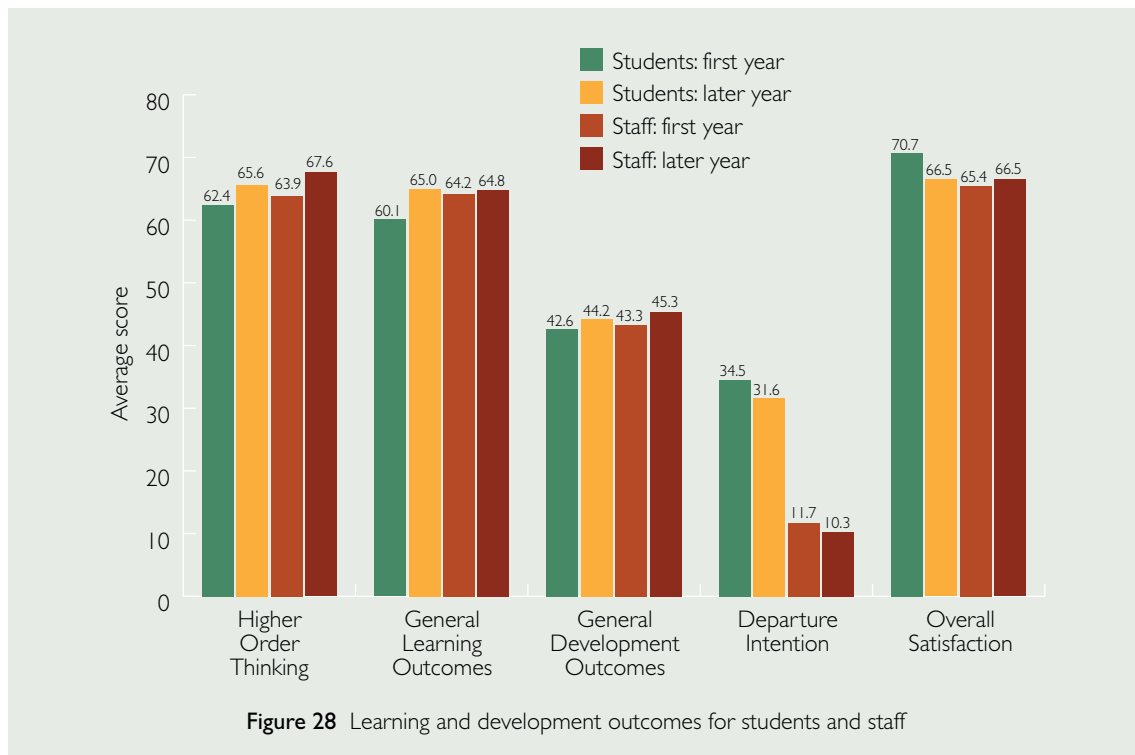


Table 6 Average outcome measures for selected equity groups

	Australasia	LBOTE	First in family	LSES ¹	PROV ¹	REM ¹	ATSI	Māori	Pasifika	Disability
Higher Order Thinking	64.0	63.0	63.6	63.9	63.0	60.1	65.0	62.2	63.7	63.6
General Learning	62.5	62.2	63.0	64.0	63.6	62.8	61.9	60.1	64.9	61.5
General Development	43.4	48.6	43.7	44.5	43.3	47.6	45.5	44.0	50.9	43.6
Average Overall Grade	71.9	68.6	71.5	71.6	72.6	70.6	69.3	71.0	69.4	70.9
Departure Intention	33.1	33.8	33.8	34.6	36.7	38.8	43.4	40.4	39.3	41.0
Overall Satisfaction	68.6	64.1	68.6	69.4	68.4	65.8	68.3	68.8	70.0	68.3

¹ Australian students only

Combined average scores for all students (first-year and later-year) are shown in Table 6, which includes results for Australasia overall as a point of reference. Subgroup statistics that differ from the cross-national average by five points or more are shaded grey.

By way of summary, students with a language background other than English report higher levels of general development and lower levels of overall satisfaction. The outcomes for those who are first in family or whose home is in a lower socioeconomic area are on par with Australasian average scores. With the exception of departure intention, which was higher by 3.6 points, students with homes in provincial locations reported outcomes on par with general cross-national averages. Students from remote backgrounds reported less development of higher order thinking (3.9 points below the Australasian average), greater general development outcomes (4.2 points above the Australasian average) and higher departure intentions (by 5.7 points). ATSI students reported outcomes on par with the cross-national figures, with the notable exception of departure intention, which was 10.3 points higher than the Australasian average. Māori students too reported higher anticipated departure (7.3 points above Australasia as a whole), as did Pasifik Islanders (6.2 points above the average). Importantly, however, Pasifik Islanders reported greater development of general learning outcomes. While most results for students who identified as having a disability were on par with the cross-national figures, departure intention was higher by 7.9 points.

Exploring early departure

Of all the educational outcomes measured in the AUSSE, early departure may very well be the most significant. Early departure is a complex and multifaceted phenomenon which incorporates transitions such as cross-institutional mobility, 'dropout' from higher education, course transfer, temporary deferral, and academic failure. The SEQ includes a series of questions to facilitate the measurement of a range of different movements, change rationales and destinations. The current analysis focuses on 'early departure' as departure from an institution before the completion of a qualification (and not necessarily in first year).

In Australasia in 2008, 33.1 per cent of first- and later-year students seriously considered leaving their institution in the 2008 academic year. This rate is high – around a third of undergraduate students. It is also an underestimate as it excludes students who have already discontinued their study. The rate decreases from 34.5 in first year to 31.6 for later-year students (although note that this later-year figure excludes those who have actually discontinued since first year). The rate varies from 22.0 per cent at one institution to 44.9 per cent at another. Clearly, these figures are serious, and carry relevance for students and institutions, for the professions and for the economy as a whole.

Table 7 provides further details on students' selected reasons for considering leaving their institution, sorted in descending order for first-year students. The figures relate to the 33.1 per cent of students who report considering

Table 7 Student reasons for departure (per cent)

	First year	Later year	All students
Convenience or practical reasons	31.4	23.3	27.5
Improve career prospects	29.5	31.1	30.2
Financial reasons or to reduce study costs	25.9	26.6	26.2
Obtain better quality education	18.7	28.4	23.4

Table 8 Student destination plans

	First year		Later year		All students	
	Yes	No	Yes	No	Yes	No
Shift to another university	21.3	78.7	12.6	87.4	17.2	82.8
Change to another qualification	17.8	82.2	10.5	89.5	14.3	85.7
Move to vocational education and training	3.3	96.7	4.3	95.7	3.8	96.2

early departure. They reflect the percentage of students in this group who selected one of the nominated reasons. For instance, of the 33.1 per cent of students who considered early departure, 27.5 per cent indicated that they were leaving for convenience or practical reasons. Broadly, first-year students are around twice as likely to consider leaving for practical or financial rather than educational quality reasons, although the differences decrease for later-year students. Table 8 reports on the destination plans of all students. Interestingly, very few bachelor degree students – less than 1 in 20 – consider shifting to vocational education. In first year, more students consider shifting to another university than changing their qualification, although the percentage and gap reduces for later-year students.

Identifying concomitants of early departure provides insights that may be used to manage and reduce the phenomenon. Early departure may be associated with certain types of engagement or outcomes. Identifying these relationships provides a basis for identifying groups which may be particularly 'at risk'.

Table 9 reports correlations (scaled to a ± 100 metric) between students' departure intentions and the seven engagement scales, and remaining

outcome measures. These correlations are sorted in ascending order by first-year results. As all of these correlations are statistically significant (considered independently or as part of simultaneous regression analyses), to facilitate analysis it is helpful to deploy another interpretative metric. Given the large-scale nature of this analysis, those correlations around ± 10 might be considered meaningful from an 'effect size' perspective.

By way of example, the correlation of -36.0 between Overall Satisfaction and first-year early departure implies that a decrease in this global measure of satisfaction is associated with an increased early departure intention. In statistical terminology, the -36.0 correlation is referred to as the 'standardised estimate'. The corresponding 'unstandardised estimate' for first-year students is -0.86 , exposing that each score-point increase in satisfaction sees a decline of 0.86 in early departure intention. Considered independently, Overall Satisfaction scores account for around 13 per cent of the observed variation in reported departure intentions.

These correlations offer evidence that, broadly speaking, it is overall satisfaction, perceptions of support, and sense of learning and development, which appear to be most significant for first-year

Table 9 Correlations between departure intentions and AUSSE engagement and outcome measures

	First year departure intention	Later year departure intention
Overall Satisfaction	-36.0	-37.6
Supportive Learning Environment	-20.2	-22.6
General Learning Outcomes	-17.9	-23.0
Average Overall Grade	-12.4	-10.2
General Development Outcomes	-10.0	-13.2
Work Integrated Learning	-8.0	-10.6
Higher Order Thinking	-7.6	-10.8
Enriching Educational Experiences	-5.1	-5.0
Academic Challenge	-5.1	-7.1
Active Learning	-3.1	-2.5
Student and Staff Interactions	-0.8	-3.8

students. These factors also hold for final-year students, although developing higher-order forms of thinking and the work relevance of learning is also seen to count.

While neither a causal nor linear relationship may be assumed, the above analysis does suggest that in Australasia in 2008, satisfaction, support and learning outcomes are seen by students as the most important correlates of pre-graduation institutional departure. It is helpful, therefore, to explore which student subgroups report lower than average scores on these measures, and hence might be more likely to prematurely discontinue their study. Subgroups with low scores in multiple areas may be of particular concern.

Students in the architecture, creative arts and education fields, for instance, all report higher than Australasian average departure intentions. Architecture and business students, however, also report lower overall satisfaction, perceptions of support, and learning and development outcomes. Creative arts students feel supported and satisfied, but that they have gained less in terms of general learning and development. International students report being more likely to depart, along with being less satisfied and reporting lower levels of academic achievement. Students with disabilities report lower levels of achievement and more general forms of learning.

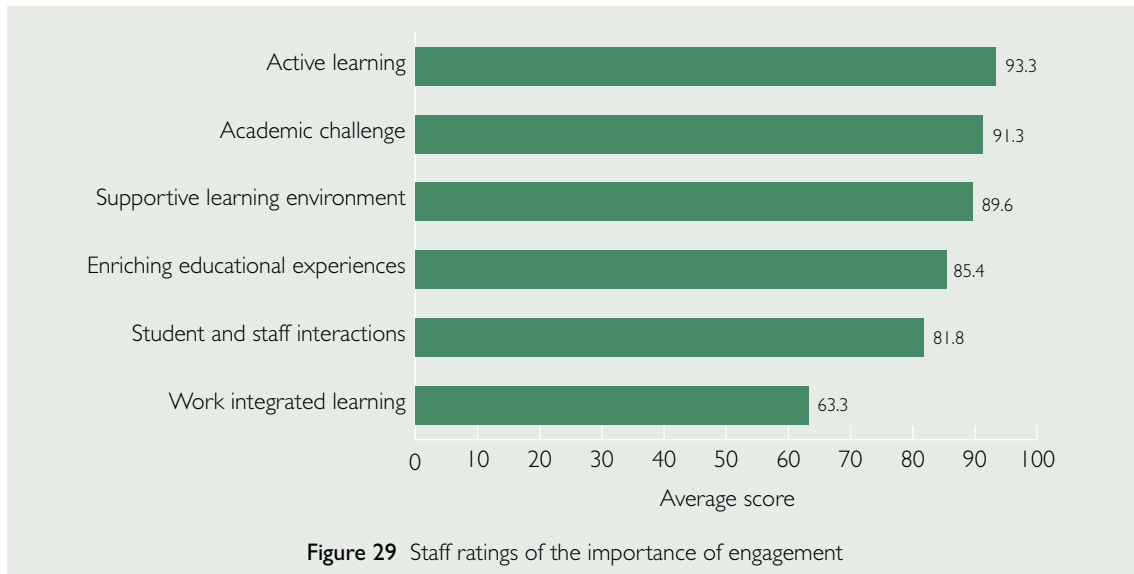
Such analysis can be extended in a variety of directions, yet when various analytical possibilities are tested, they tend to converge around the

importance of students' average overall grade. In particular, students with grades between 50 and 60 appear considerably more likely to consider departing than others – 11.5 per cent for first-year students and 12.2 for later-year students. Cross-nationally, 12.4 per cent of students reported low marks. Certain groups of students were over-represented in this category, however, including international students (24.0%) students with a home language other than English (22.3%) Pasifik Islanders (20.5%), and Australian Indigenous students (20.1%). Low grades were also reported for relatively high proportions of business students (18.1%), IT students (16.3%), students with disabilities (15.5%) and Māori students (15.5%).

The finding that low marks are associated with early departure may not be surprising. At a minimum, the AUSSE 2008 results may be seen as providing evidence and further details in support of this proposition. Such evidence helps affirm the importance for institutions of implementing carefully designed monitoring and preventive procedures that can track student progress, identifying at risk students, and putting in place conditions which may support and inspire student success.

Setting conditions for success

The engagement scales in Table 9 have less direct relationships with early departure intentions, but it is possible that their influence is mediated by those outcomes which do appear more closely



connected with retention decisions. Therefore, it is useful to examine which engagement conditions are linked with educational success.

The perspective of teaching staff on this matter is important, for they have an important responsibility for setting the scholarly and social conditions that will enhance engagement. As part of the SSES, academics were asked to rate the importance of each of the AUSSE scales for university education. The results, scored on a 0-100 point scale, are presented in Figure 29.

With the exception of Work Integrated Learning, all defined facets of engagement have an average score greater than 80. The cross-institutional Work Integrated Learning score is low, although this varies considerably across fields from 54.7 and 54.9 for humanities and sciences staff, to 75.1 and 72.7 for health and education academics. These results, importantly, affirm the importance of the aspects of engagement measured in the AUSSE and SSES.

Table 10 reports correlations between the six

Table 10 Engagement and outcome links

	First year			
	General Learning	General Development	Average Grade	Overall Satisfaction
Academic Challenge	47.3	39.8	13.4	24.6
Active Learning	34.7	33.5	9.9	18.2
Student and Staff Interactions	30.8	36.0	3.7	18.1
Enriching Educational Experiences	31.9	34.6	6.0	20.0
Supportive Learning Environment	50.0	47.0	10.8	55.8
Work Integrated Learning	44.3	34.9	9.4	23.5
	Later year			
Academic Challenge	47.1	39.8	15.2	26.9
Active Learning	33.6	29.5	15.3	19.0
Student and Staff Interactions	29.6	32.8	12.3	24.0
Enriching Educational Experiences	27.9	28.3	12.7	18.4
Supportive Learning Environment	48.9	46.5	8.7	55.7
Work Integrated Learning	40.3	28.6	14.2	23.0

AUSSE engagement scales and key outcomes which the above analysis has linked with early departure decisions. For instance, the correlation of 0.473 between Academic Challenge and General Learning implies that a rise in students' perception of academic challenge is associated with an increase in learning outcomes. The unstandardised statistical estimates for the first- and later-year correlations are 0.72 and 0.69 respectively. This implies that a rise of one score point on the Academic Challenge scale leads to a rise on the General Learning Outcomes scale of 0.72 score points for first-year students, and 0.69 for later-year students.

As reported for AUSSE 2007 (Coates, 2008a), the correlations affirm the positive links between engagement and outcomes. The statistics for average overall grade are lower, particularly in first year, which is partly due to the compressed distribution of this measure.

These results repeat a pattern reported in the first AUSSE Research Briefing (Coates, 2008b) of the particularly important role played by challenge and support. The idea that academic challenge and individual support promotes engagement and learning outcomes is not new. In his 1975 book *Faces on Campus*, for instance, Graham Little defined a typology of university learning climates underpinned by variations in students' perceptions of challenge and support – see Figure 30. He argued that the 'cultivating climate' was most productive for undergraduate student learning



Figure 30 Little's typology of learning climates

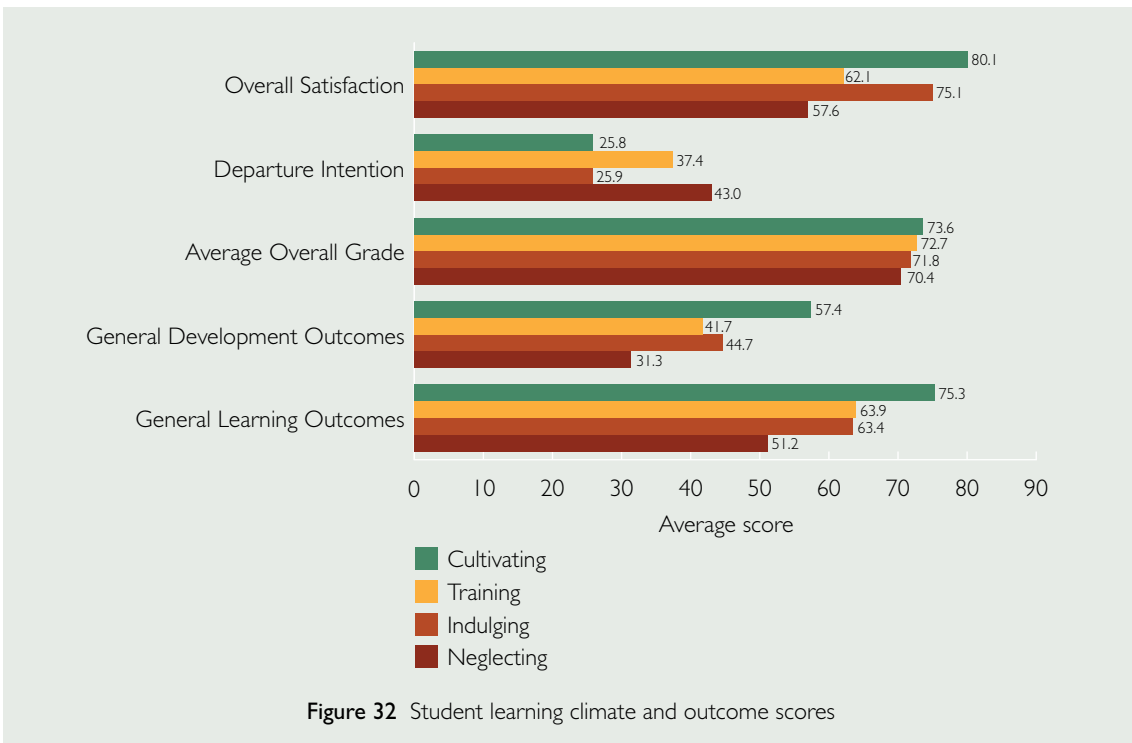
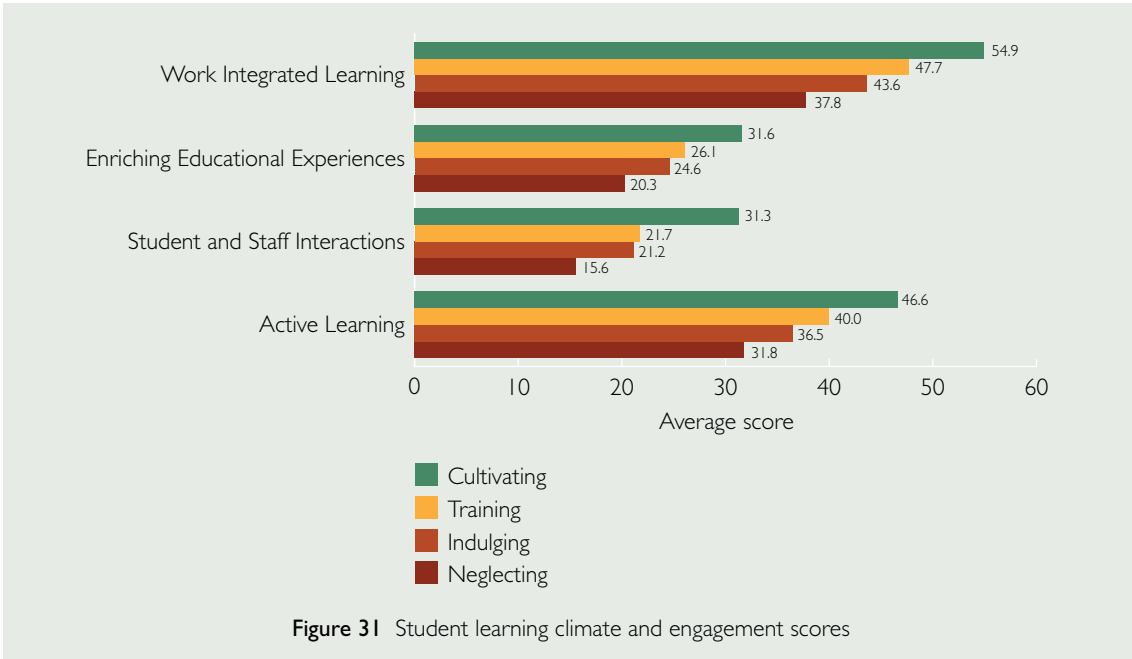
and development, this being characterised by high academic standards, support and recognition.

Little's typological distinction can be explored using AUSSE data by categorising students according to their perceptions of challenge and support. To do this, students were classified into one of four 'learning climate' groups, depending on whether their Academic Challenge or Supportive Learning Environment scores were above or below the Australasian average. Students reporting low support and low challenge, for instance, were assigned to the 'neglecting climate' group. Those reporting high levels of challenge and support were assigned to the 'cultivating climate' group.

Average engagement and outcome scores for each of these four groups are reported in Figure 31 and Figure 32. (The Academic Challenge and Supportive Learning Environment scales are omitted from Figure 31 as these are used in the construction of the climate groupings.) The results suggest that high challenge and high support are linked with greater student engagement. Figure 31 affirms Little's typology, showing a steadily increasing relationship between neglecting and cultivating climates. Results for the challenge and support scales have been omitted. Students who report studying in a neglecting climate, for instance, report average Active Learning scores of around 31.8 compared with 46.6 for those working in a cultivating climate. A cultivating climate leads to a doubling of the Student and Staff Interactions scale score.

Importantly for retention, cultivating climates – those that reflect high levels of challenge and support – are related to increased student outcomes. Neglecting and training climates are linked with lower satisfaction and higher departure intentions, signalling that in these areas it is the lack of support that counts. The growth in average grades is more measured in line with the variation in this distribution, but still reflects a third of the standard deviation of 9.9 score points. General forms of learning and development are influenced less by low levels of support. For both of these, it appears to be the joint absence of challenge and support that leads to a drop-off in average scores.

In line with existing research, these insights underscore the educational value of monitoring and improving student engagement. By tracking patterns of student engagement and indicators of



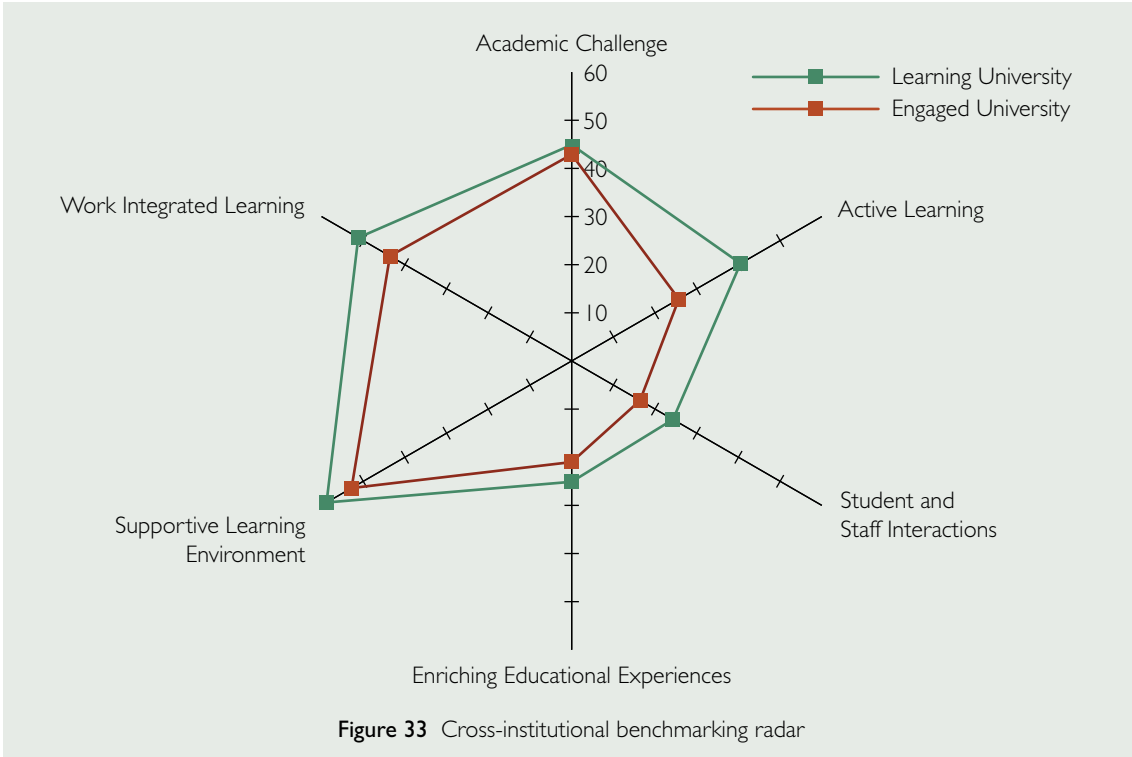
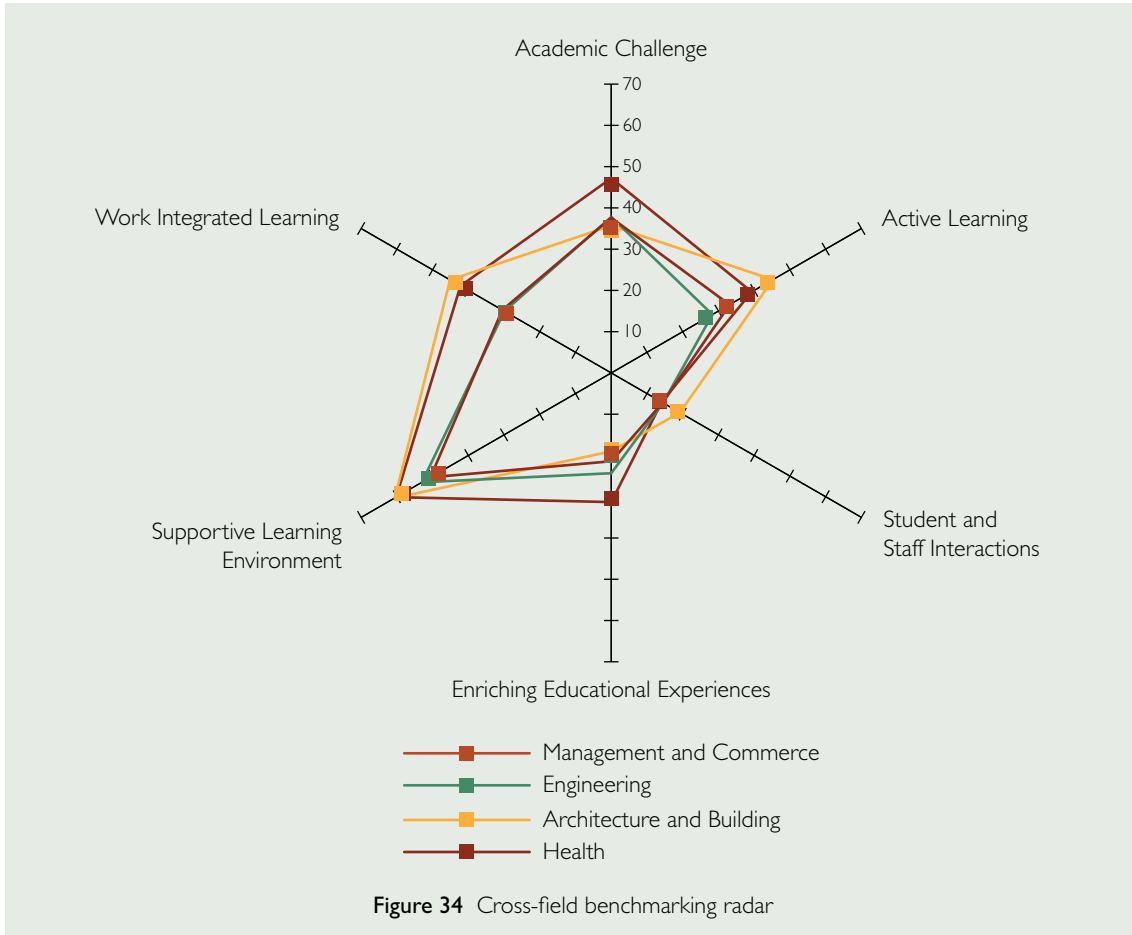


Table 11 Areas of greatest variation between institutions

1. Made a class or online presentation	16. Attend same institution if starting over
2. Conversations with students of different ethnic group	17. Working effectively with others
3. Providing care for dependents	18. Managing personal business
4. Working for pay off campus	19. Participated in community-based project
5. Worked with students during class	20. Discussed grades with teaching staff
6. Blended academic learning with workplace experience	21. Acquiring job-related or work-related knowledge and skills
7. Asked questions or contributed to discussions in class or online	22. Attending campus events and activities
8. Explored how to apply your learning in the workforce	23. Used library resources on campus or online
9. Worked with students outside class	24. Sought advice from academic staff
10. Used an electronic medium for assignment	25. Included diverse perspectives
11. Conversations with students who are very different	26. Relationships with administrative personnel and services
12. Practicum, internship, fieldwork or clinical placement	27. Industry placement or work experience
13. Used email or a forum to communicate with teaching staff	28. Worked harder than you thought you could
14. Used student learning support services	29. Voting informedly in local, state or national elections
15. Came to class having completed readings or assignments	30. Foreign language study



departure intentions, institutions can use student engagement data to set conditions that enhance educational success.

Benchmarking is a particularly powerful approach that institutions can use for monitoring and enhancement. Examples of benchmarking are included here by way of rounding out the current analysis. These flesh out the more general overview provided in the AUSSE Enhancement Guides which are surveyed in the final chapter. Benchmarking can be undertaken in a range of ways, such as internal or external, norm- or criterion-referenced, outcome- or process-oriented. The AUSSE is designed to balance local relevance with cross-contextual generalisability.

Figure 33 shows how two institutions – Engaged University and Learning University – may begin their benchmarking conversations. These institutions may have pre-existing benchmarking arrangements and data-sharing agreements, or Learning University may have initiated the conversations using publicly reported information.

For such comparisons to be useful, it is helpful to enumerate the similarities and differences between the institutions, to establish a long-term benchmarking relationship, and to define substantive points of reference (criteria) for the numerical results. After looking further into results for particular subgroups, the institutions may be able to spotlight areas of particular concern, and processes that could be re-engineered to facilitate effective change.

To help guide such benchmarking, it is useful to have a sense of the areas of greatest variation between institutions. Table 11 lists the 30 items that vary most between institutions, ranked in descending order of variability. By way of example, the aspect of student engagement that varies most across institutions is whether students report making a class or online presentation. There is also variation between institutions in the extent to which students report conversations with students of different ethnic groups.

Cross-institutional conversations between like

institutions are important – particularly when conducted within similar fields, but the 2008 NSSE report affirms Pascarella's (2001: 20) prescient remark that "within-college experiences tend to count substantially more than between-college characteristics". Figure 34 repeats the format of Figure 33 but this time includes average scores for four selected fields within a single institution. Such results might form a basis for internal benchmarking that is undertaken between faculties or schools. Compared with health students, for instance, what individual and environmental factors lead architecture and building students to perceive lower levels of academic challenge yet report higher participation in active learning?

As these results suggest, student engagement data can inform practical deliberations about the significant dynamics, constraints and opportunities facing higher education institutions. It offers a lens that provides key insights into what students are actually doing, a structure for framing conversations about quality, and a stimulus for guiding new thinking into practice.

5

Conversations about change

Guides for monitoring and enhancing education

Developing strategies to use engagement data for continuous quality improvement is a very important part of the AUSSE. Information about student engagement can play a valuable role in enhancing the quality of higher education, if only by stimulating conversations about how students engage in high-quality learning, or by exposing students and teaching staff to lists of good learning practices.

Institutions need to make informed, professional decisions about what particular student engagement data they will act on and about how to take necessary action. To assist with this process, a series of initial AUSSE Enhancement Guides have been developed to help institutions make the most use of their AUSSE data and results (see: www.acer.edu.au/ausse).

Students' perceptions of their education are shaped by the expectations that have been negotiated – explicitly or otherwise – with their institution. Hence one AUSSE Enhancement Guide explores how institutions can use resources such as the Student Engagement Questionnaire to establish and manage relationships with their students.

Involving students in organisational learning has grown to play an important role in contemporary higher education quality, and endorses students as members of the university community. Work on 'survey engagement' (Coates, 2006) has explored what steps institutions can take, and an AUSSE Enhancement Guide explores these in relation to the AUSSE.

Engagement is an institution-wide phenomenon, and institution-wide approaches are likely to be among the most effective means of enhancing practice. An AUSSE Enhancement Guide focused on this matter develops ideas about how institutions can understand student engagement and develop responsive and locally effective strategies.

As noted earlier, AUSSE 2008 results affirm findings from the corpus of empirical studies which underline the vital educational benefits that can result from students' interactions with staff. A range of constraints limit the development of such contact – such as staff time, competing research priorities, and the growth and diversity of students – but it remains important for institutions to think through effective ways for managing such engagement. One AUSSE Enhancement Guide explores options for extending interactions between staff and students outside formal class time, while another looks more generally at how teachers might broaden their involvement in student learning.

An important component of the AUSSE is that it offers institutions evidence and opportunities for benchmarking and monitoring quality over time. To this end, one AUSSE Enhancement Guide explores the concept of benchmarking (such as criterion- and norm-referenced approaches, selecting partners, and process benchmarking), while another sets out key principles associated with monitoring trends over time.

Within an educational institution, exploring the concept of student engagement may in itself play an important role in developing policy and practice. An AUSSE Enhancement Guide has

been prepared to assist institutional researchers, scholars, teachers and administrators think through various ways in which they can look further into their results and to develop helpful insights for practice.

As these guides suggest, student engagement information can be used to provide information to potential students, for internal and external quality assurance activities, to help academic staff target their teaching, to understand how students are interacting with institutional resources, to inform employers about student characteristics and growth, and to manage particular student cohorts. Most importantly, understanding student involvement can be used to engage and help students succeed in university education.

Building new perspectives

The immediate foundations for the AUSSE were set between late 2006 and early 2007 through conversations between institutions and ACER about developing a measure of current students' engagement in Australasian university education. The SEQ and the AUSSE collection system were developed in early 2007 and an initial collection was conducted that year.

Reports were provided to institutions in late 2007, and served as a basis for a range of evidence-focused conversations in 2008. Institutions reviewed their results internally, made them available for external quality audits, undertook cross-institutional benchmarking, ran seminars with Heads and Deans, conducted focus groups with students, put their results on the web, took part in ACER-facilitated cross-institutional workshops, undertook follow-up analyses, made contact with participating USA and Canadian institutions, set up benchmarking groups, prepared in-house executive summary reports, held faculty-based workshops, considered the relevance of various items and scales to institutional missions and practices, reported findings to the media, and explored aspects of the AUSSE methodology.

In 2008, ACER facilitated these conversations through a program of cross-national workshops, developing the Staff Student Engagement Survey, publishing the first Australasian Student Engagement Report, disseminating AUSSE Research Briefings, undertaking background validation work, and managing AUSSE 2008.

The AUSSE provides a basis for refocusing conversations about Australasian university education on student learning and development. Consolidation of existing activities provides a basis for continuous improvement and ongoing development. In 2008, ACER started working with several institutions to explore aspects of the SEQ and SSEQ such as their relevance to external or distance learners.

The AUSSE is taking further shape in 2009. The contribution of the AUSSE was affirmed in the late 2008 report of the national review of Australian higher education (Bradley, Noonan, Nugent & Scales, 2008). Institutions have started planning engagement-focused workshops for 2009, and ideas are taking shape for the first Australian and New Zealand forum on student engagement. Recent proposals have been advanced to develop a Postgraduate Survey of Student Engagement (POSSE), and also a subject-level collection that facilitates direct links between local teaching and learning processes and institution level results. Further validation work will be planned, potentially progressing criterion validation work that links AUSSE results with learner and graduate outcomes. In addition, models for measuring the contribution and value of higher education may be explored (Coates, 2009), as may links between the engagement of university students and other tertiary learners (Coates & Hillman, 2007). Executive Summary reports were prepared for institutions in 2008, and 2009 will see introduction of a report designed for widespread distribution to current and potential students.

The 2008 NSSE report tracks a decade of growth in the USA collection, charting development of the core collection as well as expansion in collection and reporting approaches. As with the NSSE, rigorous methodologies and research foundations offer solid grounds for extending the power of the AUSSE to contribute to meaningful improvements in student engagement. The involvement of educators in developing students' engagement in effective educational practices is vital.

Resources

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Appendices

Appendix I: 2008 Student Engagement Questionnaire (SEQ)



Australasian survey of student engagement

Your university experience

1 In your experience at your institution during the current academic year, about how often have you done each of the following? Mark your answers in the boxes. Leave blank if the item does not apply.

	Never ▼	Some- times ▼	Often ▼	Very often ▼
Asked questions or contributed to discussions in class or online	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sought advice from academic staff	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Made a class or online presentation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Worked hard to master difficult content	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Prepared two or more drafts of an assignment before handing it in	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Used library resources on campus or online	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Worked on an essay or assignment that required integrating ideas or information from various sources	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Used student learning support services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Blended academic learning with workplace experience	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Included diverse perspectives (e.g. different races, religions, genders, political beliefs, etc.) in class discussions or written assignments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Came to class having completed readings or assignments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Kept up to date with your studies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Worked with other students on projects during class	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Worked with other students outside class to prepare assignments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Put together ideas or concepts from different subjects when completing assignments or during class discussions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tutored or taught other university students (paid or voluntary)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Participated in a community-based project (e.g. volunteering) as part of your study	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Used an online learning system to discuss or complete an assignment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Used email or a forum to communicate with teaching staff	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Discussed your grades or assignments with teaching staff	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Talked about your career plans with teaching staff or advisors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Discussed ideas from your readings or classes with teaching staff outside class	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2 During the current academic year, how much has your coursework emphasised the following intellectual activities?

	Very little ▼	Some ▼	Quite a bit ▼	Very much ▼
Received prompt written or oral feedback from teachers/tutors on your academic performance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Worked harder than you thought you could to meet a teacher's/tutor's standards or expectations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Worked with teaching staff on activities other than coursework (e.g. committees, orientation, student organisations, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Discussed ideas from your readings or classes with others outside class (e.g. students, family members, co-workers, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Had conversations with students of a different ethnic group than your own	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Had conversations with students who are very different to you in terms of their religious beliefs, political opinions or personal values	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Memorising facts, ideas or methods from your subjects and readings so you can repeat them in pretty much the same form	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Analysing the basic elements of an idea, experience or theory, such as examining a particular case or situation in depth and considering its components	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Synthesising and organising ideas, information or experiences into new, more complex interpretations and relationships	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Making judgements about the value of information, arguments or methods, such as examining how others gather and interpret data and assessing the soundness of their conclusions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Applying theories or concepts to practical problems or in new situations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3 In a typical week, how many exercises, lab reports, problem sets and tutorial questions do you complete?

	None ▼	1 to 2 ▼	3 to 4 ▼	5 to 6 ▼	More than 6 ▼
Number of pieces of work that take one hour or less to complete	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Number of pieces of work that take more than one hour to complete	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



4 During the current academic year, about how much reading and writing have you done?

	None	1 to 4	5 to 10	11 to 20	More than 20
Number of assigned textbooks, books or book-length packs of subject readings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Number of books read on your own (not assigned) for personal enjoyment or academic enrichment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Number of written assignments of fewer than 1,000 words	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Number of written assignments of between 1,000 and 5,000 words	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Number of written assignments of more than 5,000 words	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5 Which box best represents the extent to which your examinations during the current academic year have challenged you to do your best work?

Very little Very much

1 2 3 4 5 6 7

6 During the current academic year, about how often have you done each of the following?

	Never	Sometimes	Often	Very often
Attended an art exhibition, play, dance, music, theatre or other performance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Exercised or participated in physical fitness activities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Examined the strengths and weaknesses of your own views on a topic or issue	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Improved knowledge and skills that will contribute to your employability	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Developed communication skills relevant to your discipline	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Explored how to apply your learning in the workplace	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tried to better understand someone else's views by imagining how an issue looks from his or her perspective	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Learned something that changed the way you understand an issue or concept	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7 Which of the following have you done or do you plan to do before you graduate from your institution?

	Do not know about	Have not decided	Do not plan to do	Plan to do	Done
Practicum, internship, fieldwork or clinical placement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Industry placement or work experience	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Community service or volunteer work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Do not know about Have not decided Do not plan to do Plan to do Done

	Do not know about	Have not decided	Do not plan to do	Plan to do	Done
Participate in a study group or learning community	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Work on a research project with a staff member outside of coursework requirements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Study a foreign language	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Study abroad or student exchange	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Culminating final-year experience (e.g. honours thesis, comprehensive exam, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Independent study or self-designed major	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Consult a university careers service for advice	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8 Which of these boxes best represent the quality of your relationships with people at your institution?

Relationships with other students

Unfriendly, unsupportive, sense of alienation Friendly, supportive, sense of belonging

1 2 3 4 5 6 7

Relationships with teaching staff

Unavailable, unhelpful, unsympathetic Available, helpful, sympathetic

1 2 3 4 5 6 7

Relationships with administrative personnel and services

Unhelpful, inconsiderate, rigid Helpful, considerate, flexible

1 2 3 4 5 6 7

9 About how many hours do you spend in a typical seven-day week doing each of the following? Leave blank if the item does not apply.

Preparing for class (e.g. studying, reading, writing, doing homework or lab work, analysing data, rehearsing and other academic activities)

None 1 to 5 6 to 10 11 to 15 16 to 20 21 to 25 26 to 30 Over 30

Working for pay on campus

None 1 to 5 6 to 10 11 to 15 16 to 20 21 to 25 26 to 30 Over 30

Working for pay off campus

None 1 to 5 6 to 10 11 to 15 16 to 20 21 to 25 26 to 30 Over 30

Participating in extracurricular activities (e.g. organisations, campus publications, student associations, clubs and societies, sports, etc.)

None 1 to 5 6 to 10 11 to 15 16 to 20 21 to 25 26 to 30 Over 30





Relaxing and socialising (e.g. watching TV, partying, etc.)

None 1 to 5 6 to 10 11 to 15 16 to 20 21 to 25 26 to 30 Over 30

Providing care for dependents living with you (e.g. parents, children, spouse, etc.)

None 1 to 5 6 to 10 11 to 15 16 to 20 21 to 25 26 to 30 Over 30

Managing personal business (e.g. housework, shopping, exercise, health needs, etc.)

None 1 to 5 6 to 10 11 to 15 16 to 20 21 to 25 26 to 30 Over 30

Travelling to campus (e.g. driving, walking, etc.)

None 1 to 5 6 to 10 11 to 15 16 to 20 21 to 25 26 to 30 Over 30

Being on campus, including time spent in class

None 1 to 5 6 to 10 11 to 15 16 to 20 21 to 25 26 to 30 Over 30

Being on campus, excluding time spent in class

None 1 to 5 6 to 10 11 to 15 16 to 20 21 to 25 26 to 30 Over 30

10 To what extent does your institution emphasise each of the following?

	Very little	Some	Quite a bit	Very much
Spending significant amounts of time studying and on academic work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Providing the support you need to help you succeed academically	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Encouraging contact among students from different economic, social and ethnic backgrounds	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Helping you cope with your non-academic responsibilities (e.g. work, family, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Providing the support you need to socialise	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Attending campus events and activities (e.g. special speakers, cultural performances, sporting events, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Using computers in academic work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

11 To what extent has your experience at this institution contributed to your knowledge, skills and personal development in the following areas?

	Very little	Some	Quite a bit	Very much
Acquiring a broad general education	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Acquiring job-related or work-related knowledge and skills	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Writing clearly and effectively	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Speaking clearly and effectively	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Thinking critically and analytically	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Analysing quantitative problems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Using computing and information technology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Very little	Some	Quite a bit	Very much
Working effectively with others	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Voting informally in local, state or national elections	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Learning effectively on your own	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Understanding yourself	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Understanding people of other racial and ethnic backgrounds	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Solving complex, real-world problems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Developing a personal code of values and ethics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Contributing to the welfare of your community	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

12 In this academic year have you seriously considered leaving your current institution? Mark all that apply.

No, I have not considered a change

Yes, to improve career prospects

Yes, for convenience or practical reasons

Yes, for financial reasons or to reduce study costs

Yes, to obtain better quality education

Yes, for other reasons

13 What are your plans for next year? Mark all that apply.

Continue with current study

Shift to another university

Move to vocational education and training

Change to another qualification

Leave university before finishing qualification

Leave university having completed qualification

14 Overall, how would you evaluate the quality of academic advice that you have received at your institution?

Poor	Fair	Good	Excellent
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

15 How would you evaluate your entire educational experience at this institution?

Poor	Fair	Good	Excellent
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

16 If you could start over again, would you go to the same institution you are now attending?

Definitely no Probably no Probably yes Definitely yes

17 Are you male or female?

Male Female





18 Where has your study been mainly based in the current academic year?

On one or more campuses Mix of external/distance and on-campus External/distance

19 In what year did you first start university?

Before 2004 2004 2005 2006 2007 2008

20 How many years of your qualification have you completed?

None, in first year One year Two years Three years More than three years

21 Since starting at university, have you been enrolled mainly part time or full time?

Part time Full time

22 What is your major area of study (e.g. accounting, primary education, psychology, law)? Print neatly in CAPITAL letters.

23 What is your student identification number? Please write in the following box. No individual is identified in any analyses or reports.

24 Do you have a government funded university place (e.g. HECS, CSP, NZ Student Loan Scheme)?

No Yes

25 Which category best represents your average overall grade so far?

No results Less than 50 50 to 59 60 to 69 70 to 79 80 to 89 90 to 100

26 Are you a permanent resident or citizen of either Australia or New Zealand?

No Yes

27 What is your country of permanent residence?

28 What is the main language you speak in your home?

English Language other than English

29 What is the highest level of education completed by your parents?

No school or primary school Some or all of secondary school Vocational certificate or diploma University degree or diploma Not sure

30 What is your home postcode?

31 Are you of Aboriginal or Torres Strait Islander origin?

No Yes

32 Are you of Māori descent?

No Yes

33 Are you of Pasifika (Pacific Island) descent?

No Yes

34 How old are you in years?

Under 18 18 to 19 20 to 21 22 to 23 24 to 25 26 to 30 Over 30

35 Do you consider yourself to have a disability, impairment or long-term condition?

No Yes

36 How much of your study do you do online?

None About a quarter About half All or nearly all

37 Do you live on campus in a university college or hall of residence?

No Yes

38 What are the BEST ASPECTS of how your university engages students in learning?

39 What could be done to IMPROVE how your university engages students?

Thank you for sharing your views. After completing the questionnaire, please put it in the supplied reply-paid envelope and deposit it in any mailbox. For further information, see: www.acer.edu.au/ausse

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Appendix 2: AUSSE scales, measures and SEQ items

Table 12 and Table 13 provide descriptions of AUSSE engagement scales and outcome measures, and present their constituent items.

Table 12 AUSSE engagement scale descriptions and items

Engagement scale	SEQ item
Academic Challenge The extent to which expectations and assessments challenge students to learn	Worked harder than you thought you could to meet a teacher's/tutor's standards or expectations
	Analysing basic elements of an idea
	Synthesising and organising ideas
	Making judgements about value of information
	Applying theories or concepts
	Reading assigned textbooks, books or book-length packs of subject readings
	Written assignments fewer than 1,000 words
	Written assignments between 1,000 and 5,000 words
	Written assignments more than 5,000 words
	Preparing for class
Spending significant amounts of time on studying and on academic work	
Active Learning Students' efforts to actively construct knowledge	Asked questions or contributed to discussions in class or online
	Made a class or online presentation
	Worked with other students on projects during class
	Worked with other students outside class to prepare assignments
	Tutored or taught other university students (paid or voluntary)
	Participated in a community-based project (e.g. volunteering) as part of your study
Student and Staff Interactions The level and nature of students' contact and interaction with teaching staff	Discussed ideas from your readings or classes with others outside class
	Discussed your grades or assignments with teaching staff
	Talked about your career plans with teaching staff or advisors
	Discussed ideas from your readings or classes with teaching staff outside class
	Received prompt written or oral feedback from teachers/tutors on your academic performance
Enriching Educational Experiences Students' participation in broadening educational activities	Worked with teaching staff on activities other than coursework
	Work on a research project with a staff member outside of coursework requirements
	Used an online learning system to discuss or complete an assignment
	Conversations with students of a different ethnic group than your own
	Conversations with students who are very different in terms of religious beliefs, political opinions or personal values
	Practicum, internship, fieldwork or clinical placement
	Community service or volunteer work
	Study group or learning community
	Study a foreign language
	Study abroad or student exchange
	Culminating final-year experience
	Independent study or self-designed major
	Participating in extracurricular activities
Encouraging contact among students from different economic, social and ethnic backgrounds	

Engagement scale	SEQ item
Supportive Learning Environment Students' feelings of support within the university community	Relationships with other students
	Relationships with teaching staff
	Relationships with administrative personnel and services
	Providing support to succeed academically
	Helping cope with non-academic responsibilities
Work Integrated Learning Integration of employment-focused work experiences into study	Providing support to socialise
	Blended academic learning with workplace experience
	Improved knowledge and skills that will contribute to your employability
	Explored how to apply your learning in the workforce
	Industry placement or work experience
Acquiring job-related or work-related knowledge and skills	

Table 13 AUSSE outcome measure descriptions and items

Outcome measure	SEQ item
Higher Order Thinking Participation in higher-order forms of thinking	Analysing basic elements of an idea
	Synthesising and organising ideas
	Making judgements about value of information
	Applying theories or concepts
General Learning Outcomes Development of general competencies	Acquiring a broad general education
	Acquiring job-related or work-related knowledge and skills
	Writing clearly and effectively
	Speaking clearly and effectively
	Thinking critically and analytically
	Analysing quantitative problems
	Using computing and information technology
Working effectively with others	
General Development Outcomes Formation of general forms of individual and social development	Learning effectively on your own
	Voting informedly in local, state or national elections
	Understanding yourself
	Understanding people of other racial and ethnic backgrounds
	Solving complex real-world problems
Average Overall Grade Average overall grade so far in course	Developing a personal code of values and ethics
	Contributing to the welfare of your community
Departure Intention Non-graduating students' intentions on not returning to their institution the following year	Which category best represents your average overall grade so far?
	Not considered change (reverse coded)
	Considered change to improve career prospects
	Considered change for convenience or practical reasons
	Considered change for financial reasons or to reduce study costs
	Considered change to obtain better quality education
	Considered change for other reasons
	Continue with current study (reverse coded)
Leave university before finishing qualification	
Overall Satisfaction Students' overall satisfaction with their educational experience	Quality of academic advice received at institution
	Entire educational experience
	Attend same institution if starting over

Appendix 3: AUSSE and SSES institutions 2007, 2008

	AUSSE 2007	AUSSE 2008	SSES 2008
Auckland University of Technology			
Australian Catholic University			
Australian National University			
Central Queensland University			
Charles Sturt University			
Curtin University of Technology			
Deakin University			
Flinders University			
Griffith University			
James Cook University			
La Trobe University			
Macquarie University			
Massey University			
Murdoch University			
Queensland University of Technology			
Southern Cross University			
Swinburne University of Technology			
UNITEC New Zealand			
University of Auckland			
University of Ballarat			
University of Canberra			
University of Canterbury			
University of Melbourne			
University of New England			
University of Newcastle			
University of Queensland			
University of South Australia			
University of Southern Queensland			
University of Tasmania			
University of Technology, Sydney			
University of the Sunshine Coast			
University of Waikato			
University of Western Australia			
University of Wollongong			
Victoria University			
Victoria University of Wellington			

Appendix 4: AUSSE 2008 summary statistics

Table 14 and Table 15 provide summary statistics for the six AUSSE engagement scales. Table 16 and Table 17 provide summary statistics for the six outcome measures.

For both the scales and measures, figures are shown for first-year, later-year and all students. For each cohort, the first report provides information about scale averages (means (X)), medians (middle values (M)) and variation (standard deviation (SD)).

The second report for each cohort provides percentile tables that report the score below which a certain percentage of scores lie. By way of example, 60 per cent of Australasian first-year students scored 38.1 or below on the Active Learning scale. By contrast, 60 per cent of later-year students had a score of 42.9 or below for this facet.

Table 14 AUSSE engagement scale student summary statistics

	First year			Later year			All students		
	X	M	SD	X	M	SD	X	M	SD
Academic Challenge	45.9	45.6	12.1	48.1	47.5	12.7	47.0	46.5	12.5
Active Learning	35.9	33.3	14.8	40.0	38.1	16.3	37.9	38.1	15.7
Student and Staff Interactions	19.8	16.7	14.5	24.5	22.2	16.1	22.2	20.0	15.5
Enriching Educational Experiences	23.2	21.8	11.7	26.8	25.0	13.8	25.0	23.4	12.9
Supportive Learning Environment	55.0	55.6	17.1	51.3	50.0	17.0	53.1	52.8	17.2
Work Integrated Learning	40.1	40.0	20.4	50.1	46.7	23.1	45.2	40.0	22.4

Table 15 AUSSE engagement scale benchmark percentiles

		0	10	20	30	40	50	60	70	80	90	100
First year	Academic Challenge	0.0	30.8	35.7	39.2	42.7	45.8	48.8	52.1	56.4	61.6	100.0
	Active Learning	0.0	19.0	23.8	28.6	33.3	33.3	38.1	42.9	47.6	57.1	100.0
	Student and Staff Interactions	0.0	5.6	6.7	11.1	16.7	16.7	22.2	22.2	27.8	38.9	100.0
	Enriching Educational Experiences	0.0	9.5	13.4	16.3	19.0	21.4	24.2	27.4	31.7	38.5	100.0
	Supportive Learning Environment	0.0	33.3	41.7	44.4	50.0	55.6	58.3	63.9	69.4	77.8	100.0
	Work Integrated Learning	0.0	16.7	25.0	26.7	33.3	40.0	46.7	46.7	58.3	66.7	100.0
Later year	Academic Challenge	3.0	32.4	37.7	41.5	44.6	47.6	51.2	54.9	58.9	64.6	97.0
	Active Learning	0.0	19.0	28.6	33.3	38.1	38.1	42.9	47.6	52.4	61.9	100.0
	Student and Staff Interactions	0.0	5.6	11.1	16.7	16.7	22.2	27.8	27.8	38.9	46.7	100.0
	Enriching Educational Experiences	0.0	11.1	15.1	18.2	21.8	25.0	29.0	33.3	38.5	45.6	100.0
	Supportive Learning Environment	0.0	30.6	36.1	41.7	47.2	50.0	55.6	61.1	66.7	72.2	100.0
	Work Integrated Learning	0.0	20.0	26.7	33.3	41.7	50.0	60.0	66.7	73.3	83.3	100.0
All students	Academic Challenge	0.0	31.4	36.7	40.5	43.7	46.7	49.9	53.6	57.5	63.1	100.0
	Active Learning	0.0	19.0	23.8	28.6	33.3	38.1	42.9	47.6	52.4	57.1	100.0
	Student and Staff Interactions	0.0	5.6	11.1	11.1	16.7	20.0	22.2	27.8	33.3	44.4	100.0
	Enriching Educational Experiences	0.0	10.4	13.9	16.7	20.0	23.4	26.2	30.3	35.7	42.9	100.0
	Supportive Learning Environment	0.0	30.6	38.9	44.4	47.2	52.8	58.3	61.1	66.7	75.0	100.0
	Work Integrated Learning	0.0	20.0	26.7	33.3	40.0	46.7	50.0	58.3	66.7	80.0	100.0

Table 16 AUSSE outcome measure student summary statistics

	First year			Later year			All students		
	X	M	SD	X	M	SD	X	M	SD
Higher Order Thinking	62.4	66.7	21.1	65.6	66.7	21.1	64.0	66.7	21.1
General Learning Outcomes	60.1	59.3	18.5	65.0	66.7	18.8	62.5	63.0	18.8
General Development Outcomes	42.6	38.9	22.3	44.2	44.4	23.1	43.4	44.4	22.7
Average Overall Grade	72.1	75.0	10.2	71.7	75.0	9.7	71.9	75.0	9.9
Departure Intention	34.5	0.0	47.6	31.6	0.0	46.5	33.1	0.0	47.0
Overall Satisfaction	70.7	66.7	20.0	66.5	66.7	22.2	68.6	66.7	21.2

Table 17 AUSSE outcome measure benchmark percentiles

		0	10	20	30	40	50	60	70	80	90	100
First year	Higher Order Thinking	0.0	33.3	41.7	50.0	58.3	66.7	66.7	75.0	83.3	91.7	100.0
	General Learning Outcomes	0.0	37.0	44.4	51.9	55.6	62.5	66.7	70.4	77.8	85.2	100.0
	General Development Outcomes	0.0	11.1	22.2	27.8	33.3	38.9	50.0	55.6	61.1	72.2	100.0
	Average Overall Grade	50.0	55.0	65.0	65.0	75.0	75.0	75.0	75.0	85.0	85.0	50.0
	Departure Intention	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0	100.0	100.0
	Overall Satisfaction	0.0	44.4	55.6	66.7	66.7	66.7	77.8	77.8	88.9	100.0	100.0
Later year	Higher Order Thinking	0.0	33.3	50.0	58.3	58.3	66.7	66.7	75.0	83.3	100.0	100.0
	General Learning Outcomes	0.0	40.7	48.1	55.6	63.0	66.7	70.4	74.1	81.5	88.9	100.0
	General Development Outcomes	0.0	13.3	22.2	33.3	38.9	44.4	50.0	55.6	66.7	77.8	100.0
	Average Overall Grade	50.0	55.0	65.0	65.0	65.0	75.0	75.0	75.0	75.0	85.0	50.0
	Departure Intention	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0	100.0	100.0
	Overall Satisfaction	0.0	33.3	44.4	55.6	66.7	66.7	66.7	77.8	88.9	100.0	100.0
All students	Higher Order Thinking	0.0	33.3	50.0	50.0	58.3	66.7	66.7	75.0	83.3	91.7	0.0
	General Learning Outcomes	0.0	37.0	48.1	51.9	59.3	63.0	66.7	74.1	77.8	88.9	0.0
	General Development outcomes	0.0	11.1	22.2	27.8	33.3	44.4	50.0	55.6	61.1	72.2	0.0
	Average Overall Grade	50.0	55.0	65.0	65.0	65.0	75.0	75.0	75.0	75.0	85.0	50.0
	Departure Intention	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0	100.0	0.0
	Overall Satisfaction	0.0	44.4	55.6	55.6	66.7	66.7	77.8	77.8	88.9	100.0	0.0

Appendix 5: Summary statistics for key items

Table 18 to Table 23 report weighted percentages for the items included in the six AUSSE engagement scales and six AUSSE outcome measures. Table 24 to Table 29 report these statistics for the outcome measures. Australasian figures are given for first-year students, later-year students, and for all students.

Table 18 Academic Challenge item response category statistics

		First year	Later year	All
Reading assigned textbooks, books or book-length packs of subject readings	None	3	4	4
	1 to 4	40	43	42
	5 to 10	38	32	35
	11 to 20	12	11	12
	More than 20	7	9	8
	Total	100	100	100
Number of written assignments fewer than 1,000 words	None	20	30	25
	1 to 4	57	48	53
	5 to 10	17	15	16
	11 to 20	4	5	5
	More than 20	1	2	2
	Total	100	100	100
Number of written assignments between 1,000 and 5,000 words	None	11	7	9
	1 to 4	56	43	49
	5 to 10	28	37	33
	11 to 20	4	11	8
	More than 20	1	2	1
	Total	100	100	100
Number of written assignments more than 5,000 words	None	85	72	78
	1 to 4	12	24	18
	5 to 10	2	3	2
	11 to 20	1	1	1
	More than 20	0	1	0
	Total	100	100	100
Course work emphasised: Analysing the basic elements of an idea, experience or theory, such as examining a particular case or situation in depth and considering its components	Very little	2	2	2
	Some	22	19	20
	Quite a bit	48	47	47
	Very much	29	33	31
	Total	100	100	100
	Course work emphasised: Synthesising and organising ideas, information or experiences into new, more complex interpretations and relationships	Very little	6	5
Some		34	29	31
Quite a bit		41	42	41
Very much		20	24	22
Total		100	100	100
Course work emphasised: Making judgements about the value of information, arguments or methods, such as examining how others gather and interpret data and assessing the soundness of their conclusions		Very little	7	7
	Some	33	29	31
	Quite a bit	40	40	40
	Very much	20	24	22
	Total	100	100	100
	Course work emphasised: Applying theories or concepts to practical problems or in new situations	Very little	4	3
Some		24	20	22
Quite a bit		41	40	41
Very much		31	36	34
Total		100	100	100
Worked harder than you thought you could to meet a teacher's/tutor's standards or expectations		Never	17	14
	Sometimes	47	47	47
	Often	29	30	30
	Very often	7	9	8
	Total	100	100	100

		First year	Later year	All
Hours per typical seven-day week spent preparing for class (e.g. studying, reading, writing, doing homework or lab work, analysing data, rehearsing and other academic activities)	None	1	2	2
	1 to 5	33	35	34
	6 to 10	28	25	26
	11 to 15	16	15	16
	16 to 20	10	10	10
	21 to 25	5	6	5
	26 to 30	3	3	3
	Over 30	3	4	4
	Total	100	100	100
Institutional emphasis: Spending significant amounts of time studying and on academic work	Very little	2	3	2
	Some	21	22	21
	Quite a bit	52	50	51
	Very much	26	26	26
	Total	100	100	100

Table 19 Active Learning item response category statistics

		First year	Later year	All
Asked questions or contributed to discussions in class or online	Never	6	5	6
	Sometimes	48	43	46
	Often	31	32	31
	Very often	14	20	17
	Total	100	100	100
Made a class or online presentation	Never	31	18	25
	Sometimes	44	42	43
	Often	20	28	24
	Very often	5	11	8
	Total	100	100	100
Worked with other students on projects during class	Never	16	16	16
	Sometimes	39	37	38
	Often	33	33	33
	Very often	12	14	13
	Total	100	100	100
Worked with other students outside class to prepare assignments	Never	17	13	15
	Sometimes	38	36	37
	Often	33	35	34
	Very often	12	17	14
	Total	100	100	100
Tutored or taught other university students (paid or voluntary)	Never	78	72	75
	Sometimes	16	19	17
	Often	4	6	5
	Very often	2	3	2
	Total	100	100	100
Participated in a community-based project (e.g. volunteering) as part of your study	Never	80	69	75
	Sometimes	13	19	16
	Often	5	8	6
	Very often	2	4	3
	Total	100	100	100
Discussed ideas from your readings or classes with others outside class	Never	8	8	8
	Sometimes	39	42	41
	Often	36	35	36
	Very often	16	14	15
	Total	100	100	100

Table 20 Student and Staff Interactions item response category statistics

		First year	Later year	All
Discussed your grades or assignments with teaching staff	Never	41	29	35
	Sometimes	41	47	44
	Often	14	18	16
	Very often	4	6	5
	Total	100	100	100
Discussed ideas from your readings or classes with teaching staff outside class	Never	55	44	49
	Sometimes	36	43	40
	Often	8	11	9
	Very often	2	2	2
	Total	100	100	100
Talked about your career plans with teaching staff or advisors	Never	61	46	53
	Sometimes	29	38	34
	Often	8	12	10
	Very often	2	4	3
	Total	100	100	100
Received prompt written or oral feedback from teachers/tutors on your academic performance	Never	13	10	12
	Sometimes	48	49	49
	Often	32	33	32
	Very often	7	7	7
	Total	100	100	100
Worked with teaching staff on activities other than coursework (e.g. committees, orientation, student organisations, etc.)	Never	82	72	77
	Sometimes	13	20	17
	Often	4	6	5
	Very often	1	2	1
	Total	100	100	100
Work on a research project with a staff member outside of coursework requirements	Not yet done	98	94	96
	Done	2	6	4
	Total	100	100	100

Table 21 Enriching Educational Experiences item response category statistics

		First year	Later year	All
Had conversations with students who are very different from you in terms of their religious beliefs, political opinions or personal values	Never	8	9	8
	Sometimes	37	40	38
	Often	32	32	32
	Very often	23	20	22
	Total	100	100	100
Had conversations with students of a different ethnic group than your own	Never	8	9	9
	Sometimes	34	36	35
	Often	32	31	31
	Very often	26	24	25
	Total	100	100	100
Institutional emphasis: Encouraging contact among students from different economic, social or ethnic backgrounds	Very little	20	28	24
	Some	38	39	38
	Quite a bit	29	24	27
	Very much	12	9	10
	Total	100	100	100
Hours per typical seven-day week spent participating in extracurricular activities (e.g. organisations, campus publications, student government, clubs and societies, sports, etc.)	None	41	40	40
	1 to 5	36	34	35
	6 to 10	14	15	15
	11 to 15	5	6	5
	16 to 20	2	3	3
	21 to 25	1	1	1
	26 to 30	0	0	0
	Over 30	0	1	0
Total	100	100	100	
Used an online learning system to discuss or complete an assignment	Never	24	22	23
	Sometimes	41	41	41
	Often	25	26	25
	Very often	10	11	11
	Total	100	100	100
Practicum, internship, fieldwork or clinical placement	Not yet done	91	72	81
	Done	9	28	19
	Total	100	100	100
Community service or volunteer work	Not yet done	86	73	79
	Done	14	27	21
	Total	100	100	100
Participate in a study group or learning community	Not yet done	78	72	75
	Done	22	28	25
	Total	100	100	100
Study a foreign language	Not yet done	86	83	85
	Done	14	17	15
	Total	100	100	100
Study abroad or student exchange	Not yet done	97	93	95
	Done	3	7	5
	Total	100	100	100
Culminating final-year experience (e.g. honours thesis, comprehensive exam, etc.)	Not yet done	99	97	98
	Done	1	3	2
	Total	100	100	100

Table 22 Supportive Learning Environment item response category statistics

		First year	Later year	All
Institutional emphasis: Providing the support you need to socialise	Very little	27	37	32
	Some	43	42	42
	Quite a bit	24	17	21
	Very much	6	4	5
	Total	100	100	100
Institutional emphasis: Providing the support you need to help you succeed academically	Very little	4	7	5
	Some	27	35	31
	Quite a bit	48	44	46
	Very much	21	14	18
	Total	100	100	100
Institutional emphasis: Helping you cope with your non-academic responsibilities (e.g. work, family, etc.)	Very little	39	50	44
	Some	40	35	38
	Quite a bit	17	12	15
	Very much	4	3	4
	Total	100	100	100
Quality: Relationships with other students	1 Unfriendly, unsupportive, sense of alienation	1	1	1
	2	3	3	3
	3	6	7	6
	4	14	14	14
	5	23	23	23
	6	26	27	26
	7 Friendly, supportive, sense of belonging	26	25	26
	Total	100	100	100
Quality: Relationships with teaching staff	1 Unavailable, unhelpful, unsympathetic	1	1	1
	2	3	4	3
	3	8	8	8
	4	21	20	20
	5	28	28	28
	6	23	25	24
	7 Available, helpful, sympathetic	15	15	15
	Total	100	100	100
Quality: Relationships with administrative personnel and services	1 Unhelpful, inconsiderate, rigid	2	3	2
	2	5	7	6
	3	12	13	13
	4	27	25	26
	5	25	25	25
	6	17	17	17
	7 Helpful, considerate, flexible	12	11	12
	Total	100	100	100

Table 23 Work Integrated Learning item response category statistics

		First year	Later year	All
Blended academic learning with workplace experience	Never	41	25	33
	Sometimes	34	36	35
	Often	18	25	21
	Very often	8	15	11
	Total	100	100	100
Improved knowledge and skills that will contribute to your employability	Never	8	6	7
	Sometimes	36	33	35
	Often	40	43	41
	Very often	16	18	17
	Total	100	100	100
Explored how to apply your learning in the workforce	Never	20	14	17
	Sometimes	40	38	39
	Often	29	33	31
	Very often	11	16	13
	Total	100	100	100
Industry placement or work experience	Not yet done	88	67	78
	Done	12	33	22
	Total	100	100	100
Acquiring job-related or work-related knowledge and skills	Very little	8	5	7
	Some	28	23	26
	Quite a bit	39	38	39
	Very much	24	33	28
	Total	100	100	100

Table 24 Higher Order Thinking item response category statistics

		First year	Later year	All
Analysing basic elements of an idea	Very little	2	2	2
	Some	22	19	20
	Quite a bit	48	47	47
	Very much	29	33	31
	Total	100	100	100
Synthesising and organising ideas	Very little	6	5	6
	Some	34	29	31
	Quite a bit	41	42	41
	Very much	20	24	22
	Total	100	100	100
Making judgements about value of information	Very little	7	7	7
	Some	33	29	31
	Quite a bit	40	40	40
	Very much	20	24	22
	Total	100	100	100
Applying theories or concepts	Very little	4	3	4
	Some	24	20	22
	Quite a bit	41	40	41
	Very much	31	36	34
	Total	100	100	100

Table 25 General Learning Outcomes item response category statistics

		First year	Later year	All
Acquiring a broad general education	Very little	3	3	3
	Some	25	22	23
	Quite a bit	50	47	49
	Very much	22	28	25
	Total	100	100	100
Acquiring job-related or work-related knowledge and skills	Very little	8	5	7
	Some	28	23	26
	Quite a bit	39	38	39
	Very much	24	33	28
	Total	100	100	100
Writing clearly and effectively	Very little	8	5	7
	Some	32	24	28
	Quite a bit	42	44	43
	Very much	18	27	22
	Total	100	100	100
Speaking clearly and effectively	Very little	14	10	12
	Some	37	30	34
	Quite a bit	34	39	37
	Very much	14	20	17
	Total	100	100	100
Thinking critically and analytically	Very little	3	2	2
	Some	18	13	16
	Quite a bit	47	44	46
	Very much	32	41	36
	Total	100	100	100
Analysing quantitative problems	Very little	7	5	6
	Some	28	24	26
	Quite a bit	44	44	44
	Very much	21	27	24
	Total	100	100	100
Using computing and information technology	Very little	8	6	7
	Some	27	23	25
	Quite a bit	37	38	37
	Very much	28	33	30
	Total	100	100	100
Working effectively with others	Very little	7	7	7
	Some	31	27	29
	Quite a bit	42	42	42
	Very much	20	24	22
	Total	100	100	100
Learning effectively on your own	Very little	5	5	5
	Some	26	22	24
	Quite a bit	44	44	44
	Very much	25	29	27
	Total	100	100	100

Table 26 General Development Outcomes item response category statistics

		First year	Later year	All
Voting informedly in local, state or national elections	Very little	63	60	62
	Some	22	24	23
	Quite a bit	10	11	10
	Very much	4	5	4
	Total	100	100	100
Understanding yourself	Very little	16	16	16
	Some	35	31	33
	Quite a bit	34	34	34
	Very much	15	19	17
	Total	100	100	100
Understanding people of other racial and ethnic backgrounds	Very little	18	19	18
	Some	35	35	35
	Quite a bit	31	31	31
	Very much	15	16	15
	Total	100	100	100
Solving complex real-world problems	Very little	11	10	10
	Some	35	32	33
	Quite a bit	38	39	38
	Very much	17	19	18
	Total	100	100	100
Developing a personal code of values and ethics	Very little	17	16	17
	Some	35	34	35
	Quite a bit	33	33	33
	Very much	14	17	15
	Total	100	100	100
Contributing to the welfare of your community	Very little	27	28	27
	Some	39	38	38
	Quite a bit	24	24	24
	Very much	9	10	10
	Total	100	100	100

Table 27 Average Overall Grade item response category statistics

		First year	Later year	All
Which category best represents your average overall grade so far?	No results	2.6	0.8	1.7
	Less than 50	2.6	1.0	1.8
	50 to 59	9.9	10.9	10.4
	60 to 69	25.5	29.4	27.5
	70 to 79	38.2	39.4	38.8
	80 to 89	18.9	16.4	17.6
	90 to 100	2.3	2.1	2.2
	Total	100	100	100

Table 28 Departure Intention item response category statistics

		First year	Later year	All
Not considered change (reverse coded)	Yes	67	70	69
	No	33	30	31
	Total	100	100	100
Considered change to improve career prospects	Yes	10	10	10
	No	90	90	90
	Total	100	100	100
Considered change for convenience or practical reasons	Yes	11	7	9
	No	89	93	91
	Total	100	100	100
Considered change for financial reasons or to reduce study costs	Yes	9	8	9
	No	91	92	91
	Total	100	100	100
Considered change to obtain better quality education	Yes	6	9	8
	No	94	91	92
	Total	100	100	100
Considered change for other reasons	Yes	19	15	17
	No	81	85	83
	Total	100	100	100
Continue with current study (reverse coded)	Yes	90	65	78
	No	10	35	22
	Total	100	100	100
Leave university before finishing qualification	Yes	2	2	2
	No	98	98	98
	Total	100	100	100

Table 29 Overall Satisfaction item response category statistics

		First year	Later year	All
Quality of academic advice received at institution	Poor	3	5	4
	Fair	20	24	22
	Good	53	51	52
	Excellent	24	20	22
	Total	100	100	100
Entire educational experience	Poor	2	3	3
	Fair	15	19	17
	Good	56	53	54
	Excellent	27	24	26
	Total	100	100	100
Attend same institution if starting over	Definitely no	2	4	3
	Probably no	9	14	12
	Probably yes	45	47	46
	Definitely yes	44	35	39
	Total	100	100	100

Appendix 6: Australian Council for Educational Research (ACER)

The Australian Council for Educational Research (ACER) is one of the world's leading educational research centres. Its mission is to create and promote research-based knowledge, products and services to improve learning across the lifespan.

ACER was established in 1930 and for more than 75 years has built a strong reputation as a provider of reliable support and expertise to education policy makers and professional practitioners. As a not-for-profit organisation, independent of government, ACER receives no direct financial support and generates its entire income through contracted research and development projects and through products and services that it develops and distributes. ACER has experienced significant growth in recent years and now has around 260 staff located in Melbourne, Sydney, Brisbane, Perth, Dubai and New Delhi.

ACER is a leader in the provision of quality educational research, both within Australia and internationally. As a national, independent research body, ACER brings a high level of expertise and objectivity to its work.

In recent times ACER has expanded on its program of research and development in support of learning in vocational education and training and in higher education institutions while maintaining and expanding work undertaken in support of schools.

Blending solid experience and creative talent with established methodologies, ACER is a full-service research consultancy specialising in collecting and interpreting information to shape strategic decision making. Researchers bring many years of experience and expertise in a range of disciplines and research methods to their projects. ACER has seven research programs.

Research into transitions and post-school education and training focuses on the transitions which people make in moving from school into further study, employment and adult life, and on higher education and vocational education and training.

The assessment and reporting program conducts research into a wide range of educational outcomes (academic and social). This work, undertaken for clients nationally and internationally and in support of ACER's own tests and assessment programs, includes the refinement of test constructs; studies of test validity and reliability; assessment methods and formats; psychometric analyses of test data; and methods for item banking, online test delivery and reporting.

Research in the national and international surveys area draws on staff expertise in sampling, survey management, the analysis of survey data, and the interpretation and reporting of results in conducting large scale survey research. Current work includes the leadership of three major programs of international surveys including the OECD Programme for International Student Assessment, the IEA Civics and Citizenship Education Study, and the IEA Teacher Education Study.

The system-wide testing program identifies more effective ways of monitoring achievement across entire education systems.

Research into teaching, learning and leadership focuses on the cognitive, affective and behavioural processes and factors that affect learning, as well as the relationship between teacher professional development and improved student learning.

The policy analysis and program evaluation unit explores education policy issues and conducts program evaluation.

In addition to being a national centre for educational policy research and advice, ACER develops and provides a range of research-based products and services to support the work of professional practitioners.

ACER provides secure, fee-for-service testing programs to schools, universities, employers and professional organisations. These programs include selection tests for entry to schools and universities, scholarship tests and tests for diagnostic and monitoring purposes, and recruitment tests.

The organisation also encompasses ACER Press, the Cunningham Library, the Centre for Professional Learning, the International Institute, and the ACER Leadership Centre.

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