Doing more for learning:
Enhancing engagement and outcomes

Australasian Survey of Student Engagement
Australasian Student Engagement Report

AUSSE

ACER

Published by Australian Council for Educational Research Ltd.,
19 Prospect Hill Road, Camberwell, Victoria, 3124, Australia.
Phone: 03 9277 5555
Email: ausse@acer.edu.au
Web: ausse.acer.edu.au

ISBN: 978-0-86431-857-2

Cover and text design by ACER
Printed in Australia by Printgraphics Pty Ltd

Acknowledgements

ACER offers its very warm thanks to those students and staff who responded to the 2009 Australasian Survey of Student Engagement (AUSSE), Staff Student Engagement Survey (SSES) and Postgraduate Survey of Student Engagement (POSSE).

Engagement depends on institutions putting in place the conditions that facilitate learners' involvement in education. A warm thanks to those institutions that took part in the 2009 AUSSE, SSES and POSSE.

The Australian Council for Educational Research (ACER) would also like to offer a particular thanks to those people who played a formative role in the ongoing development and validation of the resources and collection processes. This includes feedback from hundreds of people who took part in AUSSE workshops, seminars and research in 2009. Like the phenomenon of student engagement itself, the AUSSE research process and focus is designed to change along with changing conditions and practices.

Since 2006 the National Survey of Student Engagement (NSSE) team at Indiana University in the USA has played a highly supportive and significant role in the AUSSE. Particular thanks to Associate Professor Alexander McCormick, Professor George Kuh, Dr Robert Gonyea, Mr Todd Chamberlain, Dr Tom Nelson Laird and Dr Jillian Kinzie. In addition to their more general guidance, items in questions 2 to 9, 11 to 12 and 15 to 17 in the Student Engagement Questionnaire have been used with permission from The College Student Report, National Survey of Student Engagement (copyright 2001–10, The Trustees of Indiana University). Also, items in the Staff Student Engagement Questionnaire were used with permission from the Faculty Survey of Student Engagement, Center for Postsecondary Research (copyright 2001–10, The Trustees of Indiana University). The items were adapted and validated for Australia and New Zealand by the Australian Council for Educational Research (ACER).

The 2009 AUSSE was overseen by an Advisory Group. Special thanks to Professor Tom Angelo (La Trobe University), Professor Sam Ball (Technical Adviser), Professor Marcia Devlin (Deakin University), Professor Martin Hayden (Southern Cross University), Professor Kerri-Lee Krause (Griffith University), Professor Stephen Marshall (Victoria University of Wellington), and Professor Geoff Scott (University of Western Sydney). With great sadness we learned that Professor Sam Ball died in late 2009.

A team of research and support staff manage the AUSSE at ACER. Associate Professor Hamish Coates is the AUSSE Project Director. In 2009 Hamish was supported by Ms Ali Radloff (AUSSE manager, and the principal author of this report), Mr David Rainsford, Mr David Tran, Dr Ling Tan, Mr Rob Jinks, Mr Jim Carrigan, Ms Wendy McGregor, Mr Craig Grose, Dr Daniel Edwards and Mr Tim Friedman. Dr Petra Lietz provided analysis and text for this report.

ACER is grateful to Mr Rob Sheehan of Sharp Words Editing and Writing for editing and writing many of the AUSSE Enhancement Guides, and for providing editorial feedback on earlier versions of this report. We extend our thanks to Professor

Marcia Devlin (Deakin University), Ms Anne Horn (Deakin University), Ms Bernadette Lingham (Deakin University), Dr Scott Nichols (University of Canberra), Ms Di Rachinger (University of Melbourne), Ms Laurie Ransom (University of Melbourne) and Associate Professor Ian Solomonides (Macquarie University) who helped write the AUSSE Enhancement Guides.

Please contact ACER if you would like further information about the AUSSE. The team can be contacted at ausse@acer.edu.au or +61 3 9277 5487. Information about the AUSSE is available at http://ausse.acer.edu.au. The postal address is: AUSSE, ACER, Private Bag 55, Camberwell, Victoria, 3124, Australia.

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AUSSE quick facts

Looking at things that matter

The Australasian Survey of Student Engagement (AUSSE) is a validated and established collection of data from first- and later-year students, from coursework postgraduates, and from teaching staff. It collects real-time evidence of behaviour and support. Instead of focusing on student satisfaction/agreement, the AUSSE provides evidence about what students are actually doing, highlights the most critical aspects of student learning and development, provides a 'learner-centred, whole-of-institution' perspective, and gives an index of students' involvement in both study and other relevant activities.

Data gathered through the AUSSE, Postgraduate Survey of Student Engagement (POSSE) and Staff Survey of Student Engagement (SSES) provide fresh insights on facets of education linked with high-quality processes and outcomes. Before the advent of the AUSSE in 2007, these areas had not been the focus of wide-scale measurement in Australasia. A suite of reports and enhancement activities can be used by institutions to convert insights into productive change. The AUSSE starts with the engagement of individuals, and adds this up to institutional, cross-institutional and cross-national perspectives.

Participation

Thirty-five higher education institutions – almost three-quarters of the universities in Australia and New Zealand – participated in the 2009 AUSSE. Nine of these institutions also took part in the SSES. In addition to these surveys, a further four institutions participated in a pilot of the POSSE.

The 2009 AUSSE is the largest ever education-focused collection of data from currently enrolled higher education students in Australasia. Over 30,000 responses were secured, including over 2,700 from on-shore international students. In 2010, the survey is growing to include a range of non-university higher education providers.

Objectives

The primary aim of the AUSSE is to develop a source of information about students' engagement with learning. We hope that the data will be used to stimulate evidence-focused conversations that will lead to the enhancement of student engagement and student outcomes. The purpose of the POSSE is to capture information on postgraduate coursework students' engagement with learning. The SSES engages staff in promoting students' engagement.

Survey instruments

The AUSSE survey 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 and otherwise 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 also measures seven key outcomes: Higher Order Thinking, General Learning Outcomes, General

Development Outcomes, Career Readiness, Average Overall Grade, Departure Intention, and Overall Satisfaction.

The POSSE instrument, the Postgraduate Student Engagement Questionnaire (PSEQ) also measures these aspects of student engagement and outcomes. The SSES instrument, the Staff Student Engagement Questionnaire (SSEQ), provides parallel measurement of these areas from a staff perspective.

Funding

The AUSSE is 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. Appendix 7 provides an overview of ACER.

Administration

A technically advanced and efficient survey methodology has been developed to ensure the validity and reliability of results. Survey administration is managed centrally 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.

A suite of reports

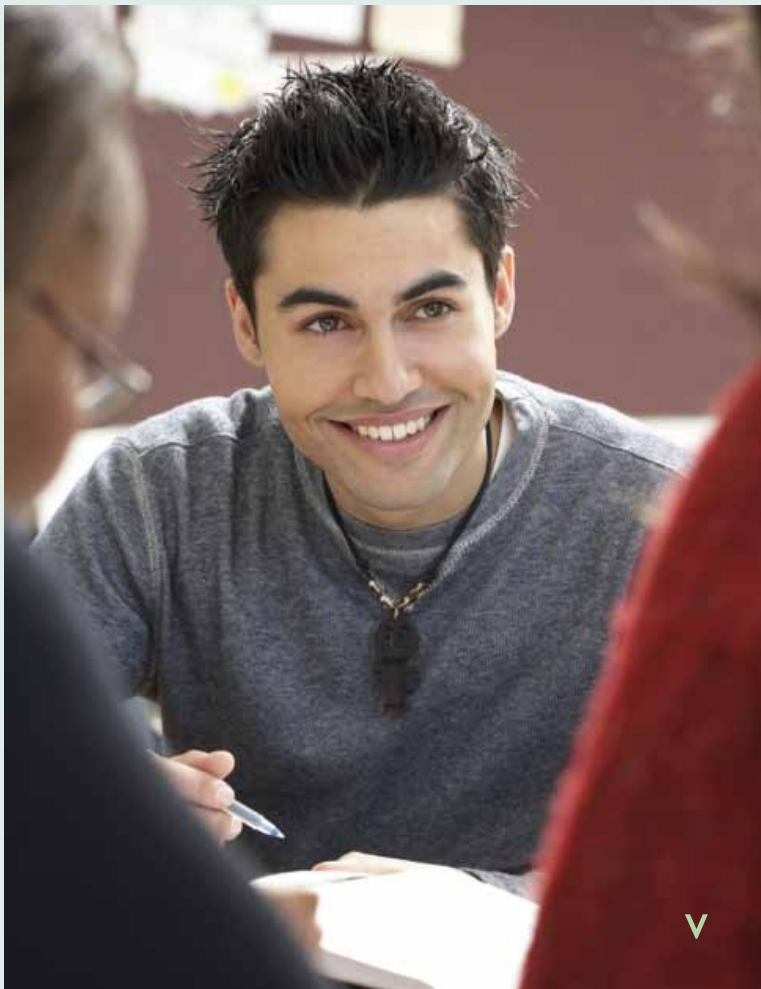
ACER produces AUSSE Institution Reports for participating universities, providing details about the responses from students in their institution and selected benchmark groups. The AUSSE Institution Reports, along with a series of shorter reports designed for dissemination to students and staff provide 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. Examples of the AUSSE Enhancement Guides are included in Appendix 6.

Data availability

In late 2009, participating institutions were provided with their AUSSE Institution Reports, which included a file of each institution's own survey data and a series containing 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. Participating institutions were also provided with a copy of their AUSSE data, and a series of other shorter reports.

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.



AUSSE headline stats

Institution scope	Students at 35 Australasian universities	**Institutions involved in 2010**	Universities, TAFEs, ITPs, private providers
Target populations	1st years, 3rd (later) years, coursework postgraduates, teachers	**Countries with institutions for benchmarking**	Australia, Canada, China, Japan, Korea, New Zealand, South Africa, USA
Sample size	Over 30,000	**Number of institutional administrations**	Over 130
Students from 2007 delivered an inventory of good educational practice	Over 450,000	**On-shore international sample**	Over 2,700
Average time spent preparing for class	8 hrs/wk	**Students who prepared multiple drafts of an assignment**	75%
Time on campus including class	13 hrs/wk	**Time on campus excluding class**	3 hrs/wk
Worked for pay on campus	9%	**Working for pay on campus**	1 hrs/wk
Worked for pay off campus	69%	**Working for pay off campus**	8 hrs/wk

Our teachers challenge your mind and help you to learn to think for yourself. They teach you to think and evaluate critically and you are expanding your views of the world constantly. It's fascinating; it makes you want to know more about the world and our place in it. University is extremely difficult but extraordinarily satisfying. It teaches me that I can be more than what I am and that is a terrific thing.

– First-year female psychology student

Participated in extracurricular activities	60%	Participating in extracurricular activities	3 hrs/wk
Provided care for dependents	49%	Travelling to campus	3 hrs/wk
Exercised or participated in physical fitness	86%	Taught other university students	26%
Asked questions or contributed to discussions	95%	Made a presentation	77%
Practicum, internship, fieldwork or clinical placement	19%	Participated in community-based project	27%
Worked with other students on projects during class	84%	Spoke with students of a different ethnic group	91%
Sought advice from academics	92%	Consulted a university careers service	8%
Worked with academics outside coursework	25%	Worked on a research project outside requirements	4%
Used an online learning system	77%	Used student learning support services	63%
Study abroad or student exchange	5%	Held a leadership position in university or community	8%
Talked about career plans with academics	47%	Blended academic and work experience	67%
Set career development goals and plans	76%	Kept resume up-to-date	61%
Explored where to look for jobs	79%	Would go to same institution if starting over	85%
Considered early departure (all students)	30%	Considered early departure (later-year international students)	34%
Domestic students received direct financial payment from government	41%	Domestic students received direct financial payment from university	17%
Rated academic advising as excellent	22%	Rated educational experience as excellent	26%

AUSSE 2009 summary report

Introduction

At a time in which there is increasing focus on the productivity, equity and standards of higher education, it is vital for universities to have access to data that really count – data that focus on how students are learning and the outcomes being achieved. Building a clearer picture of the significant contribution made by higher education, and of how students can get more from study, hinges in no small way on moving beyond satisfaction- and throughput-oriented metrics and collecting evidence on the fundamentals of education, fundamentals which institutions must measure to improve.

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. It stimulates evidence-based conversations about students' involvement in the activities and conditions which empirical research has linked with high-quality learning and outcomes.

The AUSSE reflects a collaboration between the Australian Council for Educational Research (ACER) and participating institutions. Thirty-five institutions took part in the 2009 AUSSE – around three quarters of the universities in Australia and New Zealand. The AUSSE is linked in formative ways with the 617-institution USA National Survey of Student Engagement (NSSE), facilitating cross-institutional benchmarking and cross-national comparison.

Since the AUSSE was first run in 2007, over 450,000 undergraduate students have been invited to read through an inventory of good learning practices. In 2009, 123,960 first- or later-year onshore bachelor degree students were randomly sampled from a total population of 223,533 spread across the 35 institutions. A target response rate of 20 per cent was specified and 30,622 usable responses were received, reflecting a yield of 24.7 per cent. This rate varied from 13.6 per cent at one institution to 47.9 per cent at another. Post-stratification weighting was used to ensure that results represent the target population.

Nine institutions complemented their student collection with a parallel survey of teaching staff. Run for the second time in 2009, the Staff Student Engagement Survey (SSES) asks academics to report how important they feel that certain aspects of education are for their students, the proportion of students who have participated in certain educational activities, and their expectations for the engagement of their first- or later-year students they had taught during the past two years.

Our university engages us through discussion. Questions are asked within tutorials which really get you thinking long and hard, even once class is over.
– First-year female education student

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 legitimation 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.

In summary, the 2009 Australasian results reveal that:

- The mean Academic Challenge score was 47.9, rising from 46.6 for first-year students to 49.1 for later-year students. Staff perceptions are very similar to those of their students, with cross-national averages of 44.9 and 48.7 for those teaching mostly first- or later-year students. As in 2008, the 2009 AUSSE figures are slightly lower than the NSSE 2009 first- and later-year means of 53.7 and 57.0.
- The average Australasian Active Learning score was 38.6, up slightly from 37.9 in 2008. This average varied from 36.6 for first-year students to 40.4 for later-year students. Staff perceptions of active learning are a little higher than students' scores – 48.9 for first-year students and 44.1 for later year students. The USA year level figures are 43.2 and 51.0 respectively.
- The average score for the Student and Staff Interactions scale was just 23.0 – 20.5 for first year rising to 25.3 for later-year students. Interestingly, staff see themselves as having slightly more interaction with students than do students, with the average score for staff being 31.0. Comparative student figures for the USA are notably higher at 34.7 and 42.0.
- Results for the Enriching Educational Experiences scale are low, with the cross-national mean being 25.0. This mean reflects a slight increase from 22.9 for first-year students to 26.8 among later-year students. Staff perceptions of students' participation in enriching educational experiences is similar to students' participation with an overall average

of 24.4. In the USA, first- and later-year mean scores increased dramatically from 28.0 to 40.8.

- The mean for the Supportive Learning Environment scale was 54.1 – cross-national figures were almost identical to those reported in 2008. This was the only scale that saw a decrease across year levels, with first-year Australasian students having a mean of 56.2 (up marginally from 55.0 in 2008) and later-year students having a mean of 52.2 (up marginally from 51.3 in 2008). Interestingly, this same decrease is evident in the NSSE year-level estimates, which decline from 61.6 to 58.2.
- The average Work Integrated Learning score for Australasia was 45.2, the same as the 2008 score. The scores rose from a mean of 39.6 for first-year students to 50.0 for later-year students – a similar trend to that found in 2008. This scale is unique to the AUSSE and, consequently, there are no NSSE reference values available for comparison. Staff thought that students were more engaged in work integrated learning with an average engagement score of 58.4 for first-year students rising to 64.7 for later-year students.

A focus on outcomes

The 2009 Student Engagement Questionnaire measured seven 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
Career Readiness	Preparation for participation in the professional workforce
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 65.4, rising from 63.8 for first-year students to 66.7 for final-year students. The perceptions of staff are slightly higher than those for students, with a cross-year average of 71.3.
- For learning outcomes such as communication, writing, speaking and analytic skills, the Australasian average score rises from 61.0 to 65.0. The overall average score for Australasia was 63.1. Staff expectations are quite a bit higher than students', with a combined year average of 70.3.
- Compared with learning outcomes, Australasian students report lower levels of general development with an overall average score of 44.6. Average scores rise from 43.3 for first-year students to 45.6 for later-year students. As for general learning outcomes, the average for staff – 46.8 – is on par with the student average.
- Students' levels of career readiness are quite low; however they rise quite considerably between first and later-year. First-year students have a mean score of 34.0 on this scale, rising to 40.8 for later-year students. The overall Australasian average for this scale is 37.6.
- Formal grades average 72.3 for later-year students, very close to the average score of 72.7 for first-year students. This stability is not surprising given the calibration of grade distributions that typically takes place within universities.
- The AUSSE 2009 results suggest that nearly a third of all students (30.1% in first-year and 29.9% in later-year) consider leaving their institutions before graduation. This is slightly lower than the 2008 findings where 34.5 per cent of first-year and 31.6 per cent of later-year students had considered leaving before graduation. Compared with students, academic staff perceive that only 16.8 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 71.3 to 66.1. The overall Australasian average satisfaction score is 68.5. Interestingly, staff rate their

students' overall satisfaction lower than students do, with an overall average of 53.2.

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:

- Levels of engagement and outcome scores were mostly similar for males and females, however, females reported slightly higher levels of academic challenge and greater participation in work integrated forms of learning than males. Females also reported slightly higher levels of higher-order thinking and general development outcomes than males.
- With the exception of perceptions of environmental support, students over 20 years of age reported being more engaged than their younger counterparts. This difference was most marked for work integrated learning, and to a lesser extent for staff and student interactions. Students over 20 years of age also reported higher general learning outcomes, higher career readiness and lower departure intentions than younger students, but lower levels of overall satisfaction.
- Having a disability accounted for very little variation in the engagement or outcomes reported by students. The notable exception to this was that students who report having a disability are more likely to consider departing before the completion of their degree.
- International students were a little more engaged than their domestic counterparts, with the exception of their participation in work integrated forms of learning. International students showed much higher levels of student and staff interactions than domestic students. International students also reported higher levels of general development outcomes and career readiness, lower average overall grades, slightly greater intentions of departing before degree completion, and lower levels of overall satisfaction.
- Speaking a language other than English at home is associated with greater interaction with staff and less engagement in work integrated forms of learning. Students who speak a language other than English at home also have higher levels of general development outcomes and career readiness, but lower average grades and overall satisfaction.
- Socioeconomic disadvantage – measured as being the first in the family to attend university and (for Australian students) residing in a lower socioeconomic area – was on the whole not associated with differences in engagement or outcomes. Australian students residing in a lower socioeconomic area had slightly lower levels of work integrated learning and general learning outcomes than students from a higher socioeconomic area.
- Australian students from remote, provincial or metropolitan areas had similar levels of engagement to each other overall; however, students from remote and provincial areas reported lower levels of active learning and higher levels of work integrated types of learning than students from metropolitan areas. Students from provincial or remote areas were also somewhat more likely to consider departing before completing their degree.
- Compared with non-Indigenous Australians, Indigenous students reported slightly more participation in work integrated learning, greater interactions with staff, and considerably higher early departure intentions. Aboriginal and Torres Strait Islander students also reported higher levels of general development outcomes than their non-Indigenous counterparts. Māori students reported similar engagement and outcomes to other Australasian students, although they reported notably higher departure intentions and somewhat lower levels of work integrated learning and career readiness. Pacific Islander students reported a greater sense of support, higher general learning and development outcomes and greater career readiness than other students, yet their departure intentions were on a par with Māori students.

In terms of key 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 similar grades and departure intentions to part-time students.
- Campus-based students reported higher levels of active learning, greater levels of support, less participation in work integrated learning, and more overall satisfaction and lower levels of departure intention than students studying externally or by distance.
- 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, however students whose places were government funded were a little more satisfied than fee-paying students.
- People living on campus in university colleges or halls of residence felt more supported, participated less in work integrated learning, and reported greater overall satisfaction and lower levels of departure intention than non-residential students.
- Field of education provides a powerful lens for interpreting many aspects of university life. Humanities and education students felt most challenged to learn, while education students also reported the highest levels of active learning and work-integrated learning. Students in the creative arts area had the strongest levels of student and staff interactions, students studying in a health-related field reported the highest levels of participation in enriching educational experiences along with education students, and agriculture students felt the most supported. Students studying in the fields of science and information technology tended to have lower levels of engagement. Students studying information technology had the lowest levels of academic challenge, enriching educational experiences and felt les supported, while students studying science had the lowest levels of active learning and work integrated learning of all the fields of education.

  Higher order thinking was highest among humanities students, while agriculture and education students reported the highest levels of general learning outcomes. General development outcomes were highest among humanities and health students. There was little variation among fields for average overall grade. Students in the management and commerce field reported the highest levels of career readiness, while students studying agriculture reported the highest levels of satisfaction. Engineering students reported the highest departure intention, while students studying creative arts reported the lowest levels of departure intention.

This report provides an in-depth exploration of the differences in students' engagement for students in various equity groups – students from low socioeconomic backgrounds, those who are the first-in-family to attend university, and Indigenous students among others. The findings generally affirm that students from low socioeconomic backgrounds, from regional and remote areas, and who identify as being of Indigenous origin or descent perform educationally at comparable levels to others.

Guidance for change

Developing strategies to use engagement data for continuous quality improvement is central to the AUSSE. Information about student engagement plays 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.

But the most important impact comes from leaders, teachers, professional staff and policy makers enacting evidence-based change. People need to make informed, professional decisions about which 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 along with Appendix 6 reviews these Enhancement Guides which, as with many other AUSSE resources, can be downloaded from http://ausse.acer.edu.au.

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Measuring learning to improve education

A perspective that adds up

The Australasian Survey of Student Engagement (AUSSE) provides data that Australian and New Zealand higher education institutions can use to attract, engage, retain and graduate 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.

To understand the contribution made by higher education we need to collect data on core education business. Instead of focusing so much on student satisfaction, retention and completion rates (Coates, 2008a), we need to look at the ways in which students are learning. Collecting data on how students are learning and the outcomes they are achieving allows higher education institutions to understand what really counts in terms of quality.

The AUSSE is a quality enhancement activity managed by the Australian Council for Educational Research (ACER). An overview of its development is provided by Coates (2009a). It builds on foundations laid by the North American National Survey of Student Engagement (NSSE). The report of the 2009 NSSE (NSSE, 2009) 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. The NSSE's methodologies and research foundations offer solid grounds for ongoing development of the AUSSE.

The AUSSE was conducted for the third time in 2009 with 35 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 of higher education 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 2009, for the second time, all institutions that participated in the AUSSE were invited to take part in the SSES. Nine 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 undergraduate students that they teach are the focus of the survey. The SSES focuses on:

- academic's perceptions of the proportion of their students who engage in different activities and the frequency with which they do so;
- the importance staff place on various areas of learning and development;
- the nature and frequency of staff-student interactions; and
- 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; and
- 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 2009 the SSES was revised in line with feedback from participating universities to make the items easier for teaching staff to answer.

In broad terms, the population for the SSES includes on-shore academic staff working in faculties, who are currently teaching, or have in the last two years taught undergraduate students. The population includes contract, permanent and casual 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 selected variables to ensure their representativeness at the institution level.

The SSES is a survey of academic staff about students

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) alongside student responses and norms, 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 some demographic data.

When the SSES was run in 2008 it 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 et al., 1997; Johnes & Taylor, 1991; Cuenin, 1993; 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, 2007a) 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 education.

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

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 superior 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

excellence, 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 which specifically focuses on students and their interactions with their institution. While the concept has previously been 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, can be a reliable proxy for understanding students' learning outcomes and 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, 2009b) 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

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, 2009a).

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 2009 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 (Table 1).

Table 1 AUSSE engagement scales

Engagement 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 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 (2005), Pascarella (2001), Ewell and Jones (1996), Pace (1979), Astin (1985, 1990, 1993), Coates (2006). This research foundation assures the educational importance of the phenomena measured by the instrument.

The seven outcome measures focus on broader forms of learning and development. All seven areas are measured in the SEQ, and the SSEQ measures all but average overall grade and career readiness (Table 2).

Table 2 AUSSE outcome measures

Outcome measure	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
Career Readiness	Preparation for participation in the professional workforce
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 and was updated for use in 2009. 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.

ACER conducts routine psychometric analyses of the SEQ and SSEQ scales and items. Content validity is built into the instrument through its foundation in research, consultation and qualitative testing. Construct validity is tested with congeneric measurement and item response modelling. These analyses show that the items have appropriate loadings on and spread out to provide consistent measurement of underpinning variables. Construct validity is also tested by looking at empirical divergence between the scales, which reveals that the scales are distinct. Analysis of the response scale for each item shows that it generates efficient and sufficient variation in response.

Analyses of differential item functioning (item bias) attests to the stability of items across different respondent groups. The criterion validity of the instrument has been tested by several institutions that have mapped AUSSE findings against grades and early departure. Correlations between the engagement and outcomes scales affirms a consistently positive relationship.

Lower bounds (Chronbach alpha) estimates of internal consistency (reliability) show variation across fields of education and institutions (as expected, see: Vacha-Haase, 1998), and range from 0.6 (for Active Learning in the fields of engineering and education), to 0.9 (for General Learning Outcomes in several fields).

Institution, student and staff samples

The AUSSE was conducted for the third time in 2009, building on more than a decade of national use of the NSSE in the USA. In total, 35 higher education institutions chose to participate, with 30 from Australia and five from New Zealand – six more institutions participated in 2009 than in 2008. Participating institutions are listed in Table 3. Since its inception, there have been over 130 institutional replications of the AUSSE.

In addition, nine institutions participated in the SSES. These institutions are identified in Table 3 by the inclusion of '(SSES)' following the institution's name. To assist with benchmarking, Appendix 2 provides a complete list of 2007 to 2010 institutional participation in the AUSSE, SSES and POSSE. Around 45 institutions are scheduled to take part in AUSSE 2010, including several who are participating for the first time.

Table 3 AUSSE 2009 participating institutions

Australian institutions	New Zealand institutions
Australian Catholic University	Lincoln University
Australian National University	Massey University
Bond University	University of Canterbury
Central Queensland University (SSES)	University of Otago
Charles Darwin University (SSES)	Victoria University of Wellington (SSES)
Charles Sturt University	
Curtin University of Technology	
Deakin University	
Edith Cowan University	
Flinders University	
Griffith University	
James Cook University	
La Trobe University (SSES)	
Macquarie University	
Murdoch University	
Queensland University of Technology (SSES)	
Southern Cross University (SSES)	
University of Adelaide	
University of Canberra	
University of New England (SSES)	
University of Newcastle (SSES)	
University of Notre Dame, Australia (SSES)	
University of Queensland	
University of South Australia	
University of Southern Queensland	
University of Tasmania (SSES)	
University of Technology, Sydney	
University of the Sunshine Coast	
University of Wollongong	
Victoria University	

Review of this list indicates the AUSSE covers a good range of each country's universities (research-intensive Australian institutions were under-represented in AUSSE 2009). 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. These important qualifications aside, the 2009 SSES was one of the largest surveys of academic staff ever conducted in Australia and New Zealand, and selected results are presented throughout this report.

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 2009 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 2009, the target population included 104,141 first-year students and 119,392 later-year students, giving 223,533 students in

Assignments and class work are good as it helps open up discussion topics and helps get you involved.

– Later-year male information technology student

total across the 35 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; and
- 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 2009, different sample sizes were defined for different sizes of institution. Institution size was based on the number of on-shore first-year students (a rough proxy for size). Up to 2,500 first- and later-year students were surveyed at institutions with less than 1,500 on-shore first-year students. Up to 3,000 first- and later-year students were surveyed at institutions with between 1,500 and 5,000 on-shore first-year students, and up to 3,500 first- and later-year students were surveyed at institutions with more than 5,000 onshore 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 is provided to institutions to assist with the generation of estimates for specific subgroups within the student population should they wish to do this.

A total of 123,960 students at 35 institutions were invited to take part in the 2009 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 123,000. A link to the online survey form was sent to all sampled students. The ACER sample design also allowed for 58,138 students to be sent a paper survey form.

A total of 30,622 usable responses were received prior to production of the final data file. This included 6,633 paper and 23,988 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 (8,520, 7,562 and 7,906), 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 24.7 per cent. The response rate varied from around 13.6 per cent at one institution to 47.9 per cent at another. In total, 25 of the 35 institutions secured more than the 20 per cent target response rate. The middle 70 per cent of institutions received response rates ranging between 16 and 31 per cent.

By way of comparison, the average institutional response rate in the USA was 36 per cent for institutions using the same mix of online and paper surveying used for the AUSSE. Institutions that administered the survey online only had an average response rate of 37 per cent, while those that administered paper questionnaires had an average response rate of 31 per cent.

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 4 reports demographic data for the AUSSE population and sample, and Table 5 summarises educational characteristics. The population parameters are drawn from the population lists supplied by participating institutions, and

Table 4 Population and sample demographic characteristics

		Population		Secured sample		
		N	%	n (unweighted)	n (weighted)	% (weighted)
Year level	First	104,141	46.6	14,878	115,846	47.3
	Later	119,392	53.4	15,743	128,969	52.7
Sex	Male	92,101	41.2	8,818	92,375	41.1
	Female	131,431	58.8	18,978	132,328	58.9
Residency	Domestic	190,025	85.0	25,038	199,415	89.0
	International	33,451	15.0	2,718	24,655	11.0
Age	Under 20			10,673	82,001	36.8
	20 or over			16,928	140,692	63.2
Language background	English			23,862	189,637	84.8
	Not English			3,854	33,892	15.2
Indigenous	Indigenous			1,293	9,881	4.4
	Non-Indigenous			26,483	214,210	95.6

Table 5 Population and sample educational characteristics

		Population		Secured sample		
		N	%	n (unweighted)	n (weighted)	% (weighted)
Field	Science	17,746	7.9	2,936	19,992	8.9
	Information technology	6,953	3.1	698	7,207	3.2
	Engineering	15,671	7.0	1,751	15,178	6.8
	Architecture and building	6,350	2.8	558	5,200	2.3
	Agriculture	3,839	1.7	717	4,571	2.0
	Health	36,497	16.3	5,355	40,117	17.9
	Education	23,658	10.6	2,903	24,475	10.9
	Management and commerce	50,893	22.8	4,474	40,830	18.2
	Humanities	44,488	19.9	6,441	49,080	21.9
	Creative arts	17,341	7.8	1,852	16,510	7.4
Attendance mode	Internal	192,425	86.1	23,556	187,064	83.2
	External/mixed	31,107	13.9	4,273	37,805	16.8
Family background	First in family			12,403	103,159	42.1
	Not first in family			18,218	141,656	57.9
Disability	Identified disability			1,629	13,900	6.3
	No disability			25,902	208,399	93.7
Study finance	Government funded			21,448	171,686	77.1
	International fees			2,705	24,534	11.0
	Domestic fees			3,409	26,430	11.9
Residential status	Residential student			3,967	22,434	10.0
	Non-residential			23,766	201,302	90.0

information is only available on selected variables. Weighted totals vary due to missing data and rounding. The figures provide useful background for subsequent analyses and affirm the representative of the sample against 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 a teaching function in faculties, and includes casual staff. In 2009 the target population used for sampling purposes included 13,116 staff.

In order to capture responses from a broad range of academics teaching in different fields, the SSES was run as a census of all staff in the target population.

The sample design for the SSES included a target response rate of 20 per cent. A total of 30,622 responses were received, meaning that the secured Australasian response rate, not adjusted for undeliverable contacts, was 24.7 per cent. The response rate varied from around 13.6 per cent at one institution to 47.9 per cent at another. In total, responses were secured from at least 20 per cent of sampled staff at six of the nine 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.

Academic feedback should be more detailed and often, so as to consider which parts of your work need more improvement.

– First-year male humanities student

3

Students' engagement with learning

Measuring students' engagement with learning

This report emphasises key aspects of student engagement. Much could be reported given the breadth of phenomena and the comparatively small amount of information traditionally available.

In this report attention is focused on summarising patterns of engagement in terms of the six AUSSE scales. Results from each scale are analysed in turn, as it is most effective to make comparisons between different student and educational groups within a scale, rather than between scales. While the scales all measure aspects of students' engagement with learning, the six scales are quite distinct from each other. The items included in each of these scales are listed in Appendix 3 and further scale-level statistics are provided in Appendices 4 and 5. Throughout the report selected SSES and comparison results for USA students from the FSSE are presented to complement the Australasian 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 5.0 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 of around a third 'moderate', and those greater than half 'large'.

Scale standard deviations are reported in this chapter to help facilitate effect size analysis.

Part of the Student Engagement Questionnaire asks 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?'

Selected comments from these open-ended responses are included alongside the findings presented in this chapter to help contextualise the statistical results.

Academic Challenge

Overall, most students beginning in higher education expect to be challenged, to work hard, and expect that their teachers will have high expectations of them and their work. Appropriate levels of intellectual challenge along with sufficient educational support, improves students' learning outcomes. Indeed the AUSSE results show a relationship between students overall Academic Challenge score and students' average grade. In the AUSSE, items measuring students' participation in intellectually challenging activities underpin the Academic Challenge scale.

Scores for each of the AUSSE scales are reported on a metric ranging from 0 to 100. The average Academic Challenge score was 47.9, up marginally from 2008 when the average was 47.0. Later-year students had a slightly higher average for this scale (49.1), than first-year students (46.6). The Australasian standard deviation for the Academic

Challenge scale was 12.6. Staff perceptions of students' participation in intellectually challenging activities match those of their students, with cross-national averages of 44.7 and 48.6 for staff teaching predominantly first-year and later-year students respectively.

It is informative to probe cross-national comparisons between Australasia and the USA given the increasingly internationalised nature of higher education. Such comparisons highlight gaps, differences and areas in need of further exploration. Any differences or gaps need to be understood in terms of the differences in context between institutions and educational systems.

As Figure 2 shows, USA students spend more time preparing for class than Australasian students. USA students report spending an average of 14 hours and 20 minutes preparing for class in a typical week, significantly more than the 10 hours and 45 minutes the average Australasian student spends studying, doing homework and preparing for classes in a typical week. USA students also report pushing themselves to work hard more often than their Australasian counterparts, as shown in Figure 3. A fifth of USA students report that they 'very often' push themselves to work hard to meet their teachers' expectations, which compares with only 8.6 per cent of Australasian students who report that they 'very often' work harder than they thought they could.

Although Australasian students do not report working hard as frequently as USA students, only a relatively small proportion of Australasian students report that they 'never' work hard (14.0%), and quite a large proportion of students (39.8%) say that they push themselves to work hard 'often' or 'very often'. This is up slightly from the 2008 findings which showed that 34.3 per cent of Australasian students pushed themselves to work hard at least often.

Appropriate levels of intellectual challenge along with sufficient educational support, improves students' learning outcomes

On average, staff indicated that 41.2 per cent of their students had worked harder than usual to meet their standards or expectations. The disjunct between the proportion of students that staff believe have worked hard, and the proportion of students who indicate that they have worked hard at least sometimes suggests that staff may be underestimating how hard their students are working, or may have a different understanding of what is meant by hard work. Staff who predominantly taught later-year students believed that a slightly greater proportion of their students – 42.2 per cent pushed themselves to work hard than staff teaching first-year students – 39.4 per cent.

Though intellectual challenge requires input from individual students, universities and their staff

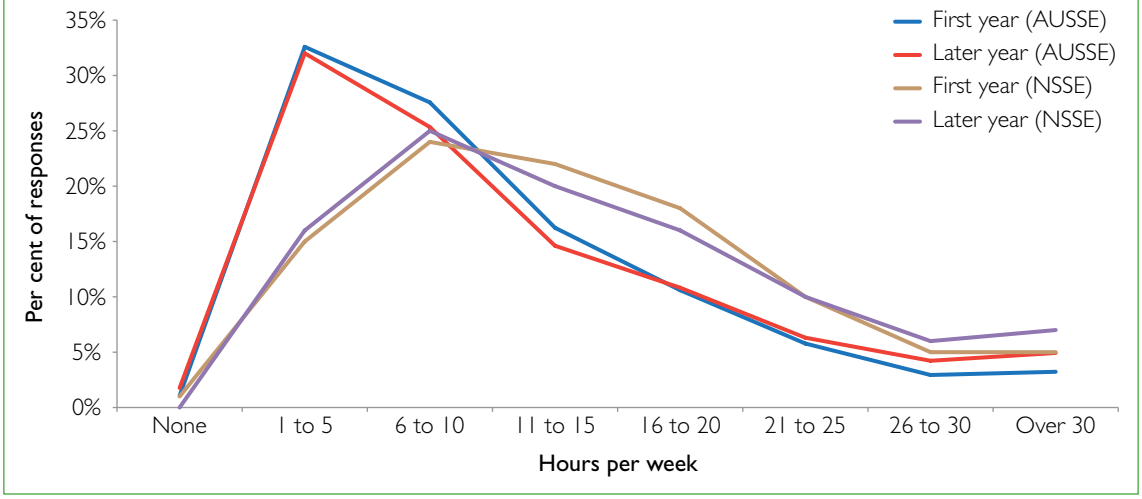

Figure 2 Hours spent preparing for class in a typical seven-day week – USA and Australasian comparison

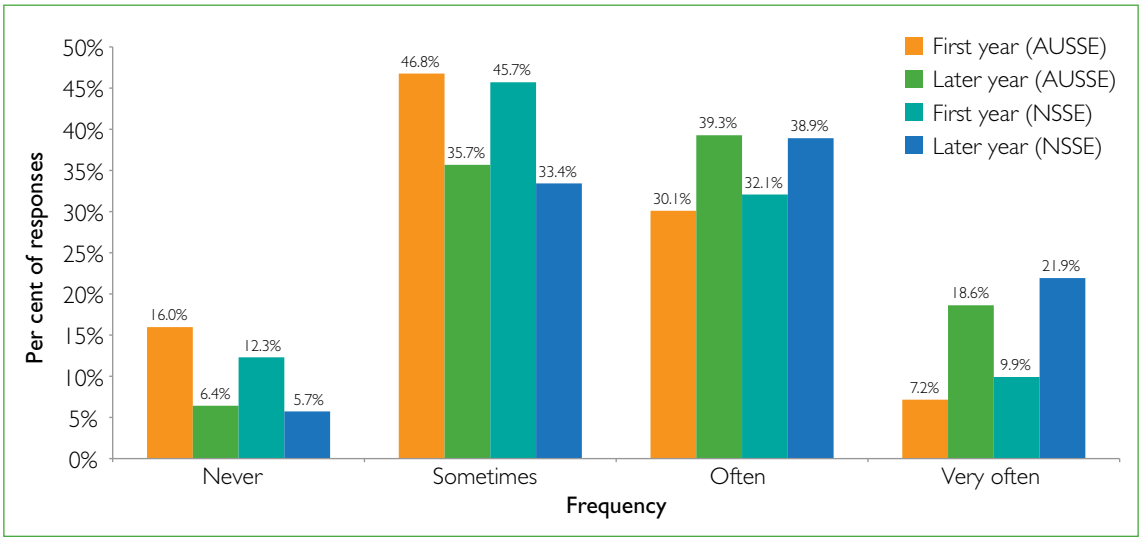

Figure 3 Working harder than students thought they could – USA and Australasian comparison

also have an effect on students' perceptions of academic challenge, and the amount of effort they put into their work. Most Australasian students – 49.1 per cent – feel that their institution places 'quite a bit' of emphasis on spending significant time on academic work while over a quarter – 28.3 per cent – say that this is emphasised 'very much'. Only a very small proportion – 2.5 per cent of students feel that this is not emphasised by their institution at all. This same pattern is reflected in staff responses, with 50.6 per cent of staff saying that they believe their department emphasises spending significant time on academic work 'quite a bit', and 25.7 per cent 'very much'.

Staff surveyed as part of the Staff Student Engagement Survey reported that they set their students an average of four assigned textbooks or reading packs, and set, on average three written assignments of fewer than 1,000 words, two medium-length written assignments of between 1,000 and 5,000 words and one longer assignment of more than 5,000 words. While staff on average assigned their students this amount of assessment and reading, students said that across all of their subjects they were assigned a greater amount of reading and writing. Students were assigned an average of seven textbooks or reading packs, four short written assignments, five medium-length written assignments and one lengthy written assignment.

Engagement with intellectually challenging learning varies substantially across different fields of education. As shown in Figure 4, students studying humanities and education have the highest levels of intellectual challenge, while information technology students report the lowest levels. The reason why humanities and education students report the highest levels of intellectual challenge is because they are assigned the greatest number of subject-based texts – an average of nine textbooks or subject reading packs. Education students also report having the most written assignments out of all of the fields of education, with an average of 12 small, medium and long written assignments assigned to them during the course of the academic year. Although there is large variance in levels of academic challenge across different fields of education, it is positive to note that for each field of education, overall, academic challenge has risen slightly since first measured in 2007.

At the aggregate institution level, mean scores for Academic Challenge ranged from 44.0 to 53.9, suggesting that the institution a student attends does account for some of the variation in students' perception of intellectual challenge. However, institution alone does not account for all variance in students' level of academic challenge. Factors such as student background, demographics and educational contexts all may all affect students' engagement with intellectually challenging learning.

The growth in students' rating of intellectual challenge from first-year (46.6) to later-year (49.1) suggests that students feel more challenged by their study as they move through their degree and

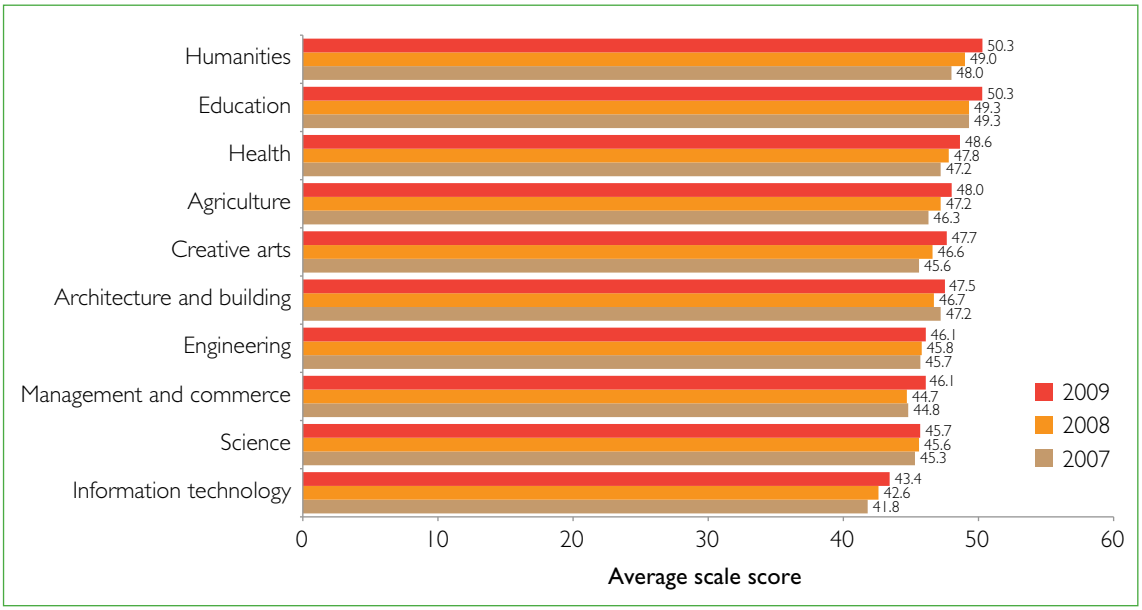

Figure 4 Academic Challenge scores by broad field of education

have the opportunity to tackle more challenging, higher level subjects, content and concepts. A similar, but less direct pattern emerges when looking at the relationship between students' age and intellectual challenge. Students under 20 years of age have an average score of 46.6 for Academic Challenge, while for students 20 years or older this rises to 48.8.

Female students report somewhat higher levels of Academic Challenge (49.2) than male students (46.1). Female students are more likely than their male counterparts to report working harder than they thought they could – female students have a mean of 47.0 for this item, while male students have a mean of 41.7. Males also reported spending slightly less time – approximately ten hours and twenty minutes – preparing for classes each week than females who spent an average of just over 11 hours studying and preparing for classes during a typical week. The reason for these discrepancies in participation in intellectually challenging activities between the sexes may be due to the higher proportion of female students studying education (78.8% female), humanities (65.5% female) and health (74.7% female), areas in which students are reporting higher levels of intellectual challenge overall. No notable differences in levels of intellectual challenge are evident among students from different regions, different socioeconomic backgrounds, between Indigenous and non-Indigenous students, international or domestic students or for students with a disability.

Students who report working for pay off campus for over 30 hours during a typical week have lower levels of perceived intellectual challenge (45.3), but most students who work for pay have slightly elevated levels of intellectual challenge. Scale scores stretch from 48.2 for students not working for pay off campus, up slightly to 49.3 for students working between 21 and 25 hours per week off campus. Although only a small proportion of students (9.2%) report working for pay on campus for at least an hour a week, there appears to be a stronger relationship between hours worked for pay on campus and level of intellectual challenge. Students who report that they do not work on campus have a mean of 47.8 for intellectual challenge. This rises to 57.0 for students who work between 26 and 30 hours on campus in a typical week.

The engagement of 'distributed learners' – people learning part time or via distance, or in a range of other modes – has been investigated in depth using AUSSE data (Coates, 2008b). In relation to Academic Challenge, part-time students have somewhat lower levels of participation in intellectual challenge (45.9) than full-time students (48.4). This may be expected, as part-

time students would be assigned less reading and writing than full-time students due to their lower study load. Part-time students spend an average of 8 hours and 40 minutes on campus in a typical week, and just over four hours in classes, while full-time students spend an average of 17 hours per week on class, and just over nine hours in class. Although part-time students have slightly lower levels of intellectual challenge overall, as illustrated in Figure 5, it is interesting to note that part-time and full-time students spend a very similar amount of time each week studying and preparing for class. Part-time students spend an average of 10 hours and 20 minutes preparing for class, while full-time students spend on average just half-an-hour more.

Students studying externally have very similar levels of intellectual challenge (48.7) to campus-based students (47.8). Interestingly, external students or those studying by distance are more likely to report pushing themselves to work harder than they thought they could, and also report spending a greater number of hours preparing for class – just over 12 hours – than their campus-based peers.

Active Learning

In the AUSSE, active learning is defined as the extent to which students are involved in experiences that involve actively constructing new knowledge and understanding. Engaging students in these forms of learning is at the heart of effective educational practice. The Active Learning scale in the AUSSE examines students' participation in various active learning activities, including the frequency with which students ask questions or contribute to discussions in class or online, make presentations, work with other students during and outside of class, tutor other students, discuss ideas from classes outside of class and extend learning beyond formal classroom contexts.

active learning is defined as the extent to which students are involved in experiences that involve actively constructing new knowledge and understanding

Active Learning scores are reported on a metric ranging from 0 to 100. The Australasian Active Learning average score in 2009 was 38.5, up slightly from 37.9 in 2008 and 35.7 in 2007. While within statistical error margins, these results hint that students are applying themselves more in 2009 than 2007.

Average scores rose from 36.5 for first-year students to 40.4 among later-year students. Average Active Learning scores for staff predominantly teaching first- and later-year students were 43.8 and 44.2 respectively. The standard deviation of the Australasian figures was 16.0. As with Academic Challenge, USA students reported higher levels of engagement with active

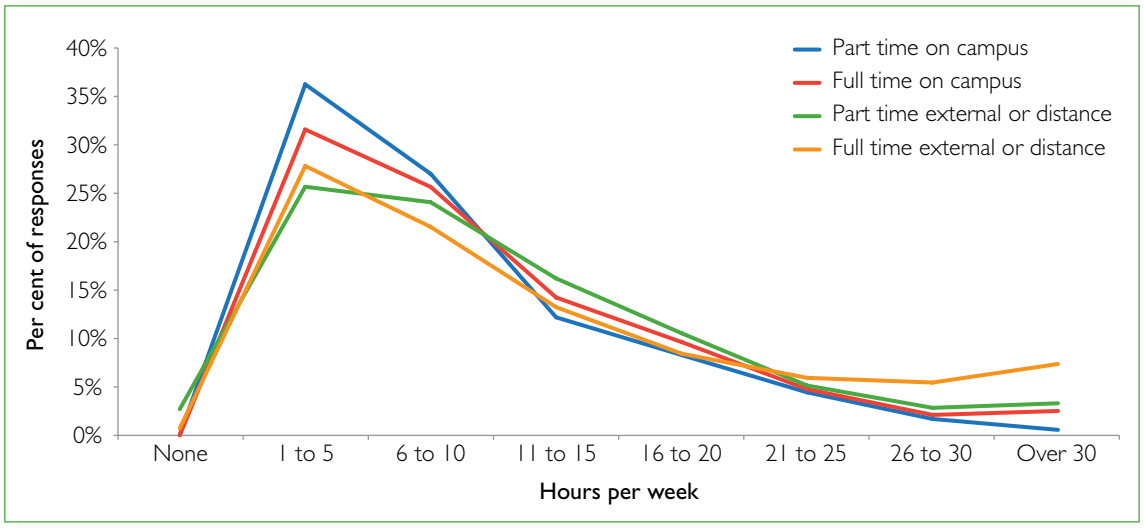

Figure 5 Hours spent preparing for class in a typical seven-day week by mode and location of study

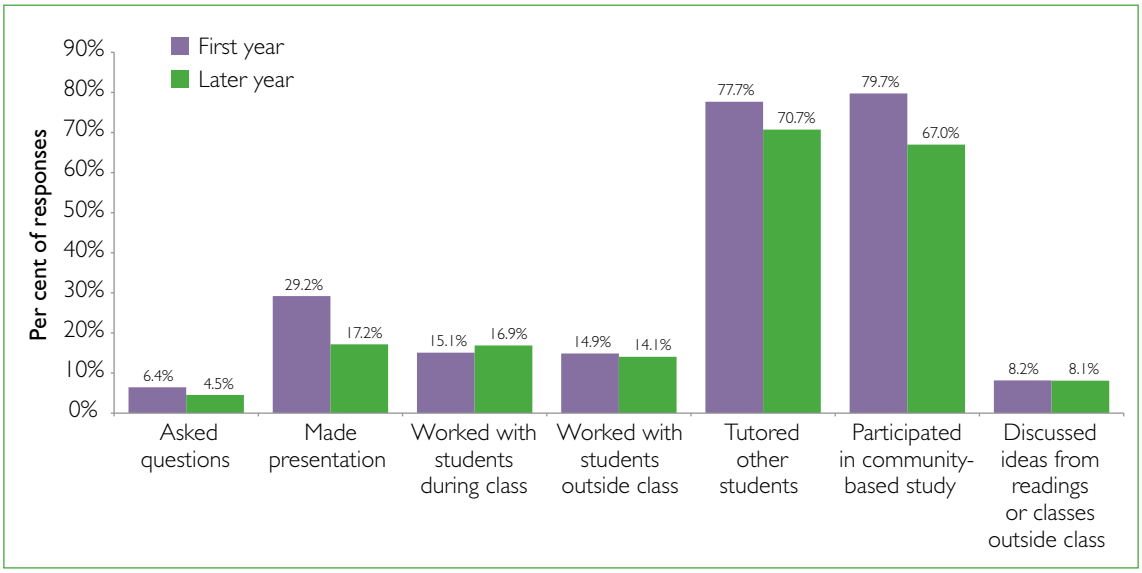

Figure 6 Proportion of students who have 'never' participated in active learning activities

forms of learning than their Australasian peers. First-year USA students had a mean of 43.2 on this scale, rising to 51.0 for later-year USA students.

Overall, students' participation in active forms of learning seems to be heading in an upward trajectory year-on-year, which is positive to see. However, the great gap between Australasian and USA students in engagement with Active Learning, and the number of students who report 'never' participating in active forms of learning (Figure 6) suggest that improvements can be made in this area.

Encouragingly, only a small proportion of students report that in the current academic year they 'never' ask questions or contribute to class discussions, or 'never' discuss ideas from classes or readings with others outside of class. However, more than a fifth of students – 22.8 per cent – report that they have 'never' made a presentation in class or online during the current academic year. A much smaller proportion of USA students – 9.9

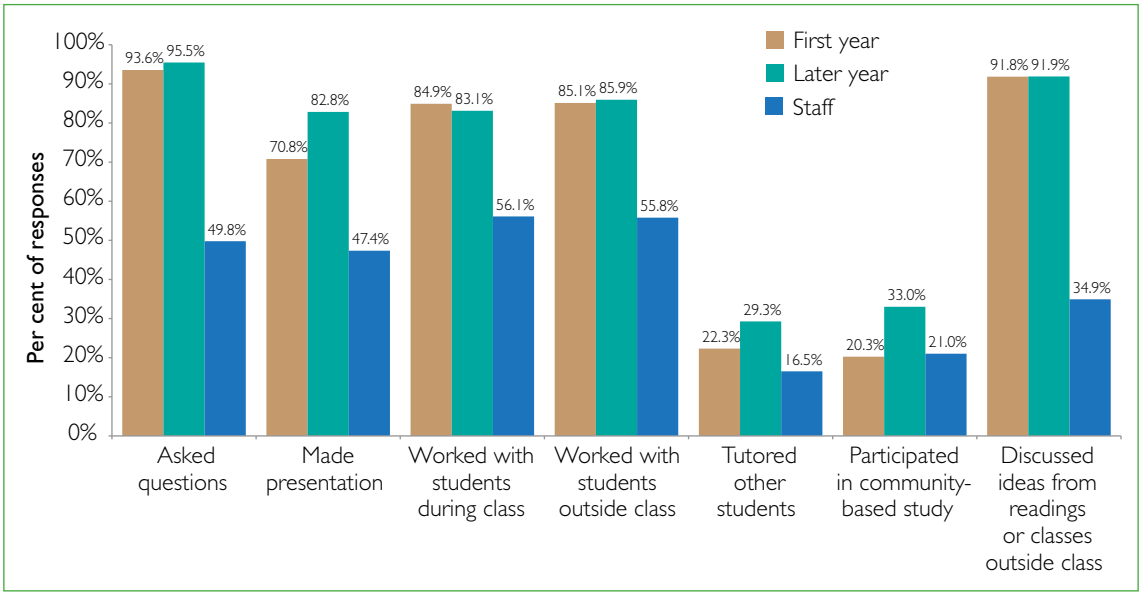

Figure 7 Student and staff estimates of proportion of students who participate in active learning activities

per cent – report that they have 'never' made a presentation.

That such a large proportion of students have 'never' made a presentation as part of their higher education studies is surprising, as over 95 per cent of staff surveyed indicated that it was 'important' or 'very important' for their students to develop their communication skills through their studies. That so many students have not had the experience of making a presentation is also disheartening, as communicating and presenting effectively are valuable skills necessary to succeed in many professions.

Interestingly, when staff were asked to estimate the proportion of their students who had participated in active forms of learning, they were not very optimistic. Teaching staff estimate that close to half of their students have asked questions or contributed to discussions during classes or made a presentation during class and that slightly more than half had worked with others during class or outside of class. As illustrated in Figure 7, a much larger proportion of students had participated in these types of active learning activities than estimated by teaching staff. For example, staff estimated that just over a third of their students discussed ideas from their classes and readings with others outside of class, while nearly half of all students (48.9%) have done this 'often' or 'very often'.

Although teaching staff believe that quite a significant proportion of their students have not participated in active forms of learning, when asked how important participating in these types of activities is for students, only 0.7 per cent said it was 'not important' and 3.9 per cent said 'somewhat important'. 27.6 per cent of teaching staff indicated that active learning was 'important', and over two-thirds – 67.7 per cent – said that this was a 'very important' aspect of students' university education. Again, while staff estimate that more than 40 per cent of their students do not work with others outside or during class, 84.1 per cent of teaching staff consider peer interaction to be 'important' or 'very important' for their students.

more than a fifth of students – 22.8 per cent – report that they have 'never' made a presentation in class or online during the current academic year

As shown in Figure 8, a considerable number of Australian and New Zealand students report that they 'never' work with students during, or outside of class. 15.1 per cent of first-year students and 16.9 per cent of later-year students report 'never' working with students during class, while 14.9 per cent of first-year and 14.1 per cent of later-year students 'never' work with students outside of class.

Worryingly, 7.0 per cent of Australasian students report 'never' working with students either during

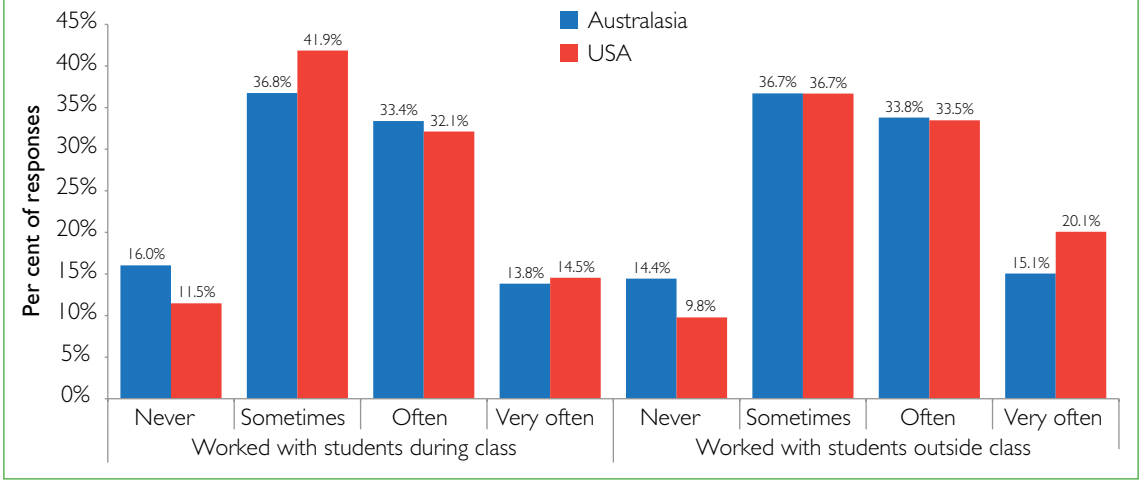

Figure 8 Frequency of working with students during and outside class

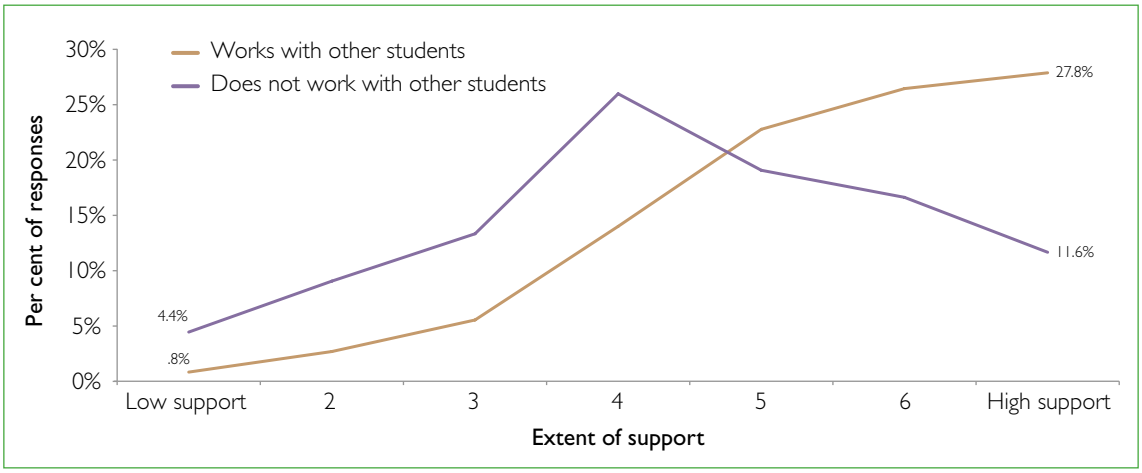

Figure 9 Relationships with other students for students who work with other students and those who do not

or outside of class. As might be expected, these students have, on average, much lower scores for feelings of institutional support (46.3) than students who work with other students either during or outside of class at least sometimes (54.1).

As shown in Figure 9, these students feel that their relationships with other students are less friendly, less supportive, and they feel a greater sense of alienation from other students. On average, these students also have lower scores on all other engagement scales, and outcomes measures, apart from average grade.

These students are more likely to have considered departing their institution prior to completing their degree, and report lower general learning and development outcomes, career readiness and overall satisfaction than students who work with others on coursework. While the direction of the relationships between working with others and student outcomes is not clear cut, these findings suggest that it may prove valuable to incorporate some element of group work into curricula where possible.

At the institution level, overall participation in active forms of learning ranges quite dramatically from 30.8 at one institution to 53.3 at another. There are also some quite large discrepancies between different subgroups of students with different backgrounds, demographics, and educational contexts.

The AUSSE provides unique perspectives on international education

Both male and female students report similar levels of engagement with active forms of learning. Males have an average score of 38.5 for participation in active forms of learning, and female students score on average 38.8. Female students are a little more likely than males to contribute to discussions in classes, and discuss ideas from their classes with others outside of class, while males are slightly more likely to tutor other students than females.

The AUSSE provides unique perspectives on international education, and two AUSSE Research Briefings have investigated the engagement of international students in detail (Edwards, 2008, 2010). International students have somewhat higher scores for engagement with active types of learning - 40.2 - than their domestic counterparts - 38.5. As shown in Figure 10, international students are less likely to report 'never' participating in most types of active learning activities than domestic students. International students also report that they work with others during and outside of class more frequently than domestic students, and also make presentations, participate in community-based projects and tutor other students more frequently than domestic students. Domestic students on the other hand are a little more likely to ask questions or contribute to discussions in class and discuss ideas from their classes with others outside of class.

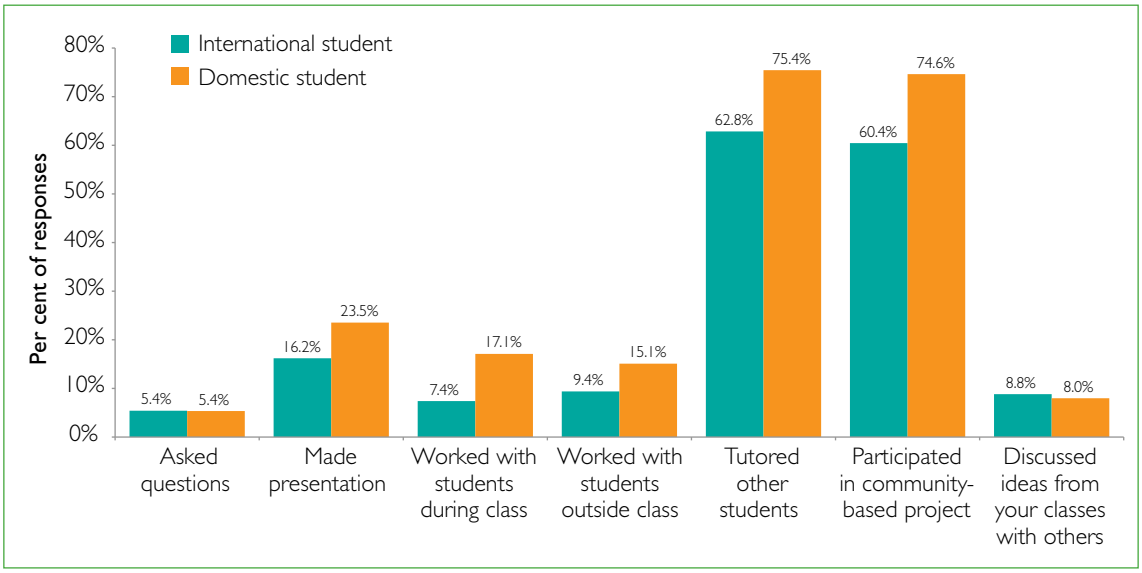

Figure 10 Proportion of international and domestic students who have 'never' participated in active learning activities

Students from remote areas tend to have lower levels of engagement with active forms of learning, with an overall mean of 33.5, than students from provincial areas - 38.0, or metropolitan areas - 40.0. Although differences in engagement with active forms of learning exist between students from different localities, no difference appears between students living in different socioeconomic areas. No significant difference emerges between Indigenous and non-Indigenous students, for students with a disability or between residential and non-residential students.

The mode and location of students' study does appear to have an effect on students' engagement with active forms of learning. Students studying full-time or on-campus have considerably higher levels of active learning than their peers who are studying part-time, externally or by distance. As illustrated in Figure 11, students studying part-time and externally or by distance have the lowest levels of engagement with active forms of learning. This group of students have an average Active Learning score of 25.3, compared with 37.7 for students studying part-time on campus, 39.4 for

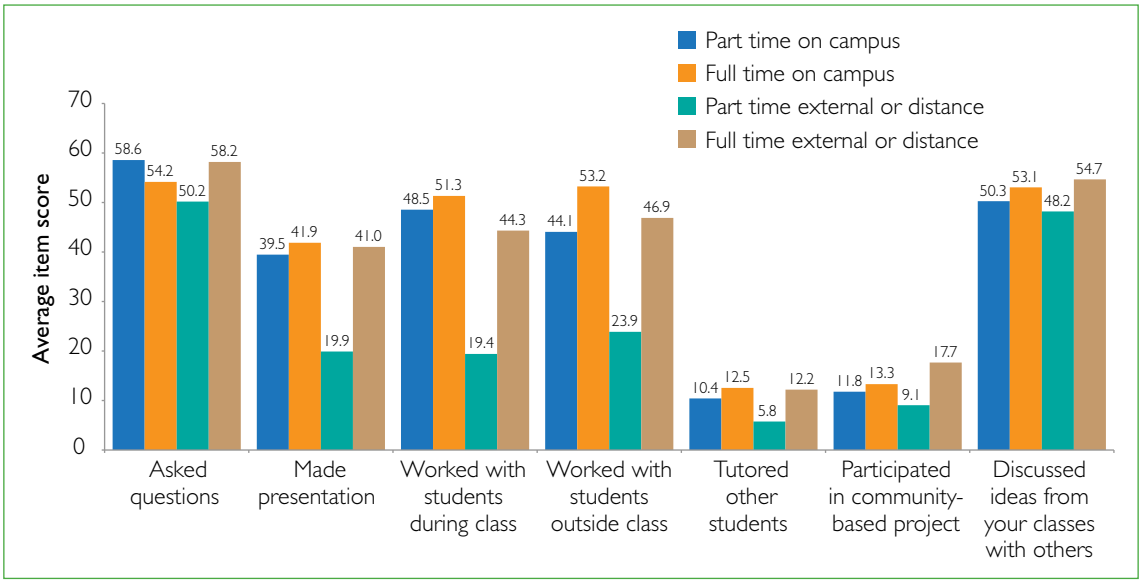

Figure 11 Average Active Learning item scores by mode and location of study

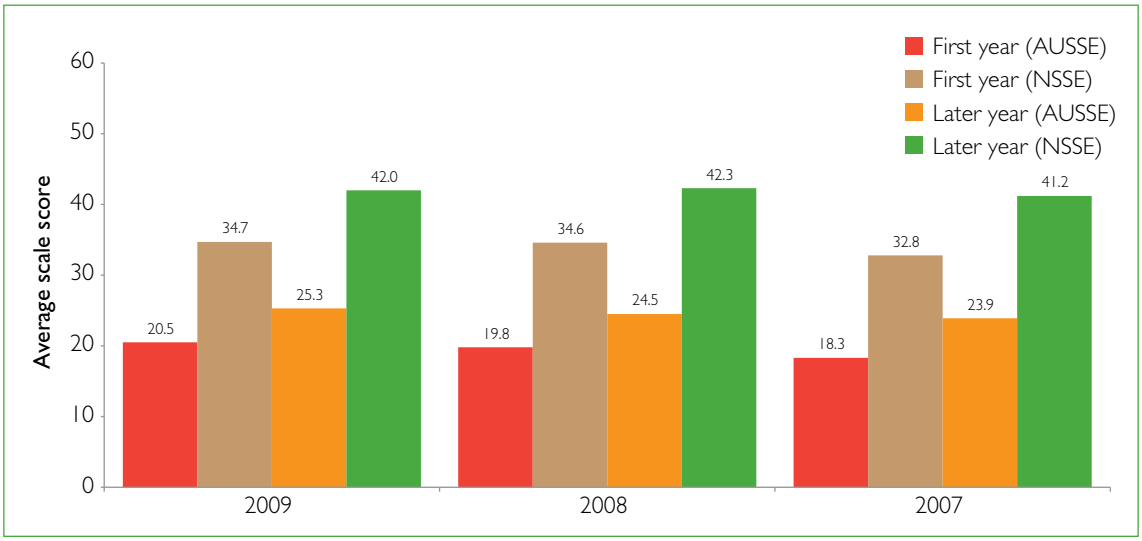

Figure 12 Average Student and Staff Interactions scores for Australasian and USA students

full-time external students, and 40.0 for full-time on campus students.

Student and Staff Interactions

To some extent, students are themselves responsible for their learning in higher education. However, the effort they put into their work and their level of engagement with active types of learning are not the only aspects of the university experience which affect their learning outcomes. The interactions that students have with staff are often demonstrated through research studies to be among some of the strongest determinants of positive learning outcomes. When students have the opportunity to speak with their teachers about their performance, their grades, or ideas from their classes, particularly outside of the classroom, and when students are able to engage with their teachers on an individual level, students tend to be more engaged with learning (see, for example: Astin, 1993; Kuh & Hu, 2001).

The Student and Staff Interactions scale in the AUSSE includes items that ask about the frequency with which students receive feedback on their academic performance, discuss grades, ideas from class or future career plans with teaching staff, and whether students work with staff on extracurricular activities or research projects outside of coursework requirements. The average Student and Staff Interactions score was 23.0, with an average of 20.5 for first-year students, increasing to 25.3 for later-year students. This scale has a standard deviation of 15.8. The average score among first- and later-year students on the Student and Staff Interactions scale has risen a little each year, yet as illustrated in Figure 12, Australasian students' level of interactions with staff is considerably lower than USA students' level of interactions.

Many Australasian students do not ever discuss their grades, ideas from classes or career plans with their teachers

Most Australasian students say that they receive timely feedback on their academic performance from their lecturers and tutors, yet only 6.9 per cent of first-year students and 7.9 per cent of later-year students say they receive this type of feedback 'very often'. It's quite troubling to see that a small, but still significant proportion of students – 12.5 per cent of first-year and 9.8 per cent of later-year students – say they 'never' receive timely feedback on their academic performance from their teachers. The proportion of Australasian students who report this is more than twice the proportion of USA students who report 'never' receiving timely feedback – 4.9 per cent.

Many Australasian students do not ever discuss their grades, ideas from classes or career plans with their teachers – 32.2 per cent, 46.7 per

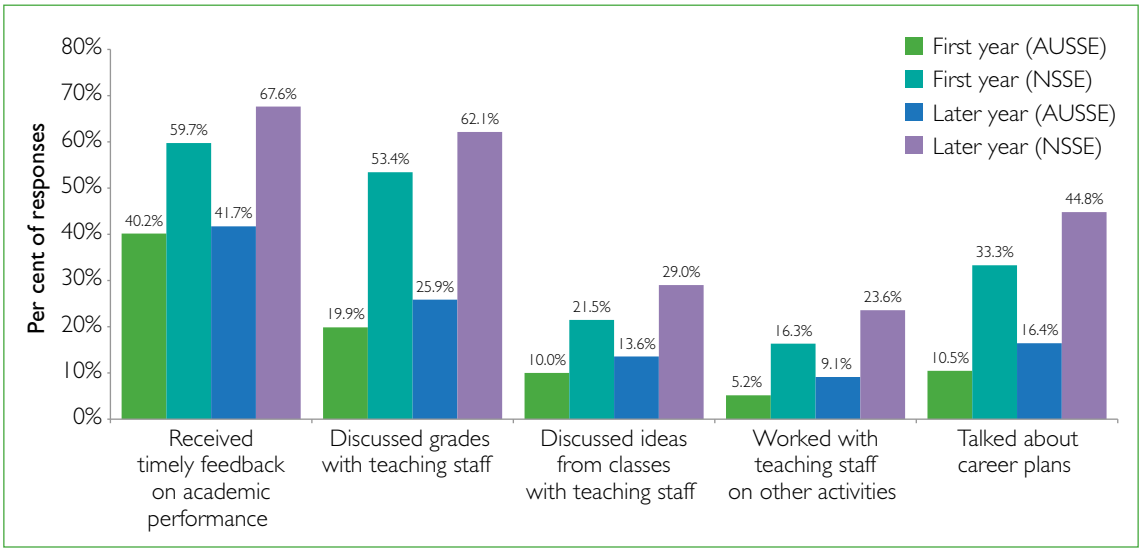

Figure 13 Students who 'often' or 'very often' interact with teaching staff

cent and 52.6 per cent respectively. A very large proportion of students have 'never' worked with teaching staff outside of coursework requirements – 81.2 per cent of first-year students and 70.0 per cent of later-year students. Only very few students – 4.0 per cent – report that they had worked on a research project with a staff member outside of coursework requirements.

Although a large proportion of students have not had these types of interactions with teaching staff, as Figure 13 illustrates, a large proportion of students report receiving timely feedback on academic performance, and frequently discuss their grades with teaching staff. It is also pleasing to see that the frequency of these interactions increases from first- to later-year. Less encouraging is that only a very small proportion of students report frequently discussing ideas and their career plans with staff, or working with staff outside of class. The vast gap between USA and Australasian

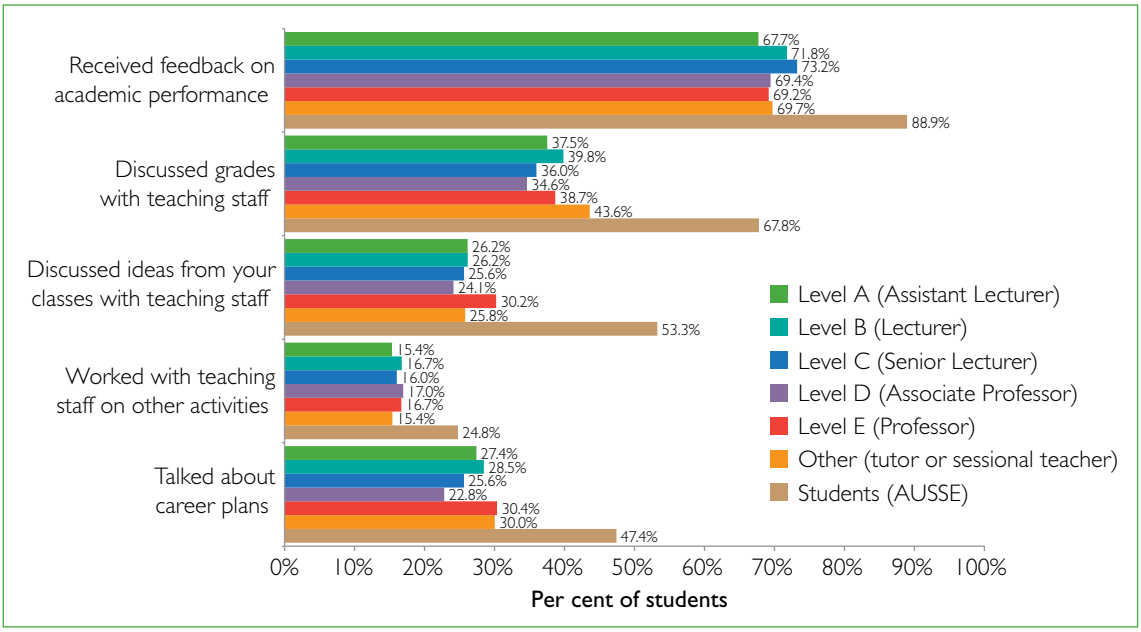

Figure 14 Student and staff perceptions of proportion of students who interact with teaching staff

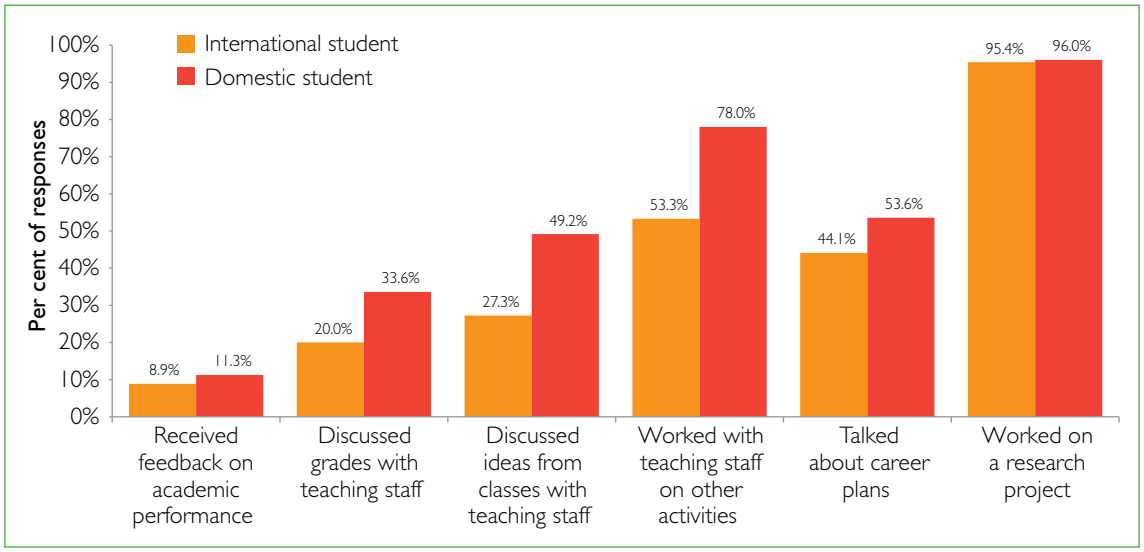

Figure 15 Proportion of international and domestic students who have 'never' had interactions with teaching staff

students' frequency with interacting in meaningful ways with staff, also points at areas where improvements could be made. USA students are more than twice as likely as Australasian students to report regularly discussing grades or ideas from class with teachers, and at least two-and-a-half times more likely to report 'often' or 'very often' working with teaching staff on extracurricular activities or speaking with teachers or advisors about career plans.

Staff responses to the Staff Student Engagement Questionnaire provide a different perspective on students' interactions with staff. Interestingly, many staff seemingly underestimate the frequency with which students interact with them and other teachers. For example, while on average staff believe that most of their students – 70.7 per cent – received prompt written or oral feedback from them, 88.9 per cent of students report having received prompt feedback from teaching staff at least sometimes. As shown in Figure 14, discrepancies between students' interactions with staff and staff perceptions of these interactions are marked for academic staff in a variety of levels.

International students interact with staff much more frequently than domestic students. While domestic students have an average score of 22.3 for Student and Staff Interactions, international students score on average 28.7. Figure 15 shows that international students more frequently interact in staff in all ways measured in the AUSSE than domestic students.

Both male and female students interact with academic staff with similar frequency to each other. There is not much of a difference in the level and frequency of interactions among students and staff among students from different socioeconomic backgrounds, different localities or for students who are the first generation in their family to attend university. Students with a disability interact with staff more frequently (26.4) than students who do not report having a disability (22.7). Indigenous Australian students had on average higher Student and Staff Interactions (26.2) than non-Indigenous students (22.8) Students of Aboriginal or Torres Strait Islander origin are considerably more likely to discuss their grades, ideas from classes, career plans with teaching staff than non-Indigenous students, and more frequently work with teaching staff on activities outside of coursework requirements. These differences were not replicated among Māori or Pacific Islander students.

Based on the assumption that campus-based students may have more opportunities to interact with teaching staff outside of classes than external or distance students, one would assume that on campus students have much higher levels of interaction with staff than students not studying on campus; however external and on-campus students have very similar overall levels of interaction with teaching staff. External

students score on average 22.3 for Student and Staff Interactions while on-campus students have a mean of 23.1. Part-time students, on the other hand, are less likely to interact with staff, and while residential students would seemingly have more opportunities to interact with academic staff, they report very similar levels of interactions – 22.6 – than non-residential students – 23.0.

Students studying engineering report the lowest frequency of contact with teaching staff, and have an average score of 20.4 for Student and Staff Interactions, while creative arts students have the highest average score – 25.9. Due to the performance and practical component at the heart of creative arts degrees and smaller class sizes, it is not surprising that creative arts students more frequently receive feedback from teachers, discuss results and ideas from classes with staff, and are most likely to have worked with teachers on activities, including plays, musical performances and art projects for example, outside of coursework activities. Students studying agriculture are most likely to report talking about career plans frequently with their teachers or advisors, and are also most likely to have participated in a research project with teaching staff.

Enriching Educational Experiences

Often, learning is viewed in narrow terms as something that takes place solely within a lecture theatre, laboratory or tutorial. However a considerable amount of learning at university takes place outside these formal learning contexts (Griffin et al., 2003; Krause & Coates, 2008). Participation in educationally enriching experiences, such as volunteering, student exchange programmes, leaning foreign languages, and interacting with people from different backgrounds and cultures, among other activities, play an important role in students' personal and educational development. The AUSSE Enriching Educational Experiences scale measures this critical aspect of student engagement.

In Australasia, results for the Enriching Educational Experiences scale are low, with an average score of 25.0. As might be expected, due to the nature of these educationally enriching experiences later-year students are more likely to have participated in these types of activities. First-year students have an average score of 22.9 for this scale, which rises to 26.8 among later-year students. This pattern mirrors results from 2007 and 2008. Staff observations and their ratings of importance of participation in these activities are similar. Staff who predominantly teach first-year students have an average of 23.6 for this scale, which increases a little to 24.7 for staff who predominantly teach later-year students.

In the USA, first-year students' participation in educationally enriching experiences is not much higher than among first-year Australasian students, with first-year USA students scoring on average

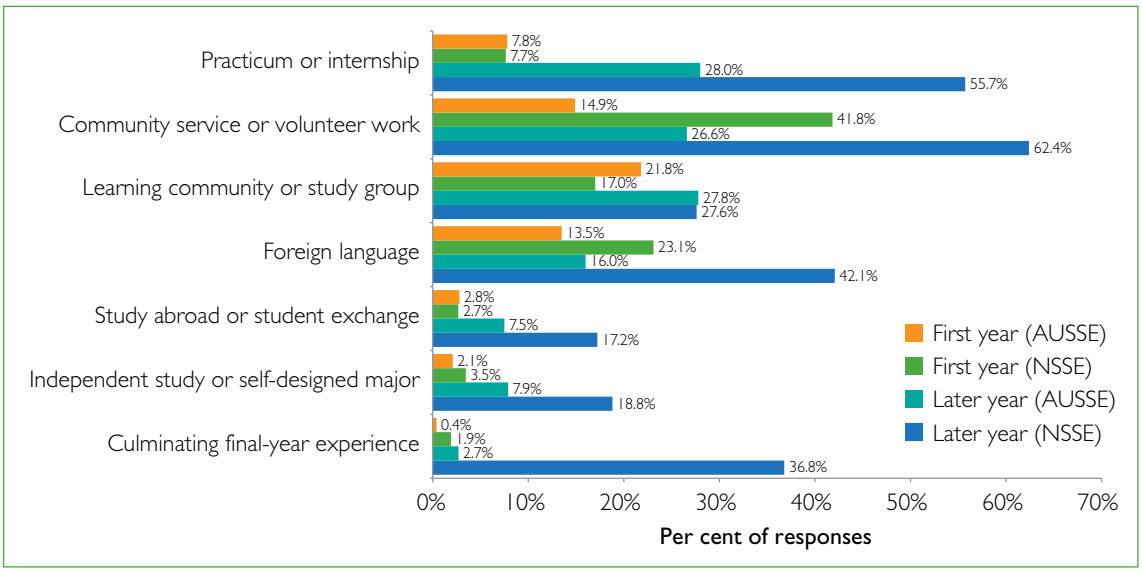

Figure 16 Student participation in enriching educational experiences

28.0 for Enriching Educational Experiences. However, among later-year USA students this rises dramatically to 40.8, much higher than the average score of 26.8 for later-year Australasian students.

The reason for this great discrepancy in participation in enriching educational experiences among later-year students may be due to differences in the cultural context between USA and Australasia. While only a small proportion of students in Australia and New Zealand – 15.1 per cent of first-year and 5.6 per cent of later-year students – live on-campus in colleges or halls of residence, the vast majority of students in the USA live on campus, and college students are more likely to participate in these educationally enriching activities. Many USA institutions offer more generalist undergraduate degrees than Australasian institutions and these degrees may allow students more opportunities to study foreign languages and to participate in volunteering. These contextual differences explain to some extent why USA students, particularly by their senior year have participated in more of these activities than Australasian students. While common in the USA, service learning is still a growing phenomenon in Australasia.

a great proportion of teaching staff rated these activities as being at least 'somewhat important' for their students

Although overall a greater proportion of USA students have participated in enriching educational experiences than their Australian and New Zealand counterparts, there are some areas where Australasian students are still performing quite well. The best example is for participation in a learning community or study group, a greater proportion of Australasian first-year students, and a similar proportion of later-year students have participated in a learning community or study group. Also, Australasian students are slightly less likely to say they 'never' having conversations with students from a different ethnic group than USA students, and are more likely to report doing so 'very often'. This is likely due to the great multicultural mix of students, and high proportion of international students who attend Australasian universities.

When asked to rate the importance of participating in enriching educational experiences, a great proportion of teaching staff rated these activities as being at least 'somewhat important' for their students. Figure 17 compares the proportion of teaching staff who rated students' participation in these particular activities as either 'important' or 'very important' with the proportion of first- and later-year students who have participated in these activities. This shows that for most types of educationally enriching experiences, a large proportion of staff felt that it was important for their students to participate in these experiences, yet in most cases a much smaller proportion

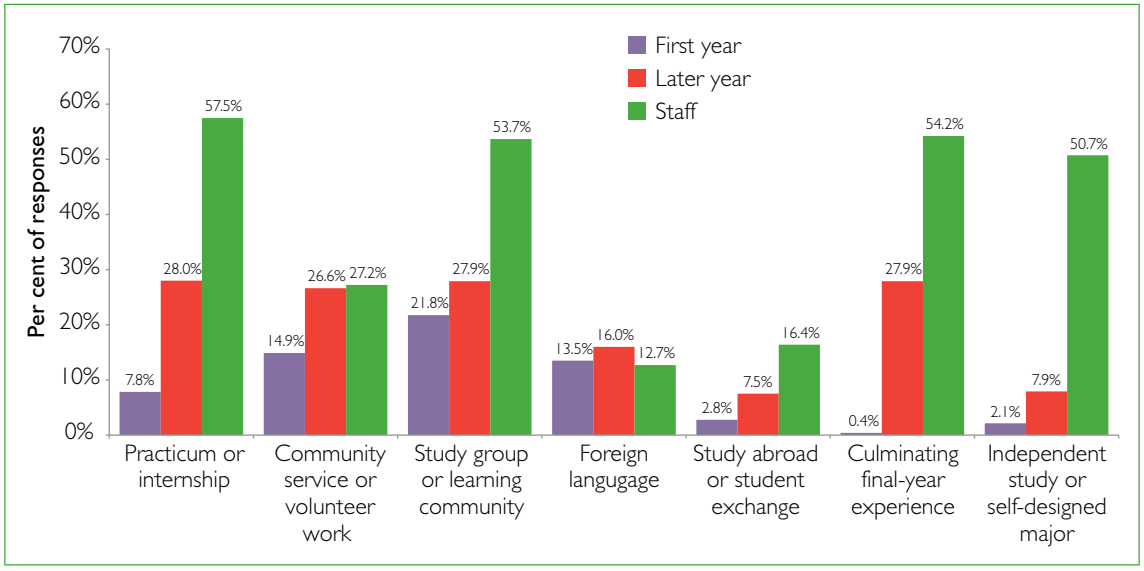

Figure 17 Comparison of teachers' ratings of importance and students' participation in enriching educational experiences

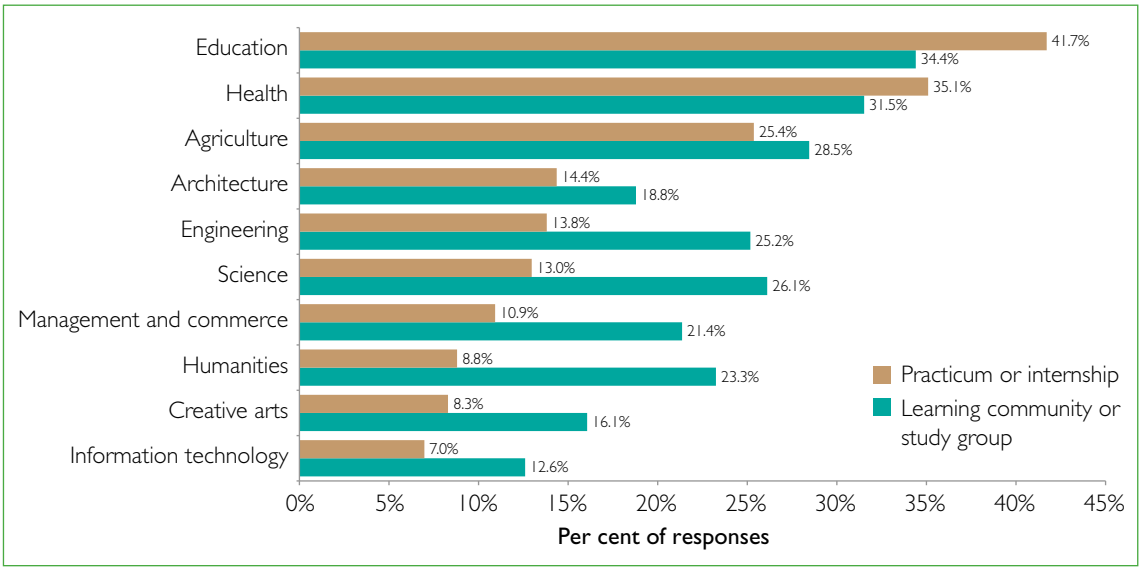

Figure 18 Proportion of students who have participated in a practicum/internship or learning community/study group

of students had actually participated in these types of activities. The mismatch between staff views of importance and students' participation in these activities, suggests that while staff feel it is important for their students to have these experiences, their courses either do not allow for students to participate in these experiences, do not encourage participation in these experiences enough, or there are institutional factors which make participation difficult.

While students' participation in enriching educational experiences varied from 22.2 to 30.0 at different institutions, on the whole, most groups of students' scores hovered around the Australasian average. Students less than 20 years old (23.9) and 20 years or older (25.7) had similar levels of participation in enriching educational experiences, as did male (24.0) and female (25.7) students, on-campus (25.3) and external students (23.8). There were some small differences between international (27.6) and domestic (24.7) students. A much greater proportion of international students had participated in study abroad or student exchange schemes and a greater proportion reported that their institution encouraged them to interact with people of different backgrounds, or different ethnic groups.

Although rates of participation in these types of activities do not vary much among different groups of students, full-time students have somewhat higher levels of enriching educational experiences (25.7) than part-time students (21.4). Full-time students are more likely to report having conversations with students who are very different to them or who are from a different ethnic group than part-time students. Part-time students are also less likely to have participated in a learning community or study group, only 17.9 per cent of part-time students have taken part in a study group or learning community, compared with 26.4 per cent of full-time students.

Participation in these types of activities varies quite significantly depending on a student's area of study. Students studying in what could be called 'hands-on' degrees – degrees which include workplace experience, internships or other real-world elements - including health courses and education have higher levels of participation in these educationally enriching activities. Health students score an average of 27.5 for Enriching Educational Experiences, and education students have an average score of 27.0. This compares to the average score of 21.4 among students studying information technology. Figure 18 illustrates some of the differences in participation in practicums and internships and learning communities or study groups among students from different fields of study. As you would expect, a large proportion of students studying education and health sciences, which usually have a practical component included in the course, have participated in a practicum or internship. By later year, 60.0 per cent of

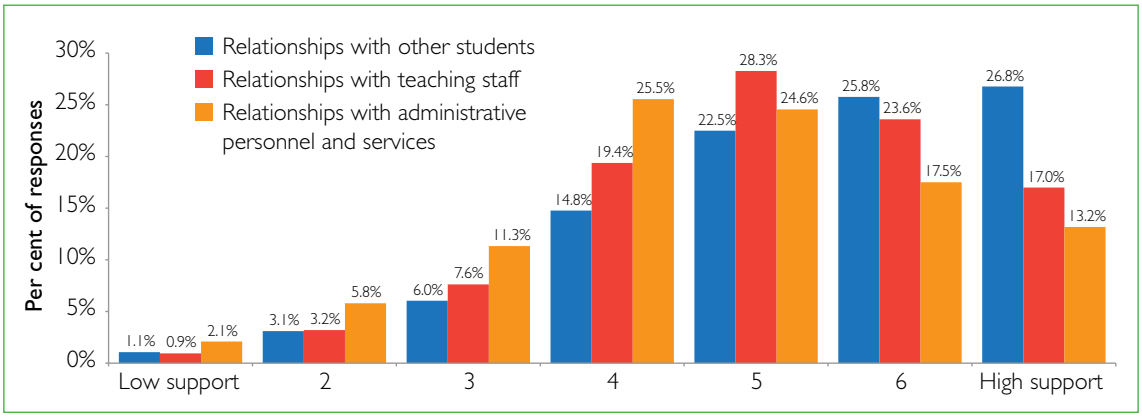

Figure 19 Students' ratings of quality of relationships with other students, teachers and administrative staff

education students, and 52.5 per cent of health students have already participated in a practicum or internship.

In total, 53.7 per cent of teaching staff felt that it was at least somewhat important that their students attend art exhibitions, plays, musical performances or other performance. Though most students had attended a performance during the 2009 academic year, a large proportion of students, 36.6 per cent, had not done so. Around half of all students indicate that they exercise or participate in physical fitness activities 'often' or 'very often', while 14.1 per cent say they 'never' exercise. Surprisingly, almost a third of staff - 31.0 per cent - say that from their perspective it is not at all important that their students exercise.

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.

Among Australasian students, the average Supportive Learning Environment score was 54.1 with a standard deviation of 17.6. Unlike the other student engagement scales measured in the AUSSE, student perceptions of institutional support decrease from first-year - 56.2 - to later-year - 52.2. The same pattern in perceptions of

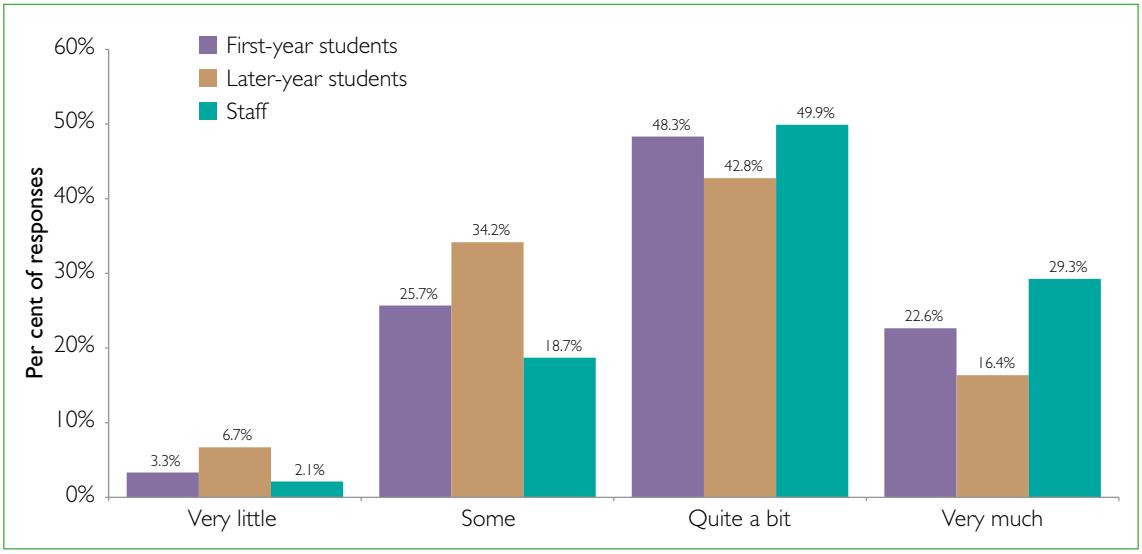

Figure 20 Institutional support provided to succeed academically

support emerges among USA students, where perceptions decline from 61.6 among first-year students to 58.2 among senior students. This is also somewhat evident in staff responses. Academic staff who teach predominantly first-year students have an average of 56.0 for Supportive Learning Environment, which declines to 53.2 among teachers of later-year students. While perceptions of support decrease as students move through their degree, average Supportive Learning Environment scores are up on previous years.

As shown in Figure 19, most students rate their relationships with other students as highly supportive and friendly, and have a strong sense of belonging with their peers. Students also tend to rate their relationships with teachers, and to a lesser extent with administrative staff quite positively.

Mirroring student responses, academic staff estimate that 73.2 per cent of their students find other students friendly and supportive, that 65.2 per cent of students find teaching staff available, helpful and supportive and 58.5 per cent find administrative personnel helpful, considerate and flexible.

Most students and staff feel that their university provides them much support to succeed academically, to cope with non-academic responsibilities, and to socialise. However, as illustrated in Figure 20, staff were more positive about the extent to which their program, faculty or department encourages and supports students to succeed academically. 79.2 per cent of staff members saying that their department provides at least quite a bit of support, compared with 59.2 per cent of later-year students and 70.9 per cent of first-year students who feel that their institution provides them with at least quite a bit of support to succeed. The disjunct between student and staff feelings of the level of institutional support provided suggests that students are either not fully aware of all the support that is available to them, or that students require more support from their institution than staff feel is necessary.

almost two-thirds of students feel that their university provides at least some support to succeed academically

While almost two-thirds of students feel that their university provides at least some support to succeed academically, a smaller proportion feel supported to socialise and supported to cope with non-academic responsibilities. Only 19.7 per cent of students feel that they are given at least 'quite a bit' of support from their university to cope with non-academic responsibilities, and 27.0 per cent of students feel supported to socialise. Just over a quarter of staff feel that their department or faculty provides at least 'quite a bit' of support to students to help them cope with non-academic responsibilities, a little higher than the proportion of students who feel this level of support. A smaller proportion of staff (19.6%) feel

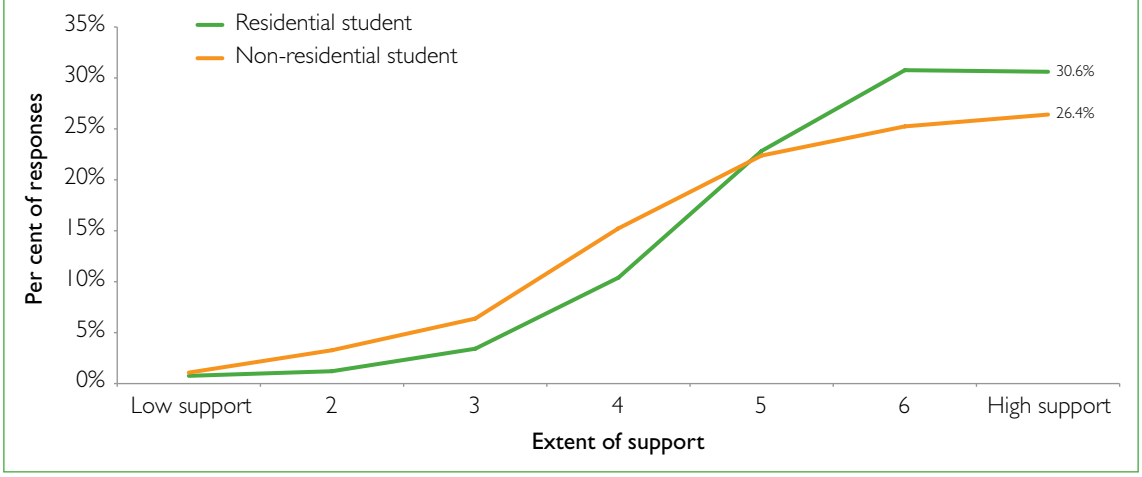

Figure 21 Ratings of quality of relationships with other students by residential status

that at least 'quite a bit' of support is provided to students to socialise.

Both male and female students and international and domestic students have similar perceptions of support – all hovering around the Australasian average for this scale. There are not many differences in perceptions of institutional support for students from different socioeconomic groups, or from different localities. Aboriginal and Torres Strait Islander and Māori students have similar levels of supportive learning environment to non-Indigenous students; however Pacific Islander students have somewhat higher perceptions of institutional support, with an average score of 58.0 compared with 54.0 for non-Pacific Islander students.

Perhaps due to the nature of their university experience, students who live on campus have significantly higher perception of support – average Supportive Learning Environment score of 58.4 - than students living off campus - 53.6. While both residential and non-residential students rate their relationships with teaching and administrative staff as similar in quality, residential students are more positive about the quality of their relationships with other students than non-residential students. This is shown in Figure 21. Residential students also have greater perceptions of the level of support provided by their college and university to succeed academically, cope with non-academic responsibilities and, feel markedly more supported to socialise. Coates and Edwards (2009) discuss the engagement of residential college students in a dedicated AUSSE Research Briefing.

Campus-based and full-time students have greater perceptions of institutional support than their external or part-time counterparts. Part-time students have an average Supportive Learning Environment score of 50.8, which increases to 54.7 among full-time students. External or distance students have an average score of 51.4 for perceptions of support, a little lower than for campus-based students, who score on average 54.6. External students or those studying by distance rate the quality of their relationships with other students somewhat lower than campus-based students. This pattern is not as evident for students' ratings of their relationships with teaching or administrative staff. A similar finding can be seen for part-time and full-time students. As shown in Figure 22, only 15.1 per cent of students studying part time and externally rate the quality of their relationships with other students at the highest level, compared with 21.9 per cent of students studying part time on campus, 28.2 per cent studying full time on campus and 28.5 per cent of students studying full time externally or by distance. External and part-time students also feel less supported to socialise with other students, to cope with non-academic pressures and responsibilities and to succeed at university than students studying full-time, either on campus or externally.

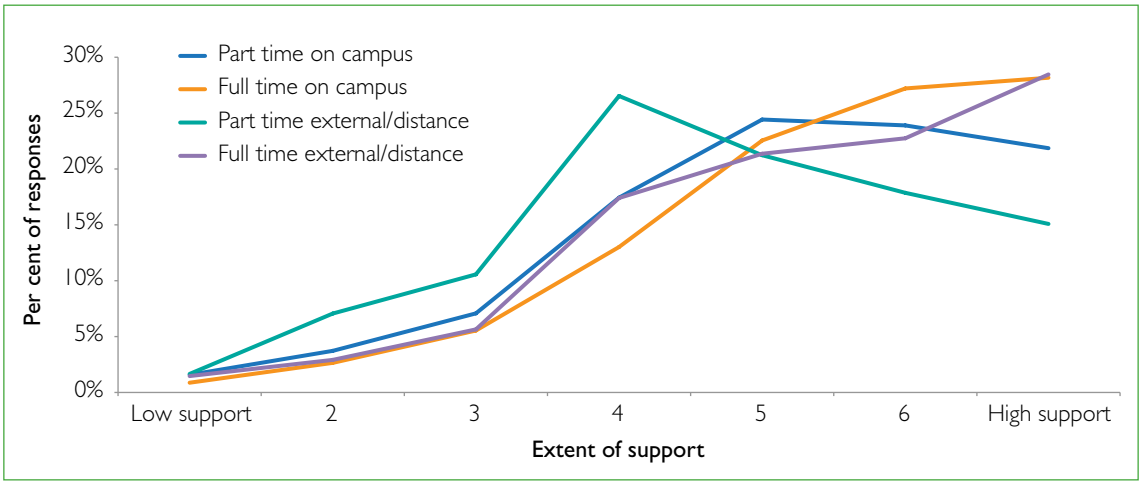

Figure 22 Student perceptions of quality of relationships with other students by mode and location of study

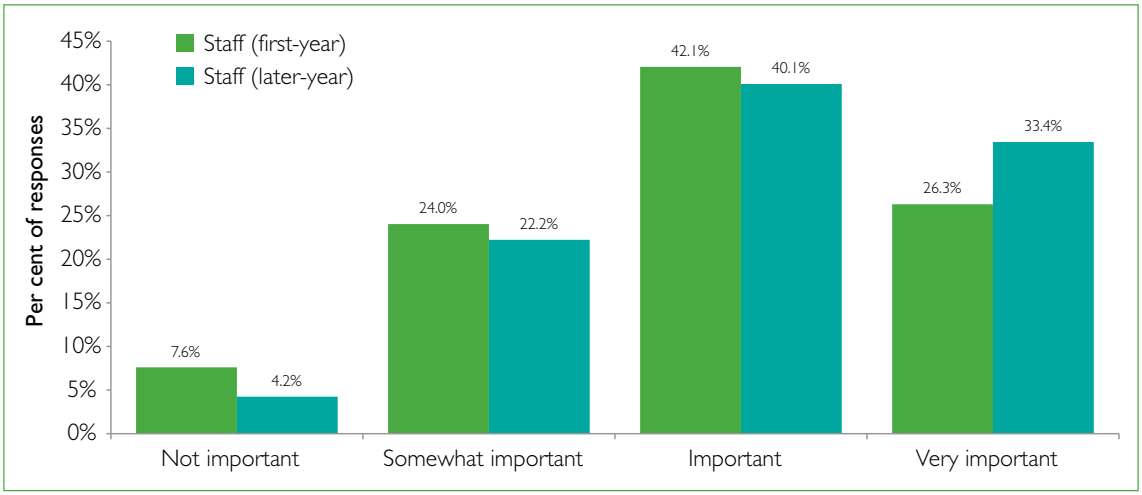

Figure 23 Staff ratings of the importance of participation in work-integrated learning

Work Integrated Learning

Increasing, students' experience in work-integrated forms of learning is seen as an important part of university studies. Ensuring students are ready for the workforce is an increasingly important function of higher education, and while this has long been an important aspect of education for students studying medicine, veterinary science, education and nursing, participation in work-integrated learning is seen as important even more widely. In the AUSSE, the Work Integrated Learning scale measures the extent to which students have blended their academic learning with experience in the workplace.

In 2009, the average Work Integrated Learning score for Australasian students was 45.2, similar to results from 2008 and 2007. Participation in work-integrated forms of learning rises from an average of 39.6 for first-year students to 50.0 among later-year students. The Work Integrated Learning scale is unique to the AUSSE, and because of this there are no comparative statistics available in the NSSE. As part of the Staff Student Engagement Questionnaire, staff are asked to rate the importance of student participation in certain areas of work-integrated forms of learning and the proportion of their students who blend what they learn in higher education with workforce experience. Overall, teaching staff had an average Work Integrated Learning score of 62.2, reflecting the high level of importance staff place on participation in work integrated types of learning.

Staff are asked to indicate how important participation in work-integrated forms of learning are for students' university education. Figure 23 shows that very few staff feel that it is not important for students to participate in work-integrated learning. The vast majority of staff (71.5%) say it is 'important' or 'very important' that their students participate in these types of learning, yet students' participation in these types of activities is not widespread.

Staff of first-year students estimate that 34.8 per cent of their students blended academic learning with workplace experience, rising to 46.6 per cent of students among teachers of later-year students. Staff underestimated the proportion of students who blend academic learning with workplace experience. Although only a small proportion of students – 7.0 per cent of first-year and 14.6 per cent of later-year students – very often blend learning in the classroom with experience in the workplace, over half of all first-year students and three-quarters of all later-year students report doing this at least sometimes. Most students indicate that they explore ways to apply their learning in employment. 80.0 per cent of first-year students and 86.8 per cent of later-year students reported doing this at least sometimes.

As Figure 24 illustrates, most staff believe that it is important for students to improve their knowledge and skills that will contribute to their future employability through their university studies. Most students report having improved skills and knowledge that will contribute to their

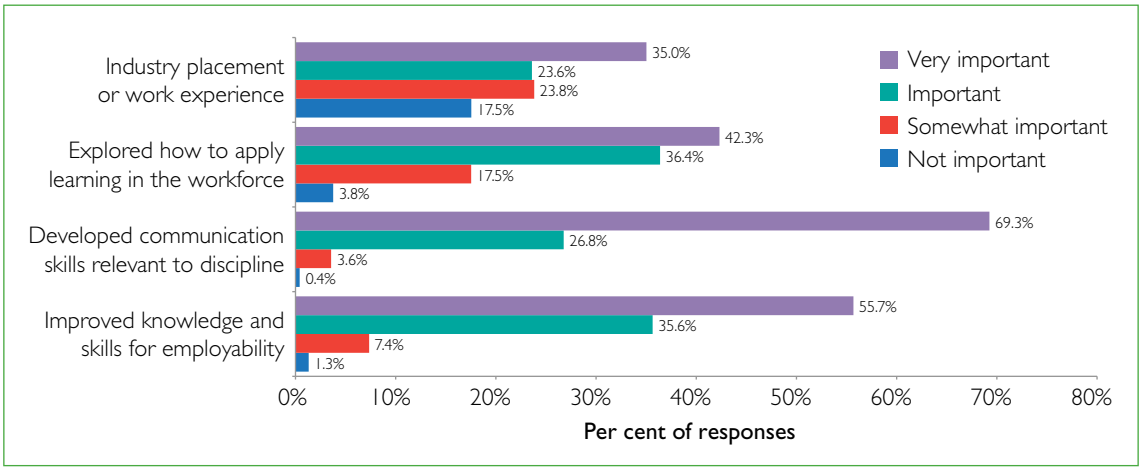

Figure 24 Staff ratings of the importance of work-integrated forms of learning

employability at least sometimes. 55.3 per cent of first-year and 61.0 per cent of later-year students say they do this 'often', or 'very often'. By later-year, 72.4 per cent of students felt that their experience at university had helped them gain work- and job-related knowledge and skills. A great proportion of staff – 83.3 per cent – felt that their teaching had contributed at least 'quite a bit' to students' development of these skills and knowledge. And while almost all staff felt it was important or very important that their students develop their communication skills, only 58.6 per cent of students felt they had done this 'often' or 'very often', and as reported earlier, over a fifth of students reported 'never' giving a presentation in class or online.

Again, although a great proportion of staff (58.6%) say it is 'important' or 'very important' for their students to participate in an industry placement or work experience as part of their studies, only 10.8 per cent of first-year students and 30.4 per cent of later year students have done so. All of these findings highlight the discrepancy between what staff believe to be important for their students' education, and the actual educational opportunities provided and taken up by students. Possibly, this shows that while staff value the importance of work-integrated learning, the curricula may not incorporate these types of learning, or teaching staff may face difficulties or restrictions on how to incorporate work-integrated learning into their courses.

Although for many other measures of student engagement students studying part time or externally have lower levels of engagement, these students have higher levels of engagement with work-integrated forms of learning than students studying full time and on campus. Students studying full time and on campus had a mean Work Integrated Learning scale score of 43.7; part time on campus students had a mean of 45.7. Students studying part time externally or by distance had a mean of 51.8, while students studying full time and externally or by distance had the highest mean score of 52.6.

One reason external students have higher levels of participation in work-integrated forms of

Table 6 Characteristics of paid work by mode and location of study

Mode/location of study	Working for pay (%)	Hours worked off campus	Hours worked on campus
Part time on campus	79.6	19.3	1.8
Full time on campus	69.0	13.1	1.3
Part time external	83.0	27.6	1.2
Full time external	73.9	17.7	1.8

learning may be because they have had more experience in the workplace, and therefore have had more opportunities to blend learning with experience in the workplace, apply learning in the workforce, and participate in industry placements or work experience.

In all, 66.1 per cent of first-year students and 75.4 per cent of later-year students report working for pay either on or off campus. Students, who work for pay, work an average of 15 hours off campus and one hour on campus in a typical week. Table 6 outlines the proportion of students studying at different locations and via different modes who report working for pay, and of those students who work for pay, the average number of hours spent working on and off campus during a typical seven day week. Students studying part time and externally or by distance were more likely to be working for pay, and those who were also reported the highest number of hours working for pay off campus.

Peer assisted learning tutorials are fantastic, it's like having a study group organised for you, except that if you are all on the wrong track the leader makes sure you get the right idea. It's great to be able to assist other students, and to have them help me, in an environment where if none of us are sure of what we are doing there is someone who does. I think this program should be offered more broadly.

– First-year female business student

4

Student outcomes – key insights

The outcomes of higher education are complex and varied, and have proved difficult to measure. Important outcomes include academic achievement, graduation, work and study post-graduation, graduates' sense of receiving a return on investment, and results from objective tests.

Very little information is available on the outcomes of higher education in Australia or New Zealand. The AUSSE makes a contribution to this area by assessing seven outcomes in addition to the facets of engagement. These outcomes cover students' learning, their personal and educational development, intentions to discontinue or carry on with study, career preparedness, and satisfaction with the educational experience.

This chapter analyses data on these outcomes. As with the engagement scales, comparisons are best made across demographic and contextual for each scale, rather than between the different facets measured. The same interpretative frames apply as for the engagement scales.

Higher Order Thinking

Higher order thinking is the type of thinking that requires students to delve deeper into issues and ideas. Higher order thinking includes manipulating information to uncover deeper meanings, analysing aspects of an idea, combining information from different sources to gain new interpretations, making judgements about information and applying ideas and theories to novel situations.

Thinking in higher order ways could be considered a quintessential feature of higher education. In the AUSSE, students are asked about the extent to which their coursework emphasises particular intellectual activities, including how much particular types of higher order thinking is included in coursework.

Thinking in higher order ways could be considered a quintessential feature of higher education

First-year students have an average score of 63.8 for the emphasis placed on higher-order forms of thinking. This rises slightly to 66.7 among later-year students. When asked how much their teaching is intended to emphasise higher order thinking, teaching staff felt that there was slightly more emphasis on these types of thinking than students did. Staff who predominantly teach first-year students gave a response with a mean score of 66.6 for Higher Order Thinking, rising to 74.0 among staff of later-year students.

As shown in Figure 25, there are quite large differences in the level of emphasis placed on higher order forms of thinking depending on students' broad field of education. Students studying humanities courses report the highest levels of higher order thinking (69.0), while students studying information technology report the lowest levels (61.0). Figure 25 also shows, interestingly, that across all fields of education staff feel that their teaching emphasises higher order forms of thinking more than students believe it is emphasised.

Students studying full-time report slightly greater emphasis on higher order thinking (65.9) than part-time students (62.8). While there are not

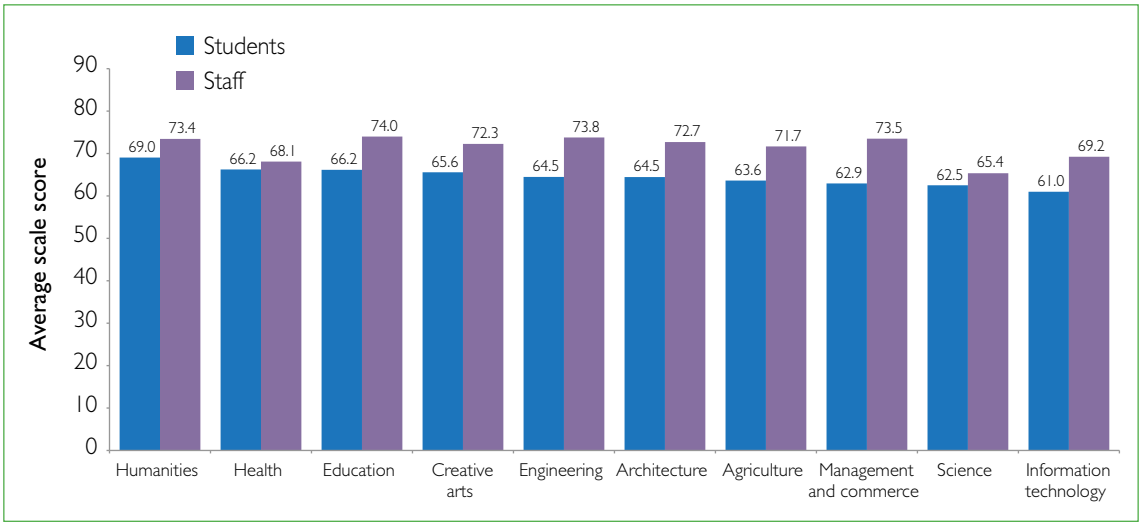

Figure 25 Student and staff average Higher Order Thinking scale scores by field of education

many differences between students from different socioeconomic backgrounds, Indigenous students, students with a disability, and domestic or international students, the levels of Higher Order Thinking do differ depending on students' locality. Students from metropolitan areas have slightly higher levels of higher order thinking (66.1) than students from provincial (64.6) or remote (62.6) areas.

General Learning Outcomes

While one of the primary roles of university education is to teach students content knowledge, arguably a more important function is to teach students more general skills they can carry throughout their life. The general learning outcomes measured in the AUSSE have been underscored by employers, institutions and learners themselves as essential for graduates' future careers and lives. These include the ability to work in teams, to learn as individuals, to write, speak and think effectively, to analyse problems, and to use information technology.

First-year students have an average score of 61.0 for the AUSSE's General Learning Outcomes measure, which increases to 65.0 for later-year students. Teaching staff have somewhat higher

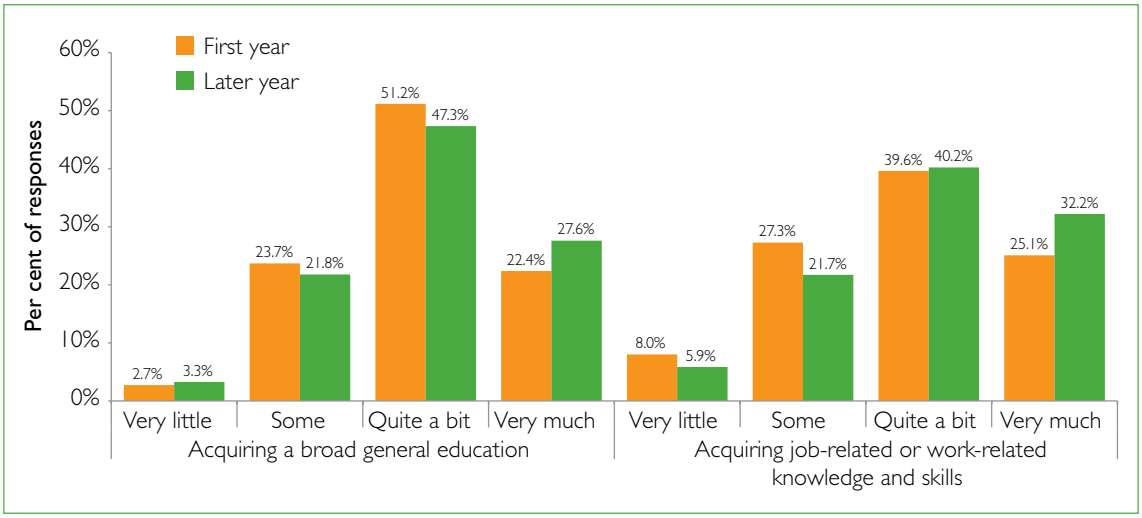

Figure 26 Institutional contribution to the acquisition of broad education and job-related capabilities

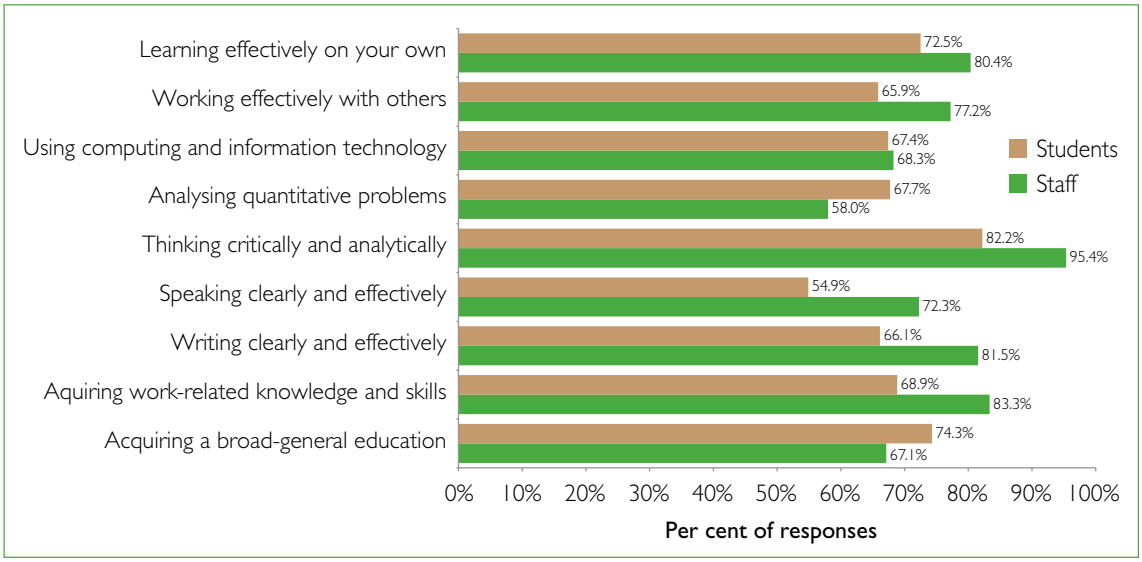

Figure 27 Proportion of students and staff who believe university contributes at least 'quite a bit' to knowledge, skill and personal development outcomes

ratings of the extent to which their teaching is intended to contribute to students' general learning outcomes, with an average score of 70.0.

Most students feel that their experience at university has helped them to acquire a broad, general education. Nearly three-quarters of students (74.3%) feel that their experience at university has helped with this either 'quite a bit' or 'very much'. As shown in Figure 26, later-year students are more likely to say that this has contributed 'very much'. Another important part of university education is gaining knowledge and skills that are relevant to students' future careers and employment. As Figure 26 illustrates, 74.4 per cent of later-year students and 64.7 per cent of first-year students say that their university experience has helped them at least 'quite a bit' in the gaining of these work- or job-related knowledge and skills.

Figure 27 shows that most students feel their experience at university has contributed at least 'quite a bit' to their ability to write clearly and effectively, speak clearly and effectively, think critically and analytically, analyse quantitative problems, use computing and information technology, work effectively with others, and learn effectively on their own. Later-year students are more likely to report that their experience has contributed to their general learning development across all the areas measured in the AUSSE.

There are no great differences between female (64.0) and male (62.0) students' General Learning Outcomes scores. Nor are there any large differences between students from different socioeconomic groups, although students from low socioeconomic backgrounds have slightly higher average general learning outcomes than students from middle or high socioeconomic backgrounds. Indigenous Australian and Pacific Islander students have slightly higher general learning outcomes than other students, while Māori students have slightly lower general learning outcomes.

Most students feel that their experience at university has helped them to acquire a broad, general education

International and domestic students have very similar levels of overall general learning outcomes, but while there are no real differences between these groups of students, international students are less positive than domestic students about the extent to which their experience at university has contributed to their development of work-related or job-related knowledge and skills. On the other hand, international students are more likely to report that their experience has contributed to their acquisition of computing skills, and to their ability to speak clearly and effectively.

Although students studying on-campus and externally or by distance have very similar levels of general learning outcomes, full-time students (63.6) have very slightly higher levels of this outcome measure than part-time students (61.0). Campus-based students are more likely to report that their experience at university has contributed to their ability to work effectively with others, while external students are more likely to report that their experience has helped them learn effectively on their own. This pattern emerges when looking at part- and full-time students as well. Full-time students are much more likely to report that their experience has contributed considerably to their ability to work effectively with others.

Students studying agriculture or environmental studies feel that their experience at university has helped them develop their knowledge and skills and contribute to their personal development the most. Agriculture students have an average general learning outcomes score of 65.0. On the other end of the spectrum, students studying information technology have the lowest levels of general development (60.6).

General Development Outcomes

The AUSSE measures key General Development Outcomes, including students' personal development, their capacity to understand themselves and people from different backgrounds, to act in an ethical and moral way and contribute to the community at large, to understand the political system, and to be able to solve real-world problems. Universities not only seek to provide students with the skills to thrive in the workplace, but also to develop within people forms of self and civic awareness that help them lead fulfilling lives.

First-year students report an average score of 43.3 for General Development Outcomes, which rises to 45.6 among later-year students. Staff believe their teaching has contributed around the same amount to students' development, with an average score of 46.6 among teaching staff.

Although only 15.8 per cent of students feel that their experience in higher education has contributed at least 'quite a bit' to their ability to vote informedly in elections, a much greater proportion of students feel that their experience has contributed to their general development in other areas. In all, 54.9 per cent of first-year students and 58.9 per cent of later-year students say their experience at university has contributed to their ability to solve complex, real-world problems at least 'quite a bit'.

Generally, teaching staff indicated that their teaching was intended to contribute to students' general development to about the same extent that students indicated their degrees had helped with general development. As Figure 28 shows, a great majority of staff (77.0%) felt their teaching

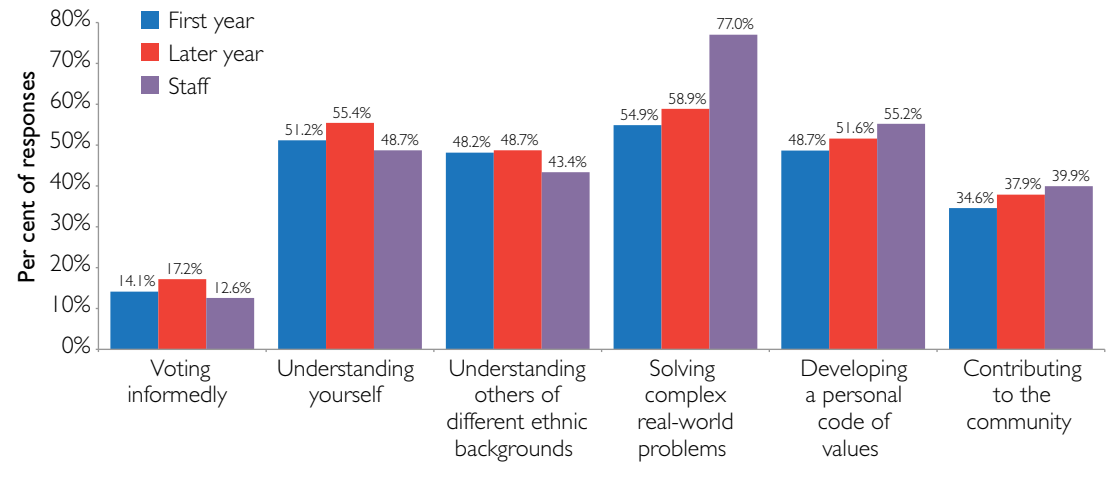

Figure 28 Proportion of students and staff who feel that university has contributed at least 'quite a bit' to general development outcomes

was intended to contribute at least 'quite a bit' to students' ability to solve complex, real world problems, however only 57.0 per cent of students felt that their university experience had contributed the same amount to their ability to problem solve.

International students report greater levels of personal development and development of knowledge and skills than domestic students

Female students report slightly higher – 45.7 – average general development scores than male students – 42.7. Female students are more likely to say that their experience has contributed considerably to their understanding of themselves, others of different racial and ethnic backgrounds, and also on their ability to develop a personal code of ethics and to contribute to their community. Aboriginal and Torres Strait Islander students have considerably higher levels of general development (mean of 49.2) than their non-Indigenous peers (average score of 44.3). This pattern is repeated with Pacific Islander students who have an average score of 51.7 for general development outcomes, and to a lesser extent among Māori students who have an average score of 45.9 for this measure. Students from low socioeconomic backgrounds (45.5) have slightly higher levels of general development than students from middle (44.5) or high socioeconomic backgrounds (43.7). This pattern is mirrored somewhat among students from different regions. Students from remote areas have greater general development, with an average score of 46.5 for this outcomes measure, than students from metropolitan (44.6) and provincial areas (43.4).

International students report greater levels of personal development and development of knowledge and skills than domestic students, and have an average score of 50.1 on this measure, considerably higher than domestic students' average of 43.7. International students are more likely to feel that their university experience has contributed to their general development in all areas of general development measured in the AUSSE. This is particularly so for their ability to understand themselves and to understand others from different ethnic or racial backgrounds. As shown in Figure 29, a significantly larger proportion of international students report that their university experience has contributed quite a bit or very much to their ability to relate to others of different ethnic groups and to understand themselves.

Although seemingly not a great difference in levels of general development between students based on their location of study, there are significant differences in students' general development between part-time and full-time students.

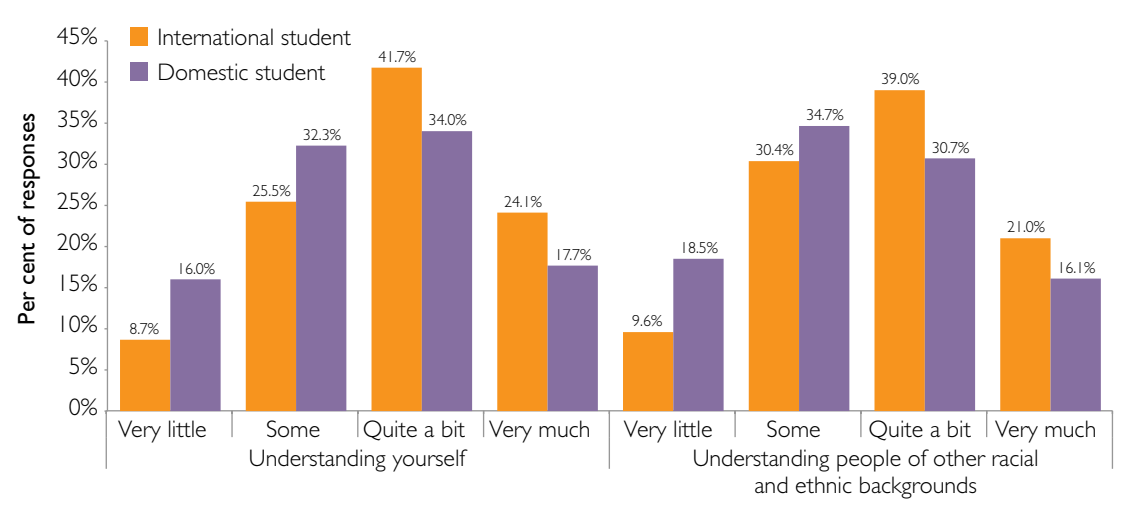

Figure 29 Extent to which students' university experience has contributed to their ability to understand themselves and others

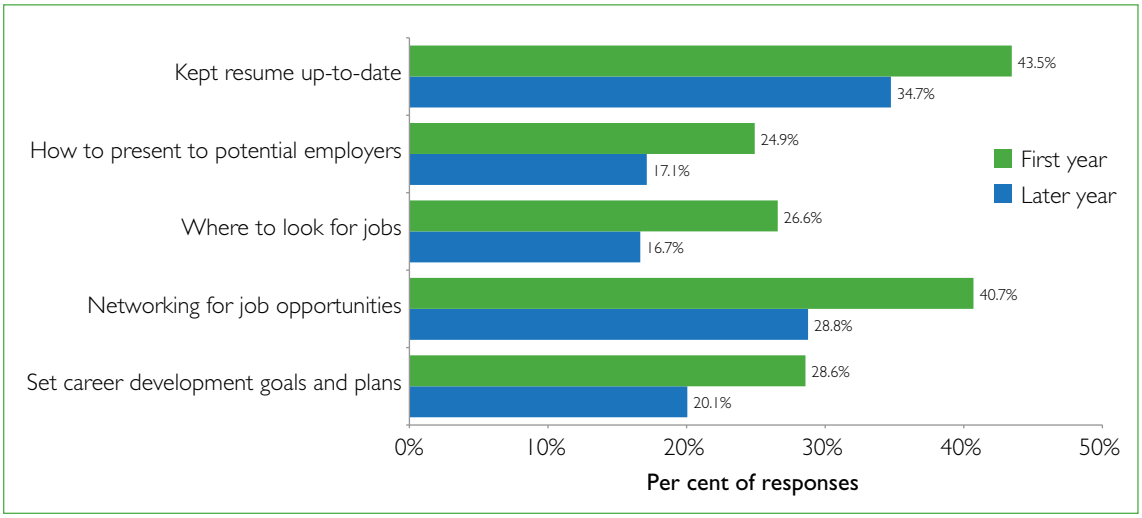

Figure 30 Proportion of students who 'never' participate in career preparation activities

Students studying part time and externally have the lowest level of general development with an average score of 39.5, students studying part time and on campus score an average of 42.1, while students studying full time and externally have a mean of 47.2 and students studying full time and on campus have a mean of 44.8. Students studying part time and externally are more likely to report that their university experience has contributed only very little to their ability to understand others of different racial and ethnic backgrounds.

Career Readiness

Readying graduates for a career is an important outcome of higher education. The 2009 SEQ included five new items designed to measure facets of students' Career Readiness. These items focused on whether students kept their resume up-to-date, thought about to present to employers, explored where to look for jobs relevant to their interests, used networking to source information on job opportunities, and set career development goals and plans. These items were sourced from related research undertaken with Victoria University (Coates, 2007b; Edwards and Coates, 2008).

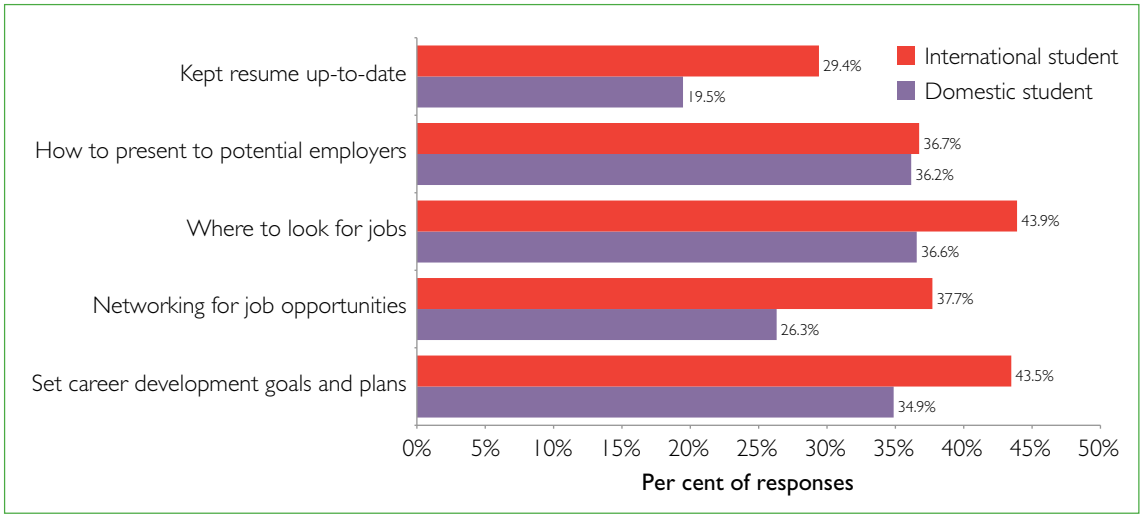

Figure 31 Proportion of students who report 'often' or 'very often' doing activities relevant to their future careers

Overall, Australasian students have a mean of 37.6 for Career Readiness, which rises from 34.0 among first-year students to 40.8 among later-year students. Worryingly, a large proportion of students seem to be ill-prepared for their future career. This is illustrated in Figure 30 which shows a large proportion of students saying that they 'never' keep their resume up-to-date (38.9%) or network to find job opportunities (34.4%). Although a large proportion of students report 'never' having done activities relevant for their future careers, by later-year the proportion of students who report doing these activities does at least rise quite substantially in certain areas.

Both male and female students report similar levels of career readiness, and there are no considerable differences in career readiness between students who identify as having a disability and those who do not. Although international students are less engaged with work integrated learning than domestic students, they have substantially higher scores for career readiness (43.7) than their domestic peers (36.8).

Worryingly, a large proportion of students seem to be ill-prepared for their future career

International students more frequently keep their resumes up-to-date, explore where to seek jobs, network for job opportunities and set career development goals and plans than domestic students. As shown in Figure 31, 29.4 per cent of international students report frequently keeping their resume updated, compared with 19.5 per cent of domestic students, 37.7 per cent frequently network for job opportunities (only 26.3% of domestic students do this frequently), and 43.5 per cent often or very often set career development goals and plans, compared with 34.9 per cent of domestic students. A similar pattern emerges among students who speak a language other than English.

Students from provincial and remote areas have slightly lower levels of career readiness than students from metropolitan areas, and students from low socioeconomic backgrounds have very slightly lower career readiness than students from middle or low socioeconomic backgrounds. Aboriginal and Torres Strait Islander students (39.1) and Pacific Islander students (40.4) have slightly higher levels of career readiness than non-Indigenous students (37.5). Māori students, however, have considerably lower levels of career readiness (31.5).

Depending on students' field of education, there are quite large variations in students' level of career readiness. Students studying degrees in the area of management or commerce have an average career readiness score of 43.1, while students studying science report the lowest levels of career readiness (33.0).

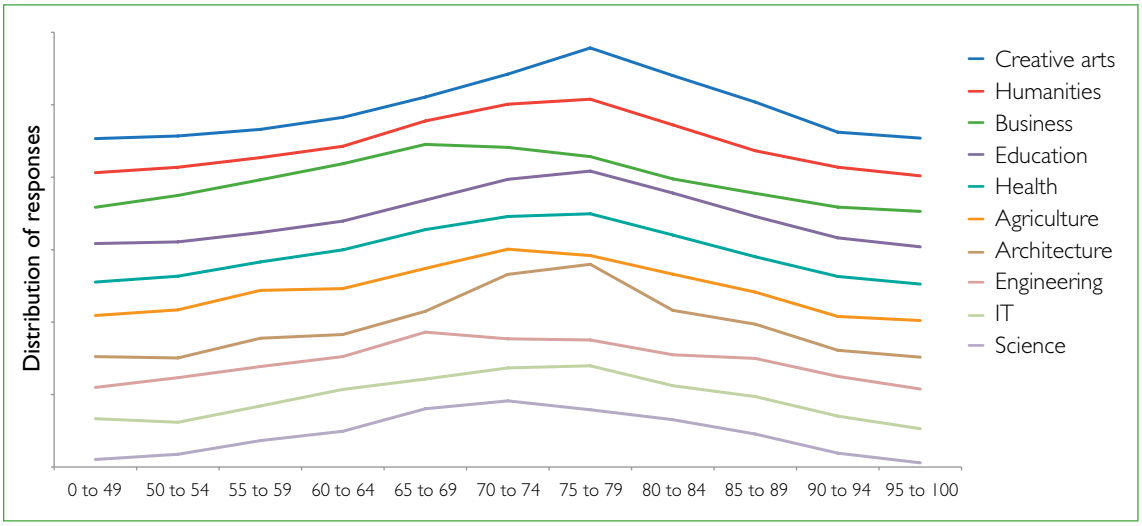

Figure 32 Average overall grade by broad field of education

Students studying full time are slightly more career ready than part-time students. Full-time students have an average of 38.1 for career readiness, higher than part time students' 34.7. Both part- and full-time students set career development goals and plans at a similar frequency to each other, full-time students report more frequently updating their resume, exploring how to present themselves to potential employees, explore where to look for jobs and network to improve their job opportunities. While there are not large differences in career readiness between students who are campus based and those who study externally or by distance, external students report more frequently setting career development goals and plans than campus based students.

Career readiness appears to be linked somewhat to students' experience in the workforce. Students who report working for pay have slightly higher levels of career readiness (39.2) than students who do not work (34.5), and more frequently participate in all aspects of career readiness measured in the AUSSE.

Average Overall Grade

An important measure often used to gauge students' learning outcomes is their average overall grade. The AUSSE asks students to select a category that best represents their average overall grade for their studies so far. As would be expected, students report an average grade of around 73.0 per cent, with little difference between grades for first-year students (72.7) and later-year students (72.3). The standard deviation for this item is 10.0. As shown in Figure 32, students' reported grades are normally distributed. Figure 32 reveals interesting differences across fields of education.

There is a strong negative relationship between students' grades, and their intentions to leave university prior to completing

The great majority of students report having a grade of 60 per cent or higher – 87.6 per cent of first-year students and 89.8 per cent of later year students report having a grade of at least 60 per cent. Students who have grades at least this high tend to also have significantly higher scores on all of the student engagement scales and the other outcomes measures apart from for departure intention.

Students' average overall grade is also correlated significantly with each engagement scale (Figure 33) and outcomes measure (Figure 34). As shown in Figure 33, the relationship between students' grades and engagement is particularly marked for students' participation work integrated learning, and in active forms of learning. Students with an average grade of 60 per cent or above score on average 46.0 for work integrated learning, compared with 38.9 among students with an average grade of less than 60 per cent. Students

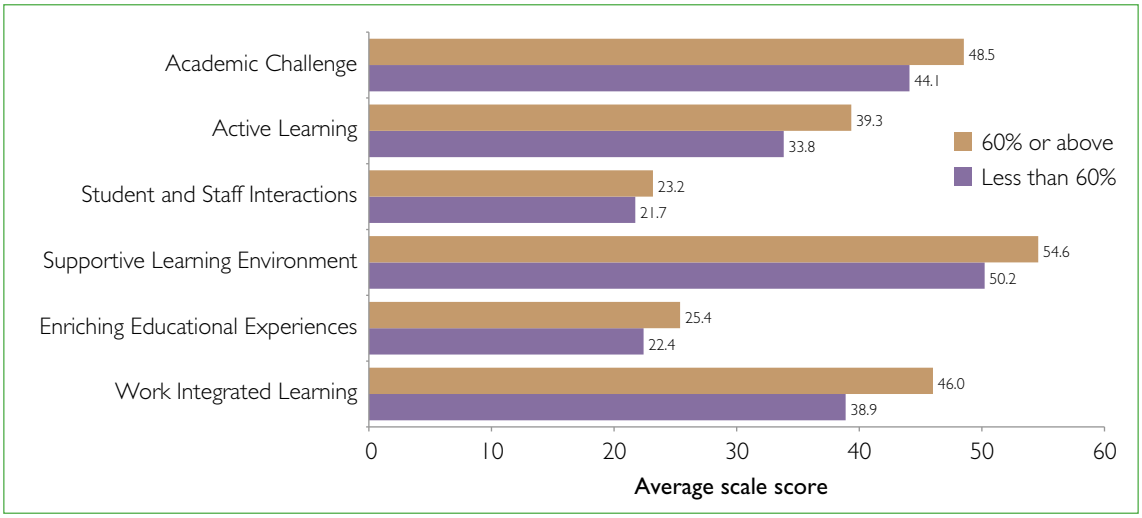

Figure 33 Students' average overall grade and average engagement scores

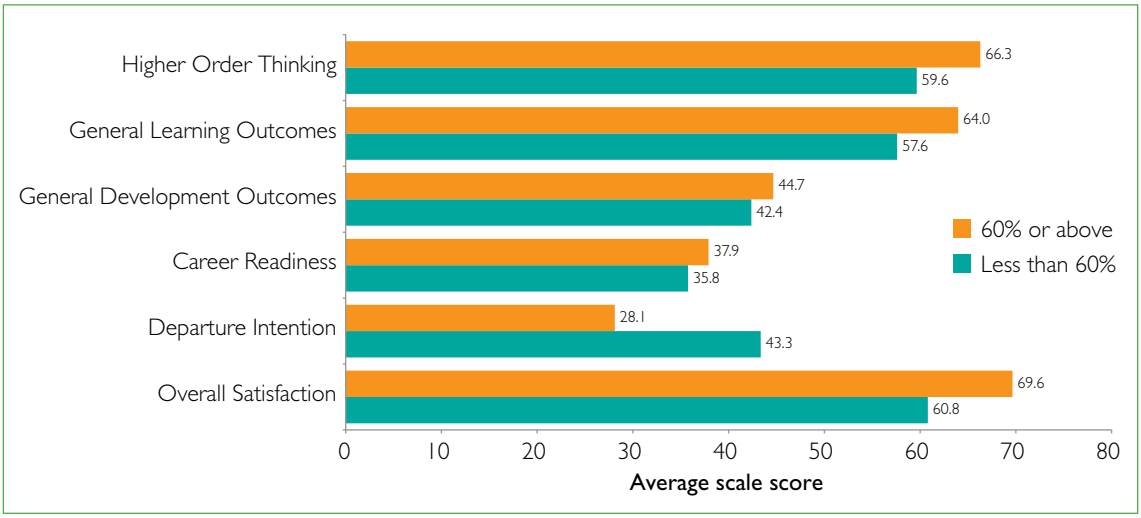

Figure 34 Students' average overall grade and average outcomes scores

with low grades have an average Active Learning score of 33.8, which compares with 39.3 among students with an average grade of 60 per cent or above.

There is a strong negative relationship between students' grades, and their intentions to leave university prior to completing and their satisfaction with their experience at university. While 43.3 per cent of students with low grades have considered departing their university prior to completing their degree, a much smaller proportion (28.1%) of students with average grades of 60 per cent or above have considered early departure. Overall satisfaction scores are 69.9 for high scoring students, but only 60.8 per cent among students with lower grades.

Students with grades of 60 per cent or higher also report more frequently working hard to master difficult content, being able to keep up-to-date with coursework, completing readings and asking questions in class than students with lower grades.

Departure Intention

Retaining students in higher education and ensuring students do not depart before completing their qualification is an obvious and important outcome. The 2008 Australasian Student Engagement Report (Coates, 2009b) devoted considerable attention to this facet of higher education. The results reported here affirm last year's patterns and trends.

the proportion of students who have seriously considered leaving is underestimated by teaching staff

A significant proportion of students – 30.0 per cent – has seriously considered or plans to depart their current institution. The levels of first- and later-year students who plan to leave or have seriously considered leaving their institution are very similar – 30.1 per cent of first-year students and 29.9 per cent of later-year students. It is important to note that these figures, particularly the later year estimate, are underestimates given they exclude people who have already left the institution. Interestingly, the proportion of students who have seriously considered leaving is underestimated by teaching staff. On average, staff who mostly teach first-year students believe around 19.6 per cent of their students have seriously considered leaving before completing their degree, and teachers of later-year students believe around 14.8 per cent of their students have contemplated this.

When teaching staff were asked to rate the importance of student retention, only 25.2 per cent of teaching staff said retention was 'very important', and almost a third of staff (32.2%) said that student retention is only 'somewhat important' or even 'not important'. Interestingly, a much greater proportion of teaching staff, more than double the proportion than for student retention, 51.9 per cent rate student satisfaction

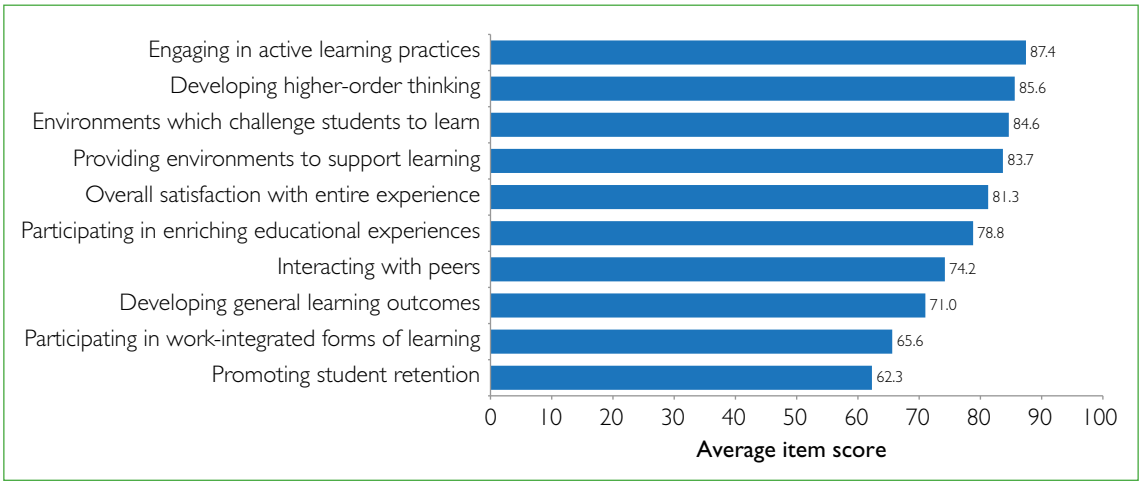

Figure 35 Staff prioritisation of facets of student engagement and outcomes

as 'very important'. In fact, as shown in Figure 35, promoting student retention is rated as the least important aspect of education about which staff were asked. Over the last two decades, teaching staff have been increasingly judged using results from student satisfaction surveys, which may be one reason why this is seen as more important to staff than student retention. The lower prioritisation may also result due to the underestimation by teaching staff of the proportion of students who have seriously considered early departure.

Students' reasons for having seriously considered leaving their current institution include for convenience or practical reasons (8.7%), for academic reasons (8.0%), to improve future career prospects (7.9%), for financial reasons (6.7%), to gain a better education (6.1%) or for other reasons (7.1%).

Although quite a high proportion of students have considered or are planning to leave their current institution next year, the great majority plan to contribute with current study. 91.4 per cent of first-year students and 66.8 per cent of later-year students plan to continue with their current study next year, while 32.7 per cent of later-year students plan to leave university having completed their qualification next year. Only a small proportion of students plan to change their qualification (7.1%), shift to another university (6.3%), and only a very small number of students plan to move to vocational education or training (1.4%), or leave their institution prior to completing their degree (1.3%).

Both male and female students have similar levels of early departure intentions, with 29.8 per cent of females and 30.1 per cent of males having considered leaving their institution prior to qualification. Students from different socioeconomic backgrounds have similar levels of departure intention, with 29.6 per cent of students from low socioeconomic backgrounds, 29.8 per cent of middle socioeconomic students and 29.7 per cent of high socioeconomic students having considered early departure. While students from metropolitan areas have slightly lower levels of early departure intentions than students from provincial or remote areas, the difference is not large. 29.2 per cent of metropolitan students have considered early departure, while 32.1 per cent of provincial and 32.3 per cent of remote students have done so.

Larger differences in departure intentions are notably among students with a self-reported disability, international students, and Indigenous students. 38.0 per cent of students with a self-reported disability plan, or have seriously considered leaving university prior to completion, compared with 29.4 per cent of students with no disability.

Around 32.4 per cent of international students report that they have seriously considered or are planning to depart their current institution prior to completion, while only 29.7 per cent of domestic students have done so. A larger proportion of international students have considered a change to improve their career prospects (12.2% compared with 7.3%), or to obtain better quality education

(9.3% compared with 5.7%), and a very slightly higher proportion of international students have considered leaving their current institution due to financial pressure (8.7% compared with 6.5%).

While 29.8 per cent of non-Indigenous students report that they have considered or are planning to leave their current institution before completion, a somewhat larger proportion of Indigenous students, 36.3 per cent of students of Aboriginal or Torres Strait Islander origin, 35.5 per cent of Māori students, and 36.1 per cent of Pacific Islander students. Indigenous students are more likely to have seriously considered leaving their current institution than non-Indigenous students, and a much higher proportion of Indigenous students cite their reason for considering early departure as being for financial reasons, and to a lesser extent for convenience or practical reasons.

Students' intention to depart varies depending on the broad area of study which they are undertaking. Students studying creative arts have the highest departure intentions. In total, 33.7 per cent of creative arts students have seriously considered leaving or plan to leave before completing their qualification. Among students studying generalist degrees, such as science and humanities, the proportion of students who have considered leaving is also slightly higher than average.

Only 26.9 per cent of engineering students, 27.5 per cent of education students and 27.7 per cent of students studying health have seriously considered or plan to depart prior to completion. As shown in Figure 36, students studying science, and humanities degrees are most likely to be planning to change to a different qualification, or shifting universities, while education and engineering students are the least likely to be planning to change universities, and students studying education, agriculture and engineering are least likely to be planning to shift universities.

Students studying externally or by distance and students studying part time have slightly higher departure intentions than students studying full time and on campus. Students studying full time, externally or by distance are most likely to have considered or plan on leaving their studies before completion, with 33.2 per cent of these students having considered or planned this. 31.6 per cent of part-time and external or distance students, and 29.9 per cent of part time students studying on campus have considered or plan to leave early, while 29.4 per cent of students studying full time and on campus have done so.

Overall Satisfaction

Student satisfaction is one of the most commonly used measures of quality in contemporary higher education. While assessing satisfaction reinforces a market-oriented perspective on university education, it is important that learners see their experience as providing an appropriate return on what is often a considerable personal investment. The intense emphasis placed on satisfaction may explain why almost all teaching staff (92.7%) surveyed in the Staff Student Engagement Survey say that students' satisfaction with their overall university experience is 'important' or 'very important'. (Figure 35).

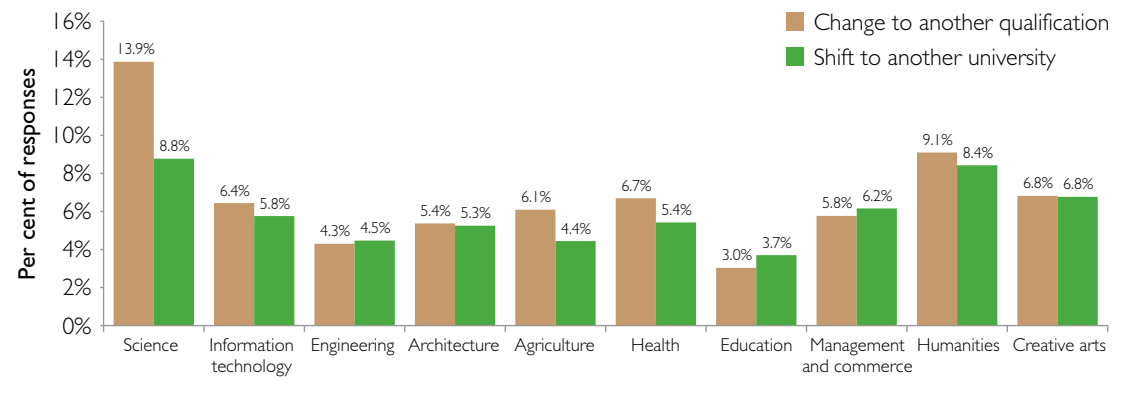

Figure 36 Proportion of students who plan to shift universities or change qualifications by field of education

most students said that they would 'definitely' or 'probably' attend the same institution if given the chance to start over again

The AUSSE is not a satisfaction survey, but it does provide measurement of what has grown to be treated as a core education outcome. Three SEQ items underpin a composite (rather than single-item) measure of student satisfaction – an item focused on the quality of academic advice, an item on the entire experience, and an item asking people if they would attend the same institution were they to begin their studies again.

In 2009, most students were satisfied with their experience at their institution, with an average score of 68.5. Satisfaction was higher among first-year students, 71.3, than later-year students, 66.0. As shown in Figure 37, most students rated their overall educational experience and the quality of academic advice received as 'good' or 'excellent'.

Overall, most students said that they would

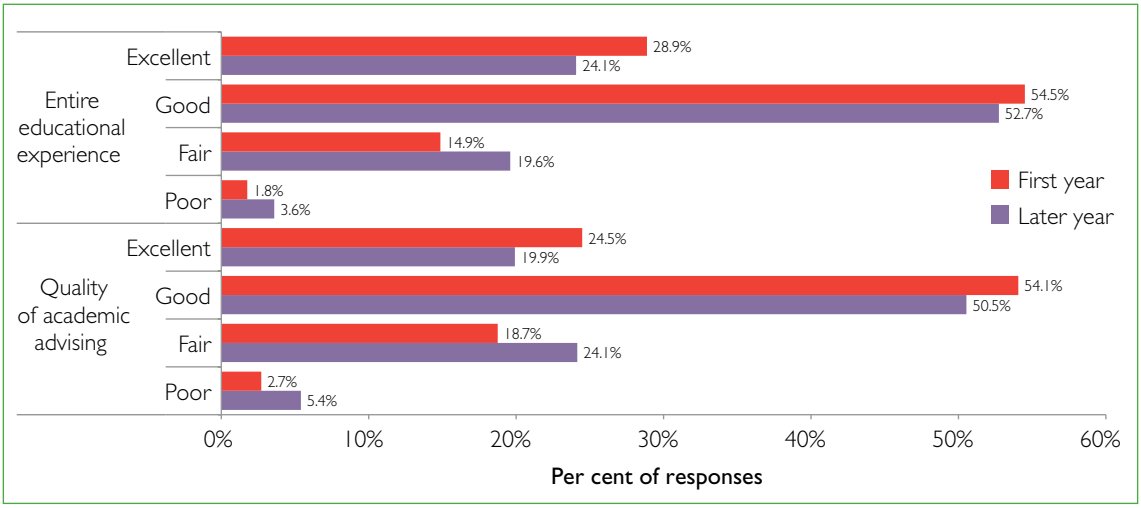

Figure 37 Student ratings of quality of academic advising and overall educational experience

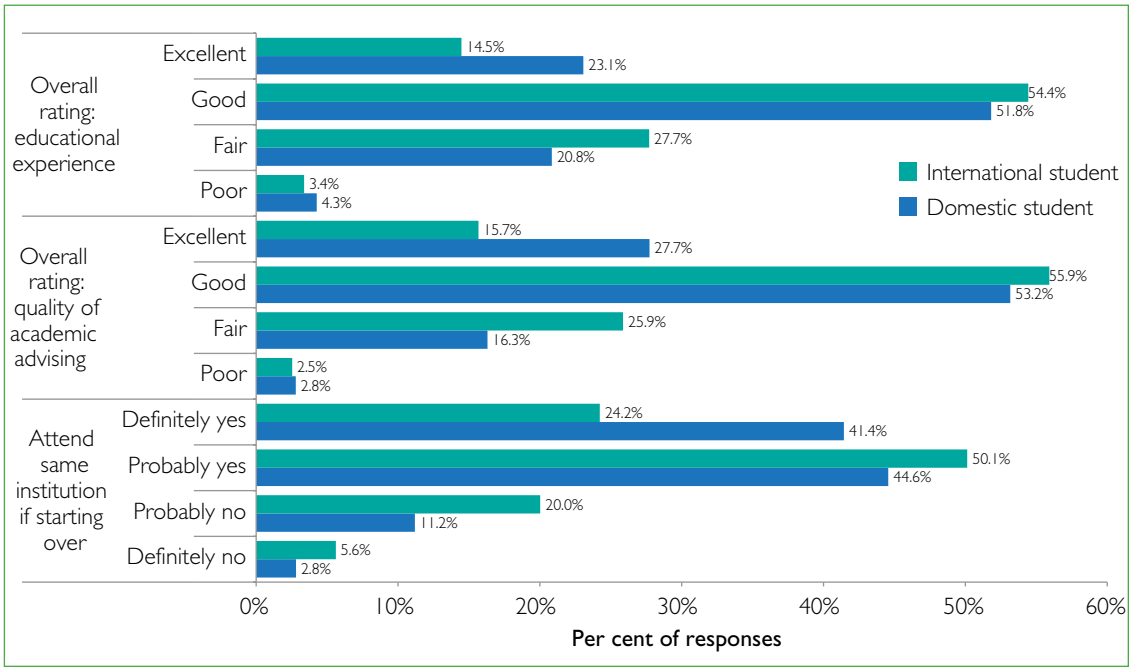

Figure 38 International and domestic students' satisfaction with university experience

'definitely' or 'probably' attend the same institution if given the chance to start over again. 45.2 per cent of first-year students and 45.3 per cent of later-year students said that they would probably attend the same institution again, while 43.6 per cent of first-year students and 35.7 per cent of later year students said they would definitely attend the same institution again. The proportion of students who say that they would probably not attend the same institution again grows from first-year (9.4%) to later-year (14.6%), as does the proportion of students who say they would definitely not attend the same institution given the chance to start over – 1.7 per cent rising to 4.4 per cent.

Although a large proportion of students were happy with their educational experience, teaching staff somewhat overestimated the proportion of students who were very satisfied. Teaching staff estimated that around 53.3 per cent of their students would rate the quality of academic advice received from university as 'excellent'. Most students rated the quality of academic advice received as at least 'good', but only 22.0 per cent said it was 'excellent'. Similar discrepancies are found for students' ratings of their overall educational experience. While most students rated their educational experience as at least 'good', only 26.3 per cent said their experience was 'excellent'. This compares with staff estimates that 53.7 per cent of their students would rate their overall university experience as 'excellent'.

There are little differences in satisfaction among female (69.5) and male students (67.3), students from low (68.2), middle (69.0) and high (67.8) socioeconomic backgrounds, students from remote (70.0), provincial (67.9) and metropolitan (68.5) areas, and students from non-Indigenous (68.6) backgrounds, Aboriginal or Torres Strait Islander origin (68.6), of Māori descent (71.8) or of Pacific Islander descent (70.3). There are, however, larger differences between international and domestic students and students whose main language spoken is English, or a language other than English.

Overall, international students have an average score of 62.0 for their overall satisfaction, much lower than the average of 69.3 among domestic students. As shown in Figure 38, international students are less likely to rate the quality of academic advising and their overall experience as being 'excellent'. Around a quarter (25.6%) of international students would probably, or definitely not attend the same institution given the chance to start over again, while only 14 per cent of domestic students feel the same way.

teaching staff somewhat overestimated the proportion of students who were very satisfied

5

Boosting the equity and outcomes of higher education

Growing the access and size of higher education

Governments and institutions recognise that higher education must expand to fuel the growing knowledge economy. An important means of expanding higher education is to boost the participation of people from historically under-represented groups. For higher education to be truly successful, the characteristics of students must match those of the general population. But the benefits of higher education to individuals and society derive not just from admitting students. Institutions must engage students in ways that help them to succeed.

This chapter focuses on the engagement and outcomes of students in socio-demographic groups that have been historically under-represented in higher education. It looks at their access to higher education, their retention, the skills they acquire at university, and their successful graduation and movement into the workforce. The analysis focuses specifically on students from low socioeconomic backgrounds, from regional and remote areas, and who identify as being of Indigenous origin or descent.

Despite decades of expansion and attempts to boost participation in higher education among historically under-represented groups of people, the need for change remains. In Australia, students from low socioeconomic backgrounds, Indigenous students and students from non-metropolitan areas remain under-represented in the number of applications and enrolments into higher education (DEEWR, 2009c). Data from the New Zealand Ministry of Education (2009a, 2009b, 2008) also show that while enrolments have been increasing, there are still low numbers of Māori and Pasifika people enrolled in higher education. More needs to be done to enhance access for people in these historically under-represented groups.

A quarter of the population is classified as being from a low socioeconomic backgrounds, but only 18 per cent of applications for higher education courses in Australia were from people from low socioeconomic backgrounds (DEEWR, 2009c). These applicants were also less likely to receive an offer, with 75.1 per cent receiving an offer compared with 76.3 per cent of middle and 78.4 per cent of high socioeconomic applicants. Although less likely to receive an offer, low socioeconomic applicants were slightly more likely to accept an offer than other applicants if one is received.

the characteristics of students must match those of the general population

A similar pattern is evident among students from regional and remote areas. While 26.3 per cent of people in Australia are from regional areas, and around 2.1 per cent are from remote areas, just over a fifth of applicants were from regional areas, and only one per cent of applicants were from remote areas. Although a smaller proportion of non-metropolitan students apply for higher education courses, they are slightly more likely to

receive offers for university, and remote students are most likely to accept an offer (DEEWR, 2009c).

Indigenous people are historically under-represented in higher education, and this is reflected in recent applications received by Aboriginal and Torres Strait Islanders, as outlined by DEEWR (2009c) while Indigenous Australians represent around 2.5 per cent of the Australian population, only one per cent of applicants in 2009 were Indigenous. Around the same proportion of Indigenous and non-Indigenous students accept offers, but a much lower number of Indigenous Australians are offered a place in higher education – 70.9 per cent, 5.7 per cent lower than non-Indigenous Australian applicants.

While students from these under-represented groups are less likely to apply for university studies, those who do tend to apply for courses which have been deemed national priority areas, such as education, nursing and health. Students from non-metropolitan areas are also more likely to apply for courses in agriculture.

Of the nearly 800,000 domestic students enrolled in bachelor degree level study in 2008 in Australia, data from DEEWR (2009b) show that around 16.1 per cent were from low socioeconomic backgrounds, 1.3 per cent were of Aboriginal or Torres Strait Islander origin, 18.6 per cent were from regional areas and one per cent were from remote areas – all these students had a much lower representation in the higher education population than in the broader Australian population.

Students from non-metropolitan areas report slightly higher levels of departure intention than metropolitan students

The same thing can be seen in New Zealand. Around 120,000 domestic students were enrolled in bachelor level study in New Zealand in 2008 (NZ MOE, 2009b). A much lower proportion of the higher education population comprises Māori and Pasifika students than in the broader New Zealand population. It is clear that Australia and New Zealand have failed thus far to diversify access to higher education in ways that enhance equity and productivity.

More needs to be done to diversify access and broaden the participation of students from traditionally under-represented groups. Further, once these students are enrolled in higher education there should also be measures put into place to ensure that they complete their studies and graduate successfully with the skills required to succeed in the workforce and contribute positively to the knowledge economy.

From enhancing access to retention and completion

Overall, most students entering higher education end up completing a qualification and graduating successfully. Currently, around 72 per cent of Australian students who enrol in higher education complete their qualification, however this is much lower among New Zealand students who only have a 58 per cent completion rate (OECD, 2009a). While this represents the overall level of completion, student attrition is slightly higher among some under-represented groups of students, and moves need to be taken to ensure the successful retention and graduation of many of these students.

Students from low socioeconomic backgrounds do not tend to be at risk of higher levels of attrition than other students, and do almost as well as students from middle and high socioeconomic backgrounds in terms of retention, success and course completion (Coates & Krause, 2005). Data from the AUSSE show that students from low socioeconomic backgrounds report similar levels of departure intentions to students from higher socioeconomic backgrounds. 29.6 per cent of low socioeconomic students either plan to leave before completing their university study, or have seriously considered departing their current institution. This compares with a very similar proportion of middle socioeconomic students (29.8%) and high socioeconomic students (29.7%).

In all, 79.1 per cent of low socioeconomic students planned to continue with their current study at their current institution next year. Most other students – 18.2 per cent – planned to finish their study and graduate next year. Only very small proportions of low socioeconomic students planned to shift to vocational education, to a different qualification or to leave university before completing their study. These proportions

were all very similar to students from higher socioeconomic groups. Interestingly, a slightly smaller proportion of low socioeconomic students planned to shift universities than students from higher socioeconomic backgrounds.

Students from non-metropolitan areas report slightly higher levels of departure intention than metropolitan students on the AUSSE. 32.2 per cent of regional students and 32.3 per cent of remote students report that they have either seriously considered, or plan to leave prior to completing their degree. This compares with the slightly lower 29.2 per cent of metropolitan students who responded in this way. Students from remote areas were somewhat more likely to say that they had considered leaving due to practical reasons or convenience – 12.5 per cent said this compared with 8.6 per cent of metropolitan students. More positively, 94.6 per cent of remote and 96.4 per cent of regional students either planned to continue their current study or graduate next year. This is only slightly less than the 97.2 per cent of metropolitan students with these same plans.

Indigenous students are more at risk of leaving their studies prior to completion. In 2007, first-year attrition rates for domestic students were around 19 per cent in both Australia and New Zealand (NZ MOE, 2009b; DEEWR, 2009a). Estimates suggest that this rate is substantially higher for Indigenous students. Estimates put the first-year attrition rate at around 35 to 39 per cent for Australian Indigenous students (IHEAC, 2006). Although not quite that high in New Zealand, the first-year attrition rate is around 29 per cent for Māori students and 26 per cent of Pasifika students (NZ MOE, 2009c). Overall, attrition of Māori and Pasifika students is much higher that students from European or Asian descent (Figure 39).

Completion rates among Indigenous students also lag behind those of non-Indigenous students. Aboriginal and Torres Strait Islander students have a completion rate of less than 50 per cent (CSHE, 2008), much less than the overall 72 per cent completion rate for Australian domestic students (OECD, 2009a). This is also mirrored among Māori and Pasifika students. After ten years, 62 per cent of New Zealand students have completed the degree they enrolled in, or a higher degree, while only 49 per cent of Māori and 44 per cent of Pasifika students have completed their degree or a higher level qualification (NZ MOE, 2009d).

Aboriginal and Torres Strait Islanders, Māori and Pasifika students all report significantly higher levels of departure intention in the 2009 AUSSE. 36.3 per cent of Aboriginal and Torres Strait Islander students, 35.5 per cent of Māori students and 36.1 per cent of Pasifika students report that they have either seriously considered departing their current institution or plan to leave university next year. Although more than a third of all Indigenous

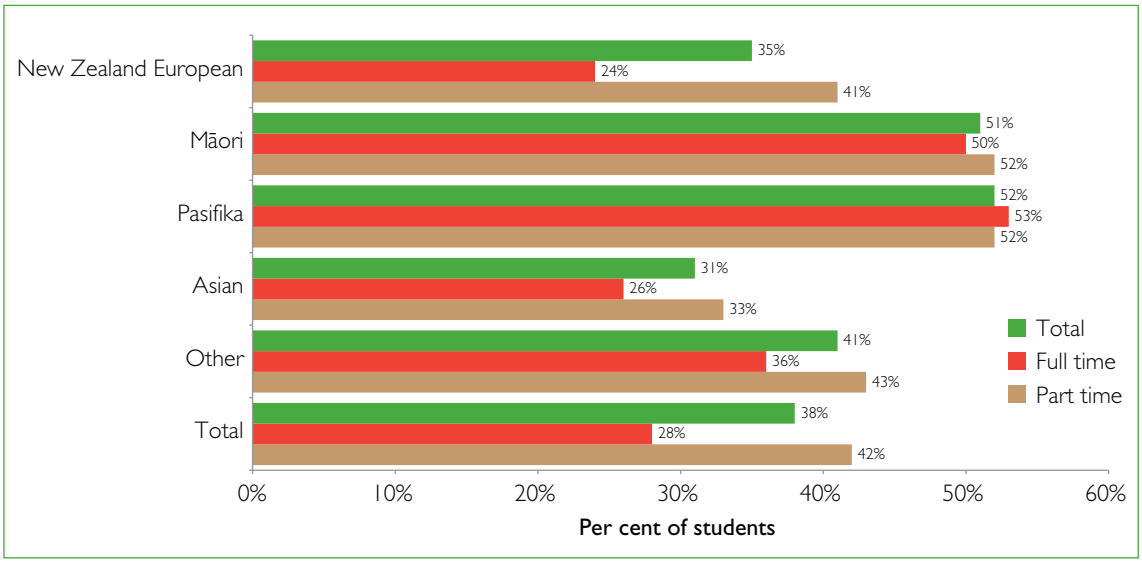

Figure 39 Attrition of New Zealand students from different ethnic groups (NZ MOE, 2009c)

students report that they plan to leave or have seriously considered leaving, almost all Indigenous students plan to continue their current study or leave having completed their study next year.

While the majority of students from low socioeconomic backgrounds and non-metropolitan areas who enrol in higher education remain, and complete their degrees, the findings discussed above show that more needs to be done to support Indigenous students to complete their studies.

Obviously, simply retaining students in higher education is not enough to ensure that they leave university with the necessary skills to succeed in the workforce and to contribute to society. The next section takes a closer look at the contribution that university has on students' development of skills and knowledge, and in preparing them to enter the workforce.

From retention and completion to successful graduation

Increasing access and retaining students from under-represented groups is of paramount importance. It is also very important that students are gaining from their time at university, and that they are developing the skills and knowledge to succeed professionally and in other areas of their life.

The AUSSE measures a number of different student outcomes, including students' overall satisfaction with their experience at their university, average overall grade, early departure intentions, and the amount of higher order thinking undertaken. Other outcomes include students' career readiness, and their general development and learning outcomes.

Students' general learning outcomes are measured in the AUSSE through a series of questions asking students about the extent to which their experience at university has contributed to their development of skills, knowledge and personal development. Interestingly, students from under-represented groups all report slightly higher levels of general learning outcomes than other students.

students from under-represented backgrounds report slightly higher levels of general development than other students

Students from low socioeconomic backgrounds have an average score of 64.3 for general learning outcomes, very slightly higher than students from middle (63.8) and high (62.6) socioeconomic backgrounds. Although not a large difference, it is pleasing to see that students from low socioeconomic groups have a positive view of the contribution their experience at university

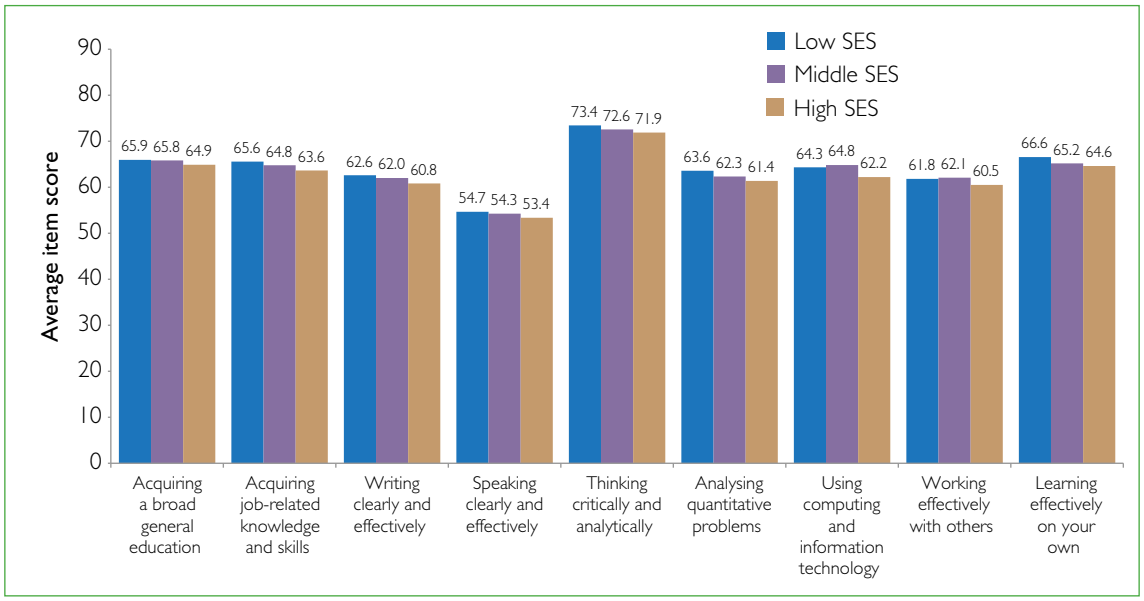

Figure 40 Average general learning outcomes scores by socioeconomic background

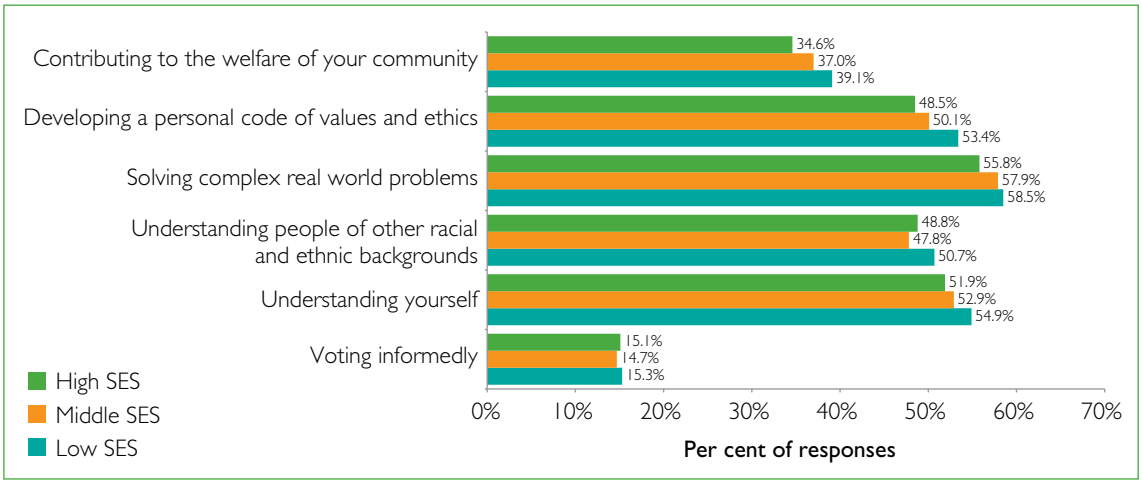

Figure 41 Proportion of students whose experience at university has contributed at least 'quite a bit' to their development

has had on their development, knowledge and skills. As shown in Figure 40, students from low socioeconomic backgrounds are slightly more positive about the contribution university has made to their ability to learn, write, speak and think, and to their acquisition of knowledge and skills that will help them in their future careers.

A more mixed pattern emerges when looking at the general learning outcomes reported by Indigenous students and students from non-metropolitan areas. Māori students report slightly lower levels of general learning (61.9) than non-Indigenous students (63.0), while Aboriginal and Torres Strait Islander students and Pasifika students report slightly higher levels of general learning development – 65.7 and 66.6 respectively. Non-metropolitan students report similar levels to metropolitan students for general learning outcomes.

Students are also asked about their general development outcomes, and the extent to which their experience at university has contributed to their ability to understand themselves and others, to solve complex, novel problems, to contribute to their community and to develop a personal code of ethics and values.

Again, interestingly, students from under-represented backgrounds report slightly higher levels of general development than other students. Students from low socioeconomic backgrounds and Indigenous students report slightly higher levels of general development, however students from remote and regional areas report similar levels of general development than metropolitan students.

As shown in Figure 41, students from low socioeconomic backgrounds feel that their experience at university has contributed to their general development more, or at least to a similar extent than students from higher socioeconomic backgrounds. Very positively, the majority of low socioeconomic students feel that their university experience has contributed at least 'quite a bit' to their development of a personal code of values, their ability to solve complex, novel problems, and their ability to understand themselves and others.

A similar pattern emerges among Indigenous students. Māori, Pasifika and Aboriginal and Torres Strait Islander students are all more positive than non-Indigenous students on the extent to which their experience at university has contributed to their general development. This is clearly shown in Figure 42.

While students from under-represented backgrounds seem to be achieving similar outcomes to other students, and in some areas report higher levels of outcomes, it is also interesting to look at ways that their engagement with learning affects their success and the extent to which this influences their outcomes.

A closer look at socioeconomic status

As Figure 1 depicts, education can be viewed as involving inputs, processes and outcomes. In this framework, students' inputs may operate

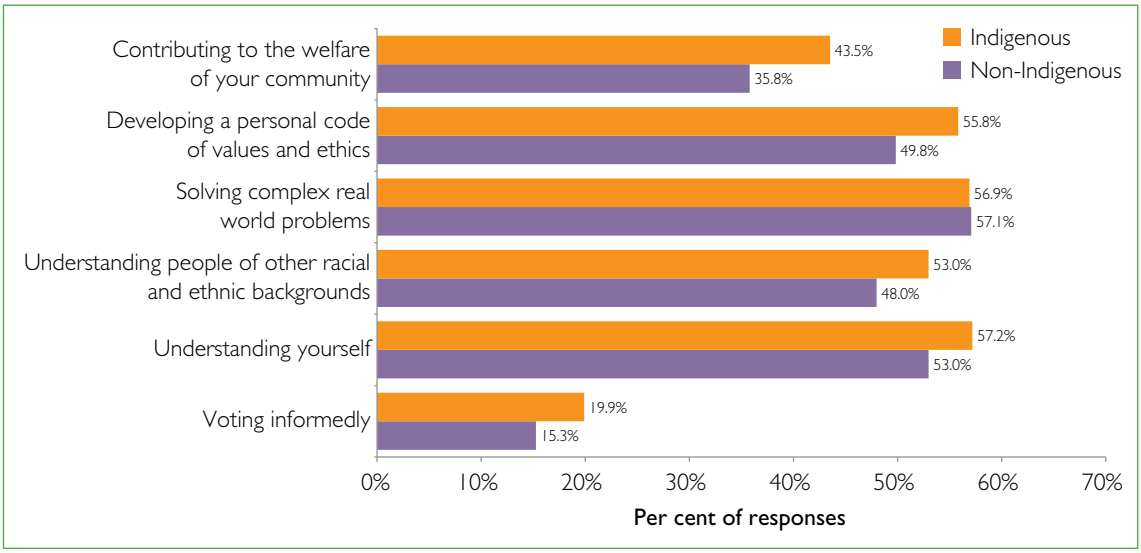

Figure 42 Proportion of Indigenous and non-Indigenous students whose experience at university has contributed at least 'quite a bit' to their development

through learning processes to influence student outcomes. These inputs frequently include demographic information, such as gender, age and socioeconomic status and are considered to not be amenable to change. Within the AUSSE context, processes are operationalised in terms of six areas of student engagement while students' average overall grade, general learning and general development outcomes are some of the student outcomes measured by the AUSSE.

A series of multivariate path models were analysed to identify how demographics (inputs) operate through engagement with learning (processes) to influence outcomes. The results provide information on how student engagement influences outcomes differently depending on students' socioeconomic backgrounds. Given that these analyses examine the relationships between all variables within a single model, the effects of socioeconomic status are controlled for other important input variables such as gender, location and field of education. In other words, the effects of students' socioeconomic backgrounds on students' engagement and outcomes can be said to apply regardless of whether students are male or female, studying in the areas of natural or social sciences, and from a metropolitan, provincial or rural area. Three models were examined – one for each of three different student outcomes of interest, namely students' average overall grade, general learning outcomes, and general development outcomes.

Figure 43 presents the logic of these three analyses, and shows results for the analysis focused on average overall grade. The numbers in brackets are standard errors and the numbers before the brackets are path coefficients, which are similar to a correlation. For a path coefficient to be considered significant, it has to be twice the size of its standard error. Only significant effects are shown. Paths relevant to lower socioeconomic status are bolded. Variables in the model have been coded as follows:

- Field of education: 0=natural science/ engineering field; 1=social science/people-oriented field;
- Location: 0=non-metropolitan; 1= metropolitan;
- Sex: 0=male; 1=female; positive effect female higher; negative effect male higher; and
- Socioeconomic status: 0=low socioeconomic status; 1=medium socioeconomic status; 2=high socioeconomic status.

Figure 43 reveals a number of interesting observations regarding the way in which socioeconomic status affects engagement and average overall grade. The positive direct effect from students' socioeconomic status to overall grade (0.7) indicates that students from higher socioeconomic status backgrounds report higher

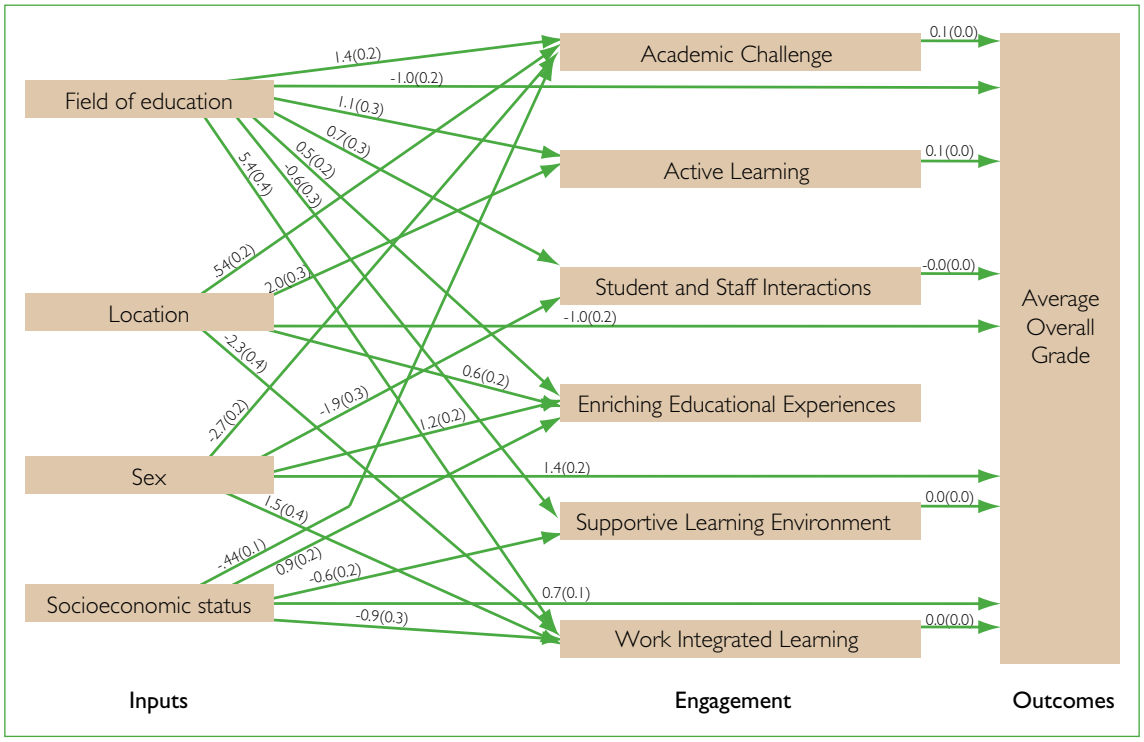

Figure 43 Effects of socioeconomic status and student engagement with average overall grade

overall grades. Although significant, the size of the direct effect is small in that students from middle socioeconomic status groups only have a 0.7 higher overall grade than students from a low socioeconomic status background. Another positive effect is observed between socioeconomic status and students' engagement with enriching educational experiences. In other words, higher socioeconomic status students report that they engage more frequently in enriching educational experiences, such as having frequent contact and conversations with students from different ethnic backgrounds and participating more frequently in extracurricular activities.

The indirect effects in these models are of greater relevance to the question of whether student engagement contributes to improving outcomes for lower socioeconomic status students. The relationships of interest are those that show a negative effect from students' socioeconomic status on student engagement which, in turn, has a positive effect on student outcomes. It is these paths that indicate relationships where processes of student engagement work to improve outcomes for students from lower socioeconomic status backgrounds.

Three such effects are evident:

- There is a negative effect from socioeconomic status on Academic Challenge which, in turn, has a positive effect on students' average overall grade. Albeit small, this means that where students from low socioeconomic status backgrounds report to have done more reading, longer and more written assignments and where their coursework places greater emphasis on analysing, synthesising, making judgements on ideas and information, and applying theories to novel situations or problems, this translates into slightly higher overall grades.
- The second path of this kind emerges from socioeconomic status through Supportive Learning Environment to average overall overall grade. Thus, students from low socioeconomic status backgrounds report slightly higher grades where they feel there is institutional emphasis on providing them with support to succeed academically and the assistance to cope with non-academic responsibilities related to work and family.
- The third beneficial effect for low socioeconomic status students works through

Work Integrated Learning. Here, students from low socioeconomic status backgrounds report more frequent experience of blending academic learning with workplace experience and acquiring job-related knowledge and skills. More frequent participation in these work integrated types of learning result in a slightly increased overall grade for students from low socioeconomic status backgrounds.

A number of other effects in Figure 43 are noteworthy. Field of education, for example, has several sizeable effects showing that students from the social and people-oriented areas of study report a greater level of engagement with work integrated learning experiences, intellectual challenge and active forms of learning than students studying natural science and engineering. The direct effect from field of education on the outcome indicates that students in the natural sciences and engineering report higher overall grades than social science students, once all other variables in the model have been taken into account. Similarly, the direct positive effect of sex on average overall grade indicates that female students report higher grades than their male counterparts. For male students, the only path that slightly compensates for this is the negative effect from gender on Academic Challenge which, in turn, has a positive effect on average overall grade. In other words, male students report greater engagement with Academic Challenge than do female students which results in higher overall grades.

Results for the other two outcome variables – general learning and general development – are very similar to those for average overall grade. Again, greater levels of academic challenge, a more supportive learning environment and involvement in work integrated types of learning assist students from low socioeconomic status backgrounds to gain increased levels of general learning and general development outcomes.

It becomes clear that there is an important direct effect of socioeconomic status on these outcomes. This means that even after all variables in the models have been taken into account students from lower socioeconomic status backgrounds report to a greater extent than others that their experience at university has contributed to acquiring a broad general education and

job-related skills as well as critical and effective writing, speaking, thinking and analytical skills. Likewise, students from low socioeconomic status backgrounds report that their university experience has contributed to understanding of themselves, other people, and the world to a greater extent than students from higher socioeconomic status backgrounds.

Taking stock

This chapter has explored differences in students' outcomes, and how these are influenced by background and the different ways students engage at university.

The analysis presented in this chapter, which focuses on fundamental learning practices and key outcomes, shows that this is indeed the case. There are variations across groups, but the results generally affirm that students from low socioeconomic backgrounds, from regional and remote areas, and who identify as being of Indigenous origin or descent perform educationally at comparable levels to others.

The results affirm the compensatory effects of student engagement noted by Kuh, Kinzie, Cruce, Shoup and Gonyea (2007). Particularly with regard to students' average overall grades, results demonstrate that students from lower socioeconomic status backgrounds benefit through greater engagement in academically challenging activities, greater levels of support and involvement in work integrated forms of learning.

Taken together, these results affirm the critical importance of reaching out to people in under-represented demographic groups to expand the number of people involved in higher education. The results also affirm the vital role that key facets of engagement play for ensuring that students receive the support they require to enhance participation and success.

6

Evidence for changing policy and practice

Guides for monitoring and enhancing education

Developing strategies to use engagement data for continuous quality improvement is a vital part of the AUSSE. Collecting information on 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. But the most productive change comes through using findings to steer improvements in practice.

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 AUSSE Enhancement Guides have been developed to help institutions make the most use of their AUSSE data and results. These are available online (see http://ausse.acer.edu.au), and a sample is included in Appendix 6.

As these Enhancement 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 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 a pilot 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 academic and professional staff and leaders, 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.

This work was extended in 2009, which saw the development of the Postgraduate Survey of Student Engagement (POSSE), the first National Student Engagement Forum, the largest education-focused cross-institutional collection of data from currently enrolled students ever conducted in either Australia or New Zealand, and more than a dozen conference presentations and workshops. Participants in AUSSE 2009 received significantly expanded AUSSE Institution Reports that included student reports, staff reports, executive summaries, and time series analyses. A new website was released, and the AUSSE was linked further into a global research collaborative that has given rise to collections in several countries. Further ACER-produced AUSSE Research Briefings were produced, and a range of institution-specific research activities were initiated, providing fresh insights into the main collection.

AUSSE 2010 continues to grow. Around 45 institutions are taking part, including a range of non-university higher education providers. Planning is underway to develop a local version of the instrument (referred to as 'CLASSE' in the USA (NSSE, 2010)), and further international and cross-institutional collaborations are planned. ACER continues to work widely with institutions and broader stakeholders to find innovative and effective ways of converting insights into students' engagement into productive change.

The 2008 NSSE report (NSSE, 2008) tracked 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 higher education.

We have very small class sizes which make for almost one-on-one learning. Personalizing the learning environment makes me work harder for the lecturer.

– Later-year male engineering student

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Appendices

Your university experience

ACER AUSSE Australasian survey of student engagement

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	☐	☐	☐	☐
Sought advice from academic staff	☐	☐	☐	☐
Made a class or online presentation	☐	☐	☐	☐
Worked hard to master difficult content	☐	☐	☐	☐
Prepared two or more drafts of an assignment before handing it in	☐	☐	☐	☐
Used library resources on campus or online	☐	☐	☐	☐
Worked on an essay or assignment that required integrating ideas or information from various sources	☐	☐	☐	☐
Used student learning support services	☐	☐	☐	☐
Blended academic learning with workplace experience	☐	☐	☐	☐
Included diverse perspectives (e.g. different races, religions, genders, political beliefs, etc.) in class discussions or written assignments	☐	☐	☐	☐
Came to class having completed readings or assignments	☐	☐	☐	☐
Kept up to date with your studies	☐	☐	☐	☐
Worked with other students on projects **during class**	☐	☐	☐	☐
Worked with other students **outside class** to prepare assignments	☐	☐	☐	☐
Put together ideas or concepts from different subjects when completing assignments or during class discussions	☐	☐	☐	☐
Tutored or taught other university students (paid or voluntary)	☐	☐	☐	☐
Participated in a community-based project (e.g. volunteering) as part of your study	☐	☐	☐	☐
Used an online learning system to discuss or complete an assignment	☐	☐	☐	☐
Used email or a forum to communicate with teaching staff	☐	☐	☐	☐
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	☐	☐	☐	☐
Worked harder than you thought you could to meet a teacher's/tutor's standards or expectations	☐	☐	☐	☐
Worked with teaching staff on activities other than coursework (e.g. committees, orientation, student organisations, etc.)	☐	☐	☐	☐
Discussed ideas from your readings or classes with others outside class (e.g. students, family members, co-workers, etc.)	☐	☐	☐	☐
Had conversations with students of a different ethnic group than your own	☐	☐	☐	☐
Had conversations with students who are very different to you in terms of their religious beliefs, political opinions or personal values	☐	☐	☐	☐

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

	Very little	Some	Quite a bit	Very much
Memorising facts, ideas or methods from your subjects and readings	☐	☐	☐	☐
Analysing the basic elements of an idea, experience or theory, such as examining a particular case or situation in depth and considering its components	☐	☐	☐	☐
Synthesising and organising ideas, information or experiences into new, more complex interpretations and relationships	☐	☐	☐	☐
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	☐	☐	☐	☐
Applying theories or concepts to practical problems or in new situations	☐	☐	☐	☐

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	☐	☐	☐	☐	☐
Number of pieces of work that take **more than one hour** to complete	☐	☐	☐	☐	☐

♠

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	☐	☐	☐	☐	☐
Number of books read on your own (not assigned) for personal enjoyment or academic enrichment	☐	☐	☐	☐	☐
Number of written assignments of **fewer than 1,000 words**	☐	☐	☐	☐	☐
Number of written assignments of **between 1,000 and 5,000 words**	☐	☐	☐	☐	☐
Number of written assignments of **more than 5,000 words**	☐	☐	☐	☐	☐

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 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 Very much

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

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

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	☐	☐	☐	☐	☐
Industry placement or work experience	☐	☐	☐	☐	☐
Community service or volunteer work	☐	☐	☐	☐	☐
Participate in a study group or learning community	☐	☐	☐	☐	☐
Work on a research project with a staff member outside of coursework requirements	☐	☐	☐	☐	☐
Study a foreign language	☐	☐	☐	☐	☐
Study abroad or student exchange	☐	☐	☐	☐	☐
Culminating final-year experience (e.g. honours thesis, capstone project, comprehensive exam, etc.)	☐	☐	☐	☐	☐
Independent study or self-designed major	☐	☐	☐	☐	☐
Consult a university careers service for advice	☐	☐	☐	☐	☐
Hold a leadership position in a university group or the community	☐	☐	☐	☐	☐

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 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 Friendly, supportive, sense of belonging

Relationships with **teaching staff**

Unavailable, unhelpful, unsympathetic ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 Available, helpful, sympathetic

Relationships with **administrative personnel and services**

Unhelpful, inconsiderate, rigid ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 Helpful, considerate, flexible

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 **If you are working for pay, how much is this work related to your field of study?**

☐ Not at all ☐ Very little ☐ Some ☐ Quite a bit ☐ Very much ☐ Not in paid work

11 **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	☐	☐	☐	☐
Providing the support you need to help you succeed academically	☐	☐	☐	☐
Encouraging contact among students from different economic, social and ethnic backgrounds	☐	☐	☐	☐
Helping you cope with your non-academic responsibilities (e.g. work, family, etc.)	☐	☐	☐	☐
Providing the support you need to socialise	☐	☐	☐	☐
Attending campus events and activities (e.g. special speakers, cultural performances, sporting events, etc.)	☐	☐	☐	☐
Using computers in academic work	☐	☐	☐	☐

12 **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	☐	☐	☐	☐
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	☐	☐	☐	☐
Voting informedly in local, state or national elections	☐	☐	☐	☐
Learning effectively on your own	☐	☐	☐	☐
Understanding yourself	☐	☐	☐	☐
Understanding people of other racial and ethnic backgrounds	☐	☐	☐	☐
Solving complex, real-world problems	☐	☐	☐	☐
Developing a personal code of values and ethics	☐	☐	☐	☐
Contributing to the welfare of your community	☐	☐	☐	☐
Securing relevant work after graduation	☐	☐	☐	☐

13 **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 academic reasons
☐ Yes, for another reason, please specify:
☐ Yes, for convenience or practical reasons
☐ Yes, for financial reasons or to reduce study costs
☐ Yes, to obtain better quality education

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

☐ Continue with current study
☐ Move to vocational education and training
☐ Change to another qualification
☐ Shift to another university
☐ Leave university before finishing qualification
☐ Leave university having completed qualification

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

☐ Poor ☐ Fair ☐ Good ☐ Excellent

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

☐ Poor ☐ Fair ☐ Good ☐ Excellent

17 **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

18 **Are you male or female?**

☐ Male ☐ Female

♣

19 **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
☐	☐	☐

20 **In what year did you first start university?**

Before 2005	2005	2006	2007	2008	2009
☐	☐	☐	☐	☐	☐

21 **How many years of your qualification have you completed?**

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

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

Part time	Full time
☐	☐

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

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

25 **Do you have a government funded university place (e.g. HECS, CSP, NZ Student Loan Scheme)?** ☐ No ☐ Yes

26 **In the current academic year, have you received any direct financial payments from the government?** ☐ No ☐ Yes

27 **Which category best represents your average overall grade so far?**

No results	0-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85-89	90-94	95-100
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

28 **Are you a permanent resident or citizen of either Australia or New Zealand?** ☐ No ☐ Yes

29 **What is your country of permanent residence?**

30 **What is the main language you speak in your home?** ☐ English ☐ Language other than English

31 **What is the highest level of education completed by your parents? Mark one box per row.**

	No school or primary school	Some or all of secondary school	Vocational certificate or diploma	Under-graduate university degree or diploma	Post-graduate university degree or diploma	Not sure
Father	☐	☐	☐	☐	☐	☐
Mother	☐	☐	☐	☐	☐	☐

32 **What is your home postcode and locality/ suburb? Write postcode opposite and locality/suburb below.**

33 **Are you of Aboriginal or Torres Strait Islander origin?** ☐ No ☐ Yes

34 **Are you of Māori descent?** ☐ No ☐ Yes

35 **Are you of Pasifika (Pacific Island) descent?** ☐ No ☐ Yes

36 **How old are you in years?**

37 **Do you consider yourself to have a disability, impairment or long-term condition?** ☐ No ☐ Yes

38 **How much of your study do you do online?**

None	About a quarter	About half	All or nearly all
☐	☐	☐	☐

39 **Which of the following describes your current living arrangement? Select the option that best applies to you.**

- On campus in a university college or hall of residence ☐
- Off campus student accommodation ☐
- Living with friends or in a share house ☐
- Living with parents or guardians ☐
- Living by yourself ☐
- Living with a partner or children ☐
- Other ☐

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

41 **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, SSES and POSSE participation 2007–2010

Institution	Country	AUSSE				SSES			POSSE	
		2007	2008	2009	2010	2008	2009	2010	2009	2010
Auckland University of Technology	NZ	■			■					
Australian Catholic University	AUS	■	■	■	■					
Australian National University	AUS	■		■						
Batchelor Institute of Indigenous Tertiary Education	AUS									
Bay of Plenty Polytechnic	NZ				■					
Bond University	AUS			■						
Box Hill Institute	AUS			■	■					
Charles Darwin University	AUS			■	■		■	■		■
Charles Sturt University	AUS	■	■	■	■					
Christchurch Polytechnic Institute of Technology	NZ				■					
CQUniversity	AUS	■	■	■		■	■			
Curtin University	AUS	■		■						
Deakin University	AUS		■	■	■					■
Edith Cowan University	AUS			■	■					
EIT	NZ				■					
Flinders University	AUS		■	■	■					
Griffith University	AUS	■	■	■						
Holmesglen TAFE	AUS				■			■		
James Cook University	AUS	■		■	■					
La Trobe University	AUS	■	■	■	■	■	■	■	■	■
Lincoln University	NZ			■						
Macquarie University	AUS	■	■	■	■	■				
Massey University	NZ	■	■	■	■					
Monash University	AUS				■					
Murdoch University	AUS	■	■	■	■					
Nelson Malborough Institute of Technology	NZ				■					
The Open Polytechnic of New Zealand	NZ				■					
Otago Polytechnic	NZ				■					
Queensland University of Technology	AUS		■	■	■	■	■	■		
RMIT University	AUS									
Southern Cross University	AUS	■	■	■		■	■			
Southern Institute of Technology	NZ				■					
Swinburne University of Technology	AUS		■		■					
Tabor College	AUS				■					
TAFE SA	AUS				■					
Unitec New Zealand	NZ	■	■		■			■		
Universal College of Learning	NZ				■					
University of Adelaide	AUS			■						
University of Auckland	NZ		■		■					■
University of Ballarat	AUS	■								
University of Canberra	AUS	■	■	■	■					
University of Canterbury	NZ	■	■	■	■					
University of Melbourne	AUS	■			■					
University of New England	AUS	■	■	■	■	■	■			
University of New South Wales	AUS				■					■

Institution	Country	AUSSE				SSES			POSSE	
		2007	2008	2009	2010	2008	2009	2010	2009	2010
University of Newcastle	AUS	■	■	■	■	■	■			■
University of Notre Dame	AUS			■	■		■			■
University of Otago	NZ			■						
University of Queensland	AUS	■	■	■	■					
University of South Australia	AUS	■	■	■	■	■				
University of Southern Queensland	AUS		■	■	■				■	
University of Sydney	AUS									
University of Tasmania	AUS		■	■	■		■	■	■	■
University of Technology Sydney	AUS		■	■						
University of the Sunshine Coast	AUS	■		■						
University of Western Australia	AUS		■		■	■				
University of Western Sydney	AUS									
University of Wollongong	AUS		■	■	■					
Victoria University	AUS	■	■	■	■					
Victoria University of Wellington	NZ	■	■	■		■	■			
Waikato University	NZ		■		■			■		■
Waikato Institute of Technology	NZ				■					
Whitieria Community Polytechnic	NZ				■					

Appendix 3: AUSSE scales, measures and SEQ items

Table 7 and Table 8 provide descriptions of AUSSE engagement scales and outcome measures, and present their constituent items.

Table 7 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
	Discussed ideas from your readings or classes with others outside class
Student and Staff Interactions The level and nature of students' contact and interaction with teaching staff	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
	Worked with teaching staff on activities other than coursework
	Work on a research project with a staff member outside of coursework requirements
Enriching Educational Experiences Students' participation in broadening educational activities	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
	Providing support to socialise
Work Integrated Learning Integration of employment-focused work experiences into study	Blended academic learning with workplace experience
	Improved knowledge and skills that will contribute to your employability
	Developed communication skills relevant to your discipline
	Explored how to apply your learning in the workforce
	Industry placement or work experience
	Acquiring job-related or work-related knowledge and skills

Table 8 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
	Learning effectively on your own
General Development Outcomes Formation of general forms of individual and social development	Voting informedly in local, state or national elections
	Understanding yourself
	Understanding people of other racial and ethnic backgrounds
	Solving complex real-world problems
	Developing a personal code of values and ethics
	Contributing to the welfare of your community
Average Overall Grade Average overall grade so far in course	Which category best represents your average overall grade so far?
Departure Intention Non-graduating students' intentions on not returning to their institution the following year	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 4: AUSSE 2009 summary statistics

Table 9 and Table 10 provide summary statistics for the six AUSSE engagement scales. Table 11 and Table 12 provide summary statistics for the seven 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 9 AUSSE engagement scale student summary statistics

	First year			Later year			All students		
	X	M	SD	X	M	SD	X	M	SD
Academic Challenge	46.6	46.2	12.2	49.1	48.6	12.9	47.9	47.5	12.6
Active Learning	36.6	33.3	15.0	40.4	38.5	16.6	38.6	36.7	16.0
Student and Staff Interactions	20.5	21.4	11.4	25.3	22.6	16.5	23.0	20.4	15.8
Enriching Educational Experiences	22.9	21.4	17.1	26.8	24.8	14.0	25.0	23.4	13.0
Supportive Learning Environment	56.2	55.5	17.1	52.2	52.0	17.9	54.1	52.8	17.6
Work Integrated Learning	39.6	38.7	19.6	50.0	48.0	22.8	45.2	41.1	22.0

Table 10 AUSSE engagement scale benchmark percentiles

		0	10	20	30	40	50	60	70	80	90	100
First year	Academic Challenge	0.0	31.7	37.3	41.0	44.5	47.5	50.6	54.2	58.7	64.5	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	26.7	27.8	38.9	100.0
	Enriching Educational Experiences	0.0	9.5	13.5	16.3	19.0	21.4	24.2	27.8	31.7	38.5	100.0
	Supportive Learning Environment	0.0	33.3	41.7	47.2	52.8	55.6	61.1	63.9	69.4	77.8	100.0
	Work Integrated Learning	0.0	13.3	20.0	26.7	33.3	40.0	40.0	46.7	53.3	66.7	100.0
Later year	Academic Challenge	3.0	32.4	38.2	42.0	45.6	48.6	51.9	55.6	60.1	65.8	100.0
	Active Learning	0.0	19.0	27.8	33.3	33.3	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	33.3	38.9	50.0	100.0
	Enriching Educational Experiences	0.0	11.1	14.7	17.9	21.4	25.0	28.6	32.9	37.3	45.6	100.0
	Supportive Learning Environment	0.0	30.6	36.1	41.7	47.2	52.8	55.6	61.1	66.7	75.0	100.0
	Work Integrated Learning	0.0	20.0	26.7	33.3	40.0	46.7	53.3	60.0	73.3	80.0	100.0
All students	Academic Challenge	0.0	31.7	37.3	41.0	44.5	47.5	50.6	54.2	58.7	64.5	100.0
	Active Learning	0.0	19.0	23.8	28.6	33.3	38.1	42.9	47.6	52.4	61.9	100.0
	Student and Staff Interactions	0.0	5.6	11.1	11.1	16.7	22.2	22.2	27.8	33.3	44.4	100.0
	Enriching Educational Experiences	0.0	10.0	13.9	16.7	19.8	23.4	26.2	30.6	35.3	42.5	100.0
	Supportive Learning Environment	0.0	30.6	38.9	44.4	50.0	52.8	58.3	63.9	69.4	77.8	100.0
	Work Integrated Learning	0.0	20.0	26.7	33.3	40.0	40.0	46.7	53.3	66.7	73.3	100.0

Table 11 AUSSE outcome measure student summary statistics

	First year			Later year			All students		
	X	M	SD	X	M	SD	X	M	SD
Higher Order Thinking	63.8	64.0	21.0	66.7	66.7	21.3	65.4	65.5	21.2
General Learning Outcomes	61.0	62.6	18.6	65.0	66.7	19.0	63.1	64.1	18.9
General Development Outcomes	43.3	42.2	22.7	45.6	44.7	23.5	44.6	43.6	23.1
Career Readiness	34.0	31.7	23.6	40.8	38.1	24.4	37.6	35.2	24.3
Average Overall Grade	72.7	73.4	10.5	72.3	72.6	9.7	72.5	73.0	10.0
Departure Intention	30.1	30.1	45.9	29.9	29.9	45.8	30.0	30.0	45.8
Overall Satisfaction	71.3	66.8	19.8	66.1	66.7	22.7	68.5	66.7	21.6

Table 12 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	50.0	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	63.0	66.7	70.4	77.8	85.2	100.0
	General Development Outcomes	0.0	11.1	22.2	27.8	33.3	44.4	50.0	55.6	61.1	72.2	100.0
	Career Readiness	0.0	6.7	13.3	20.0	26.7	33.3	40.0	46.7	53.3	66.7	100.0
	Average Overall Grade	49.0	57.0	62.0	67.0	72.0	72.0	77.0	77.0	82.0	87.0	97.0
	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	66.7	66.7	75.0	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	16.7	22.2	33.3	38.9	44.4	50.0	55.6	66.7	77.8	100.0
	Career Readiness	0.0	6.7	20.0	26.7	33.3	40.0	46.7	53.3	60.0	73.3	100.0
	Average Overall Grade	49.0	57.0	62.0	67.0	72.0	72.0	77.0	77.0	82.0	87.0	97.0
	Departure Intention	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	58.3	58.3	66.7	66.7	75.0	83.3	100.0	100.0
	General Learning Outcomes	0.0	37.0	48.1	55.6	59.3	63.0	66.7	74.1	79.2	88.9	100.0
	General Development Outcomes	0.0	16.7	22.2	33.3	38.9	44.4	50.0	55.6	66.7	77.8	100.0
	Career Readiness	0.0	6.7	13.3	20.0	33.3	33.3	40.0	46.7	60.0	66.7	100.0
	Average Overall Grade	49.0	57.0	62.0	67.0	72.0	72.0	77.0	77.0	82.0	87.0	97.0
	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	55.6	66.7	66.7	77.8	77.8	88.9	100.0	100.0

Appendix 5: Summary statistics for key items

Table 13 to Table 18 report weighted percentages for the items included in the six AUSSE engagement scales. Table 19 to Table 25 report these statistics for the seven outcome measures. Australasian figures are given for first-year students, later-year students, and for all students.

Table 13 Academic Challenge item response category statistics

		First year	Later year	All
Worked harder than you thought you could to meet a teacher's standards or expectations	Never	16	12	14
	Sometimes	47	46	46
	Often	30	32	31
	Very often	7	10	9
	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	19	17	18
	Quite a bit	48	46	47
	Very much	31	36	34
	Total	100	100	100
Course work emphasised: **Synthesising** and organising ideas, information or experiences into new, more complex interpretations and relationships	Very little	5	5	5
	Some	31	27	29
	Quite a bit	43	43	43
	Very much	21	25	24
	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	6	6
	Some	31	28	29
	Quite a bit	42	41	41
	Very much	21	25	23
	Total	100	100	100
Course work emphasised: **Applying** theories or concepts to practical problems or in new situations	Very little	3	3	3
	Some	23	20	22
	Quite a bit	42	40	41
	Very much	31	36	34
	Total	100	100	100
Reading assigned textbooks, books or book-length packs of subject readings	None	3	4	4
	1 to 4	41	43	42
	5 to 10	37	31	34
	11 to 20	12	12	12
	More than 20	7	10	9
	Total	100	100	100
Number of written assignments fewer than 1,000 words	None	20	29	25
	1 to 4	57	48	52
	5 to 10	17	16	16
	11 to 20	5	5	5
	More than 20	2	2	2
	Total	100	100	100
Number of written assignments between 1,000 and 5,000 words	None	11	6	8
	1 to 4	55	44	49
	5 to 10	29	36	36
	11 to 20	5	12	12
	More than 20	1	2	2
	Total	100	100	100
Number of written assignments more than 5,000 words	None	83	71	77
	1 to 4	14	24	19
	5 to 10	2	3	2
	11 to 20	1	1	1
	More than 20	0	1	1
	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	1
	1 to 5	33	32	32
	6 to 10	28	25	26
	11 to 15	16	15	15
	16 to 20	11	11	11
	21 to 25	6	6	6
	26 to 30	3	4	4
	Over 30	3	5	4
	Total	100	100	100
Institutional emphasis: Spending significant amounts of time studying and on academic work	Very little	2	3	2
	Some	19	21	20
	Quite a bit	50	48	49
	Very much	28	28	28
	Total	100	100	100

Table 14 Active Learning item response category statistics

		First year	Later year	All
Asked questions or contributed to discussions in class or online	Never	6	5	5
	Sometimes	47	42	44
	Often	32	33	32
	Very often	15	21	18
	Total	100	100	100
Made a class or online presentation	Never	29	17	23
	Sometimes	44	43	44
	Often	21	28	25
	Very often	6	12	9
	Total	100	100	100
Worked with other students on projects **during class**	Never	15	17	16
	Sometimes	37	36	37
	Often	35	32	33
	Very often	13	14	14
	Total	100	100	100
Worked with other students **outside class** to prepare assignments	Never	15	14	14
	Sometimes	37	36	37
	Often	35	33	34
	Very often	13	17	15
	Total	100	100	100
Tutored or taught other university students (paid or voluntary)	Never	78	71	74
	Sometimes	17	20	18
	Often	5	6	5
	Very often	1	3	2
	Total	100	100	100
Participated in a community-based project (e.g. volunteering) as part of your study	Never	80	67	73
	Sometimes	14	21	17
	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	43	41
	Often	36	34	35
	Very often	16	15	15
	Total	100	100	100

Table 15 Student and Staff Interactions item response category statistics

		First year	Later year	All
Discussed your grades or assignments with teaching staff	Never	38	27	32
	Sometimes	42	47	45
	Often	16	20	18
	Very often	4	6	5
	Total	100	100	100
Talked about your career plans with teaching staff or advisors	Never	60	46	53
	Sometimes	30	37	34
	Often	8	12	10
	Very often	2	4	3
	Total	100	100	100
Discussed ideas from your readings or classes with teaching staff outside class	Never	52	42	47
	Sometimes	38	44	41
	Often	8	11	10
	Very often	2	3	2
	Total	100	100	100
Received prompt written or oral feedback from teachers/tutors on your academic performance	Never	12	10	11
	Sometimes	47	48	48
	Often	33	34	34
	Very often	7	8	7
	Total	100	100	100
Worked with teaching staff on activities other than coursework (e.g. committees, orientation, student organisations, etc.)	Never	81	70	75
	Sometimes	14	21	17
	Often	4	7	6
	Very often	1	2	2
	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 16 Enriching Educational Experiences item response category statistics

		First year	Later year	All
Used an online learning system to discuss or complete an assignment	Never	24	21	23
	Sometimes	40	41	41
	Often	25	25	25
	Very often	10	12	12
	Total	100	100	100
Had conversations with students of a different ethnic group than your own	Never	8	10	9
	Sometimes	35	37	37
	Often	31	31	31
	Very often	25	22	24
	Total	100	100	100
Had conversations with students who are very different from you in terms of their religious beliefs, political opinions or personal values	Never	9	10	9
	Sometimes	37	40	39
	Often	31	31	31
	Very often	23	20	21
	Total	100	100	100
Practicum, internship, fieldwork or clinical placement	Not yet done	92	72	81
	Done	8	28	19
	Total	100	100	100
Community service or volunteer work	Not yet done	85	73	79
	Done	15	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	84	85
	Done	14	16	15
	Total	100	100	100
Study abroad or student exchange	Not yet done	97	92	95
	Done	3	8	5
	Total	100	100	100
Culminating final-year experience (e.g. honours thesis, comprehensive exam, etc.)	Not yet done	100	97	98
	Done	0	3	2
	Total	100	100	100
Independent study or self-designed major	Not yet done	98	92	95
	Done	2	8	5
	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	39	40
	1 to 5	36	35	36
	6 to 10	14	15	14
	11 to 15	5	6	6
	16 to 20	2	3	3
	21 to 25	1	1	1
	26 to 30	0	0	0
	Over 30	0	0	0
	Total	100	100	100
Institutional emphasis: Encouraging contact among students from different economic, social or ethnic backgrounds	Very little	19	27	23
	Some	37	38	38
	Quite a bit	29	25	27
	Very much	14	10	12
	Total	100	100	100

Table 17 Supportive Learning Environment item response category statistics

		First year	Later year	All
Quality: Relationships with other students	1 Unfriendly, unsupportive, sense of alienation	1	1	1
	2	3	3	3
	3	6	6	6
	4	14	16	15
	5	22	23	22
	6	27	25	26
	7 Friendly, supportive, sense of belonging	27	26	27
	Total	100	100	100
Quality: Relationships with teaching staff	1 Unavailable, unhelpful, unsympathetic	1	1	1
	2	3	4	3
	3	7	8	8
	4	21	18	19
	5	29	27	28
	6	24	23	24
	7 Available, helpful, sympathetic	16	18	17
	Total	100	100	100
Quality: Relationships with administrative personnel and services	1 Unhelpful, inconsiderate, rigid	1	3	2
	2	4	7	6
	3	12	11	11
	4	26	25	26
	5	25	24	25
	6	18	17	18
	7 Helpful, considerate, flexible	13	13	13
	Total	100	100	100
Institutional emphasis: Providing the support you need to help you succeed academically	Very little	3	7	5
	Some	26	34	30
	Quite a bit	48	43	45
	Very much	23	16	19
	Total	100	100	100
Institutional emphasis: Helping you cope with your non-academic responsibilities (e.g. work, family, etc.)	Very little	36	47	25
	Some	41	36	43
	Quite a bit	18	13	25
	Very much	5	4	7
	Total	100	100	100
Institutional emphasis: Providing the support you need to socialise	Very little	25	36	31
	Some	43	41	42
	Quite a bit	25	18	21
	Very much	7	5	6
	Total	100	100	100

Table 18 Work Integrated Learning item response category statistics

		First year	Later year	All
Blended academic learning with workplace experience	Never	43	25	33
	Sometimes	34	35	34
	Often	17	26	22
	Very often	7	15	11
	Total	100	100	100
Developed communication skills relevant to your discipline	Never	7	5	6
	Sometimes	37	33	35
	Often	42	43	42
	Very often	14	18	16
	Total	100	100	100
Improved knowledge and skills that will contribute to your employability	Never	8	6	7
	Sometimes	36	33	35
	Often	39	42	41
	Very often	16	19	18
	Total	100	100	100
Explored how to apply your learning in the workforce	Never	20	13	16
	Sometimes	41	37	39
	Often	28	34	31
	Very often	11	16	14
	Total	100	100	100
Industry placement or work experience	Not yet done	89	70	79
	Done	11	30	21
	Total	100	100	100
Acquiring job-related or work-related knowledge and skills	Very little	8	6	7
	Some	27	22	24
	Quite a bit	40	40	40
	Very much	25	32	29
	Total	100	100	100

Table 19 Higher Order Thinking item response category statistics

		First year	Later year	All
Analysing basic elements of an idea	Very little	2	2	2
	Some	19	17	18
	Quite a bit	48	46	47
	Very much	31	36	34
	Total	100	100	100
Synthesising and organising ideas	Very little	5	5	5
	Some	31	27	29
	Quite a bit	43	43	43
	Very much	21	25	24
	Total	100	100	100
Making judgements about value of information	Very little	7	6	6
	Some	31	28	29
	Quite a bit	42	41	41
	Very much	21	25	23
	Total	100	100	100
Applying theories or concepts	Very little	3	3	3
	Some	23	20	22
	Quite a bit	42	40	41
	Very much	31	36	34
	Total	100	100	100

Table 20 General Learning Outcomes item response category statistics

		First year	Later year	All
Acquiring a broad general education	Very little	3	3	3
	Some	24	22	23
	Quite a bit	51	47	49
	Very much	22	28	25
	Total	100	100	100
Acquiring job-related or work-related knowledge and skills	Very little	8	6	7
	Some	27	22	24
	Quite a bit	40	40	40
	Very much	25	32	29
	Total	100	100	100
Writing clearly and effectively	Very little	7	5	6
	Some	31	25	28
	Quite a bit	42	42	42
	Very much	20	28	24
	Total	100	100	100
Speaking clearly and effectively	Very little	14	10	12
	Some	37	30	33
	Quite a bit	35	39	37
	Very much	14	20	17
	Total	100	100	100
Thinking critically and analytically	Very little	2	2	2
	Some	17	15	16
	Quite a bit	47	44	45
	Very much	33	40	37
	Total	100	100	100
Analysing quantitative problems	Very little	7	5	6
	Some	28	25	26
	Quite a bit	43	43	43
	Very much	21	27	24
	Total	100	100	100
Using computing and information technology	Very little	9	6	7
	Some	26	24	25
	Quite a bit	37	38	38
	Very much	27	32	30
	Total	100	100	100
Working effectively with others	Very little	7	7	7
	Some	28	26	27
	Quite a bit	42	42	42
	Very much	23	25	24
	Total	100	100	100
Learning effectively on your own	Very little	4	5	5
	Some	25	21	23
	Quite a bit	45	43	44
	Very much	26	31	29
	Total	100	100	100

Table 21 General Development Outcomes item response category statistics

		First year	Later year	All
Voting informedly in local, state or national elections	Very little	64	60	62
	Some	22	23	23
	Quite a bit	10	12	11
	Very much	4	5	5
	Total	100	100	100
Understanding yourself	Very little	15	15	15
	Some	33	30	31
	Quite a bit	35	35	35
	Very much	16	20	18
	Total	100	100	100
Understanding people of other racial and ethnic backgrounds	Very little	18	17	17
	Some	34	34	34
	Quite a bit	32	31	32
	Very much	16	18	17
	Total	100	100	100
Solving complex real-world problems	Very little	11	9	10
	Some	34	32	33
	Quite a bit	38	39	38
	Very much	17	20	19
	Total	100	100	100
Developing a personal code of values and ethics	Very little	17	15	16
	Some	34	33	34
	Quite a bit	33	33	33
	Very much	16	18	17
	Total	100	100	100
Contributing to the welfare of your community	Very little	27	26	26
	Some	39	36	37
	Quite a bit	25	26	26
	Very much	9	12	11
	Total	100	100	100

Table 22 Career Readiness item response category statistics

		First year	Later year	All
Kept resume up-to-date	Never	43	35	39
	Sometimes	38	43	41
	Often	14	16	15
	Very often	5	6	5
	Total	100	100	100
Thought about how to present yourself to employers	Never	25	17	21
	Sometimes	44	42	43
	Often	23	29	26
	Very often	8	12	10
	Total	100	100	100
Explored where to look for jobs relevant to your interests	Never	27	17	21
	Sometimes	42	41	41
	Often	23	29	26
	Very often	9	13	11
	Total	100	100	100
Used networking to source information on job opportunities	Never	41	29	34
	Sometimes	36	40	38
	Often	17	22	20
	Very often	6	10	8
	Total	100	100	100
Set career development goals and plans	Never	29	20	24
	Sometimes	39	41	40
	Often	22	26	24
	Very often	10	13	12
	Total	100	100	100

Table 23 Average Overall Grade item response category statistics

		First year	Later year	All
Which category best represents your average overall grade so far?	No results	4	1	2
	0 to 49	2	1	1
	50 to 54	3	3	3
	55 to 59	6	7	6
	60 to 64	8	11	10
	65 to 69	14	17	15
	70 to 74	17	19	18
	75 to 79	19	19	19
	80 to 84	13	13	13
	85 to 89	8	7	8
	90 to 94	3	3	3
	95 to 100	1	0	1
	Total	100	100	100

Table 24 Departure Intention item response category statistics

		First year	Later year	All
Not considered change (reverse coded)	Yes	71	72	72
	No	29	28	28
	Total	100	100	100
Considered change to improve career prospects	Yes	8	8	8
	No	92	92	92
	Total	100	100	100
Considered change for convenience or practical reasons	Yes	10	7	9
	No	90	93	91
	Total	100	100	100
Considered change for financial reasons or to reduce study costs	Yes	7	7	7
	No	93	93	93
	Total	100	100	100
Considered change to obtain better quality education	Yes	5	7	6
	No	95	93	94
	Total	100	100	100
Considered change for academic reasons	Yes	8	8	8
	No	92	92	92
	Total	100	100	100
Considered change for other reasons	Yes	7	7	7
	No	93	93	93
	Total	100	100	100
Continue with current study (reverse coded)	Yes	91	67	78
	No	9	33	22
	Total	100	100	100
Move to vocational education and training	Yes	1	2	1
	No	99	98	99
	Total	100	100	100
Leave university before finishing qualification	Yes	2	1	1
	No	98	99	99
	Total	100	100	100

Table 25 Overall Satisfaction item response category statistics

		First year	Later year	All
Quality of academic advice received at institution	Poor	3	5	4
	Fair	19	24	22
	Good	54	51	52
	Excellent	24	20	22
	Total	100	100	100
Entire educational experience	Poor	2	4	3
	Fair	15	20	17
	Good	55	53	54
	Excellent	29	24	26
	Total	100	100	100
Attend same institution if starting over	Definitely no	2	4	3
	Probably no	9	15	12
	Probably yes	45	45	45
	Definitely yes	44	36	39
	Total	100	100	100

How can the academic program coordinators advance student engagement?

This AUSSE Enhancement Guide makes suggestions about how academic program coordinators can enhance student engagement.

AUSSE

You make student engagement happen

Academic program coordinators are a pivot point for successful student engagement. They have a definitive influence over how student engagement is integrated into program design, and how it is reflected in teaching practice. They influence how the program actively links its students to learning skills support, student services and the wider life of the university. They influence the development of policy and processes so that they promote high quality learning outcomes for their students.

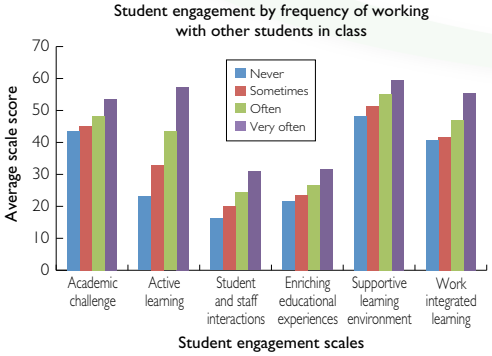
Put student engagement on the agenda when you review your program

Program and course or unit reviews are great opportunities for shaping curriculum in ways the promote student engagement. Because so much learning goes on outside the classroom, a key area for focus may well be to influence the kind of learning that takes place outside the lecture, the tutorial or the laboratory. The AUSSE measures the occurrence of this kind of learning in several ways. The results for Australian and New Zealand students generally are low. For example, later year US students are twice as likely as Australasian students to do community service or volunteer work. These activities can be built in to learning and assessment designs. Only a third of Australasian students – whether in first year or in later years – report that they frequently prepare drafts of assessments. Preparing drafts can be integrated into tutorial work and group work, or made the focus of undergraduate seminars.

Support sessional staff to work with student engagement principles

Tutorials and laboratory sessions often rely on sessional teachers who may have limited knowledge of the principles that underpin student engagement. Yet sessional teachers are the academic staff with whom most students have the greatest level of interaction. Program coordinators can ensure that induction and professional learning opportunities for sessional teachers include reference to student engagement research and to the way in which student engagement principles are embedded in unit learning and assessment designs. They can ensure that sessional staff are introduced to ideas about how to promote student engagement in small group learning environments.

Tutorials provide ideal opportunities for structured peer learning activities which have additional benefits beyond the tutorial. Properly managed, they can foster beyond-classroom study groups, friendships and informal networks by bringing together students who may not know each other. Both peer learning and connectedness increase student engagement. This is evident in the graph here which uses the Australasian data from the 2008 AUSSE to show the relationship between the frequency with which students work with others during class and student engagement outcomes.



Identify opportunities for staff-student interaction beyond the classroom

Creating opportunities for interaction between teachers and students is especially important for sustaining student engagement. Students value formal and informal interactions outside the classroom. Such interactions can reinforce motivation, a sense of purpose, a sense of connection. They contribute to student persistence and better academic performance.

Part of the challenge is to establish opportunities for frequent interaction with teachers. The evidence is that student-staff interactions have a significant impact on high quality learning. It is disconcerting that only one in five first year Australasian students, and one in four later year students, report meaningful and frequent interactions with teachers outside the classroom. Teachers see this differently. The Staff Student Engagement Survey – which investigates staff views on student engagement – shows that two in five staff believe they have meaningful and frequent interactions with students beyond the classroom. Exploring these perspectives with students and staff may clarify what is at the heart of such divergent views and provide a platform for insightful change.

The teaching-research nexus may be a fertile area for exploration. Only 2.2 per cent of Australasian first year students report working on a research project with a staff member outside coursework requirements. Is it possible to set a target for your program that would lift this to, say, 15 per cent? If there is no student organisation to which students in your program would readily belong – a microbiology students society or an international relations society – is it possible to actively support the establishment and maintenance of a student association? If there is such a society, how actively is it supported by teachers in your program, by the faculty, by student services? A student organisation may provide the structured opportunity for students to discuss research with academic staff, or to discuss their career aspirations.

About this guide

This AUSSE Enhancement Guide forms part of the suite of resources developed by ACER and the broader AUSSE community to enhance students' engagement in effective educational practices. Visit **www.acer.edu.au/ausse** for further information about the Australasian Survey of Student Engagement.

Australian Council *for* Educational Research

ACER

Enhancing engagement through institutional research

This AUSSE Enhancement Guide makes suggestions about how institutional researchers can support high quality learning outcomes and a positive student experience.

How can institutional researchers advance student engagement?

Institutional researchers play a vital role in analysing, interpreting and communicating AUSSE data. AUSSE results provide a variety of staff, and students, with a wealth of information. They can inform course reviews, support strategic analysis at the faculty and campus levels, and enrich reviews of support services offered by administrative divisions.

A considered approach to using AUSSE data ensures that the data and analyses are fully understood so that the greatest benefit from participating in the AUSSE is achieved. A considered approach includes reporting results to staff and to students, and on actions planned by the institution in response to survey outcomes.

Demystifying AUSSE data

Users of AUSSE data need clear information and advice about what the data and analysis does – and does not – tell them. Institutional researchers are key links between the Australian Council for Educational Research (ACER) and the institution. They can offer their colleagues a comprehensive understanding of the Student Engagement Questionnaire (SEQ). They can explain the methodologies used to develop the survey sample and to determine results.

Identifying and responding the data needs of different audiences

Reports and analyses based on AUSSE data need to be fashioned and presented so that they meet the needs and interests of different audiences. A summary university level report will offer a level of analysis and detail different to that provided for a course review. Similarly, a summary report for students of AUSSE findings and actions demands a particular focus.

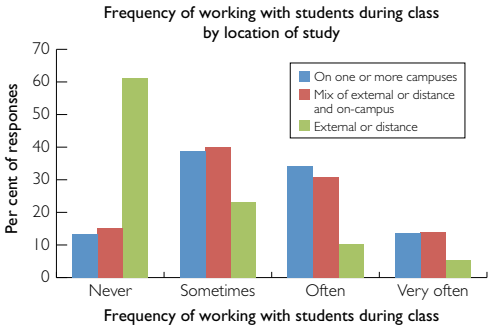
Responding to the specific needs of different audiences requires that summary tables and charts are supported by textual explanations to ensure understanding of what is being presented. Institutional researchers may provide support and advice to the interpretation of AUSSE data by: advising reference/steering groups; liaising with academic development units; contributing to resources developed to enhance the student experience.

Interpreting AUSSE data within an institutional context

Maximum benefit from AUSSE participation is gained through robust discussion of student engagement that is informed by AUSSE data analysed and interpreted within the context of an individual institution.

What is important to each institution at a point in time will depend on contextual factors relevant at that time. Interpretation of the data must recognise these contextual factors.

For example, some contexts may require careful interpretation of results for the SEQ item: 'Used an online learning system to discuss or complete an assignment'. If using such a system was a mandated requirement for all students at a particular institution, one would expect a high level of agreement with this item. Consider the SEQ item: 'Worked with other students on projects during class'. Results might be skewed at an institutional level by responses from a high proportion of students studying off campus. This graph illustrates this using data from the 2008 AUSSE.



Advanced analysis of student engagement data

Institutional researchers can support the nuanced application of AUSSE data in many ways:

- Benchmarking at the institution level, or at a lower level of disaggregation (faculty, school, course), depending on response rates and numbers of responses (see AUSSE Enhancement Guide on this topic).
- Linking with other data sets – the AUSSE data may be used to examine assertions made through analysing related data sets such as survey results, student load or enrolment patterns.
- Analysing AUSSE comments – two items in the AUSSE give respondents the opportunity to provide free form text comments. These items seek feedback about the 'best aspects' of the university's student engagement practices, and areas of potential 'improvement'. Perceived challenges in analysing qualitative comments should not deter universities from using these valuable sources of feedback on student engagement.

About this guide

This AUSSE Enhancement Guide forms part of the suite of resources developed by ACER and the broader AUSSE community to enhance students' engagement in effective educational practices. This guide was written by Scott Nichols, Head of the Planning Unit at Deakin University.
Visit **www.acer.edu.au/ausse** for further information about the Australasian Survey of Student Engagement.

Australian Council *for* Educational Research

How can the university's senior leaders advance student engagement?

This AUSSE Enhancement Guide makes suggestions about how those in institutional leadership positions can enhance student engagement.

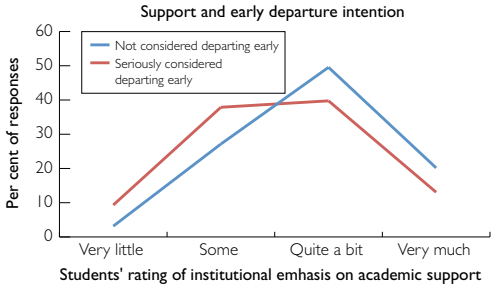
Student engagement is a strategic choice

Adopting student engagement as a primary attribute of a university is a strategic choice. It has significant influences on formulating and implementing strategy in many areas: curriculum design, resource allocation, structure of student services, teaching-research nexus, load planning, library services, industry and community engagement, among others.

Promoting values that support student engagement

Student engagement has institution-wide impacts. Advancing student engagement relies on your leadership. The manner in which the values and principles of student engagement are embodied in institutional practice must vary in response to the characteristics of the student body which differ from university to university, and from campus to campus. Leadership is always practiced in context – student engagement is all about context.

Student engagement research tells us students are more likely to persist, and to improve their academic performance, when the institution supports learning through enhanced and integrated relationships with peers, academics, student services and the broad intellectual and social domains of university life. This is highlighted by the graph below which uses Australasian data from the 2008 AUSSE to show the relationship between students' feelings of academic support and whether they have considered departing university. These kinds of relationships prosper when the institution privileges values that focus on the pursuit of high quality learning. University leaders have a central role in promoting those values and embedding them in practice.



The *2008 Australasian Student Engagement Report* discusses the role that university culture has in promoting student engagement. Using Graham Little's typology of four university learning climates (see Little's book, *Faces on Campus*, 1975), the report distinguishes the characteristics of each learning climate through the prism of the AUSSE data. Cultivating climates build student engagement. Neglecting, training and indulging climates diminish student engagement. Leaders are best placed to assess what the prevailing values of the institution are, and what the consistency of value sets is across the institution. Leaders are best placed to prompt necessary changes in policy and practice so that the predominant values are those that produce a cultivating climate.

Using AUSSE data to support evidence-based decision-making

The characteristics of any university's learning community are always evolving. The pace of evolution is likely to quicken. Many institutions are contemplating changes in the profile of their student bodies as expanded opportunities for access and participation inform policy objectives, funding models and institutional strategy. Changing student characteristics will require frequent review of student engagement practices to ensure that those practices continue to be responsive and constructive. For leaders, this means sensitising academic and professional staff to the need for ongoing change.

AUSSE data is a crucial input to effective review: it supports continuous improvement. Leaders can convey the importance of AUSSE data by referring to it in formal and informal contexts, by drawing on it as an aid in decision-making, by asking academic and professional staff to investigate it in support of their own decision-making, and in their monitoring and review processes.

Working across institutional boundaries

The nature of senior leadership roles in organisations as complex as universities inevitably involves boundary-spanning activity in pursuit of strategic objectives. Advancing student engagement requires just that: working across divisional and disciplinary boundaries and communicating direction. Good student engagement practice requires that academic and general staff take a joined-up approach to learning, student support and student services.

An example of this joined up approach can be found in the way that the university supports students to explore and define their career aspirations and options. Some 60.8 per cent of first year Australasian students, and 46.0 per cent of later year students, report never talking about their career plans with either teachers or advisors. This is despite the continuing emphasis on work integrated learning, rapidly changing employment roles and opportunities, and the longstanding role of universities in professional education.

In circumstances like these, university leaders are best-placed to explore what impediments there are to these discussions occurring, given that student engagement research underlines the importance of students interacting purposefully with teachers and professional staff on matters like their future careers. It is likely that the most productive response will range across matters like curriculum design, teaching practice, links between academic programs and careers and student advisers, support for student associations, and industry engagement.

About this guide

This AUSSE Enhancement Guide forms part of the suite of resources developed by ACER and the broader AUSSE community to enhance students' engagement in effective educational practices. Visit **www.acer.edu.au/ausse** for further information about the Australasian Survey of Student Engagement.

Australian Council *for* Educational Research

Appendix 7: 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 300 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.

acer.edu.au

Melbourne office
19 Prospect Hill Road (Private Bag 55)
Camberwell VIC 3124
Telephone +61 3 9277 5555
Facsimile +61 3 9277 5500

Sydney office
1/140 Bourke Road (PO Box 6483)
Alexandria NSW 2015
Telephone +61 2 8338 6800
Facsimile +61 2 9693 5844

ACN 004 398 145 ABN 19 004 398 145