Australasian Survey of Student Engagement

Institution Report

AUSSE

ACER

Introduction

Overview

This 2007 AUSSE Institution Report provides information for stimulating evidence-based conversations about the quality of student engagement in university education.

We present the AUSSE Institution Report in a ring binder because it brings together a range of different materials on student engagement. We hope that this collection grows as your conversations about engagement take shape.

The AUSSE is conducted by, for and with participating institutions. The intention is to provide institutions with new and significant perspectives for quality management and enhancement.

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Acknowledgements

A very warm thanks is offered to students who responded to the 2007 AUSSE. Student participation is critical for student engagement.

Engagement depends on institutions putting in place the conditions that facilitate people's involvement in education. A warm thanks also to those institutions that took part in the 2007 AUSSE.

The National Survey of Student Engagement (NSSE) team at Indiana University in the USA have played a highly supportive and significant role in the AUSSE. Particular thanks to Professor George Kuh, Dr Robert Gonyea, and Mr Todd Chamberlain. In addition to their more general guidance, items in questions 2 to 11 and 14 to 16 in the Student Engagement Questionnaire have been used with permission from The College Student Report, National Survey of Student Engagement, Copyright 2001–07 The Trustees of Indiana University.

The 2007 AUSSE is overseen by an Advisory Group. A special thanks is offered to Professor Tom Angelo (Victoria University of Wellington), Professor Sam Ball (Technical Adviser), Dr Marcia Devlin (University of Melbourne), Professor Martin Hayden (Southern Cross University), Professor Kerri-Lee Krause (Griffith University) and Professor Geoff Scott (University of Western Sydney).

Contact ACER

For further information about the AUSSE, please contact:

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Background

Overview of the AUSSE

The Australasian Survey of Student Engagement (AUSSE) is a new quality enhancement activity developed for Australasian higher education institutions by the Australian Council for Educational Research (ACER). By providing information that is generalisable and sensitive to institutional diversity, and with international points of reference, the AUSSE will play a very important role in helping institutions monitor and enhance the quality of education.

The AUSSE involves administration of the state-of-the-art Student Engagement Questionnaire (SEQ) to a representative sample of first-year and later-year students at each institution. With formative links to the 750 institution USA National Survey of Student Engagement (NSSE), the AUSSE provides data that complement and extend collections that focus on satisfaction with the quality of teaching and the learning environment. It thereby makes available to Australasian higher education institutions a new means for measuring and monitoring the effectiveness of learning and teaching.

The AUSSE was developed to bring together existing work in the field, and leverage benefits from a collaborative, multi-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 to get most value from reports, along with well-tested strategies for embedding results into practice.

Key AUSSE benefits

Several characteristics distinguish the AUSSE as a highly valuable quality enhancement activity in Australasian higher education:

Robust technical properties
- Psychometrically validated Student Engagement Questionnaire
- Efficient and robust sampling strategy
- High-quality analysis and reporting practices

Quality-assured approach
- Deploys one of the world's most advanced institutional research activities
- Central management and collaboration with institutions
- Standardised survey support materials
- Carefully designed survey administration strategy

Significant new perspectives
- Evidence on what students are actually doing (engagement behaviours)
- Highlights the most critical aspects of learning and development
- 'Learner-centred, whole-of-institution' perspective
- Index of students' involvement in study

New opportunities
- Cross-institutional benchmarking
- Cross-national comparison
- Data on the value-added by institutions to student learning
- Information for attracting, engaging and retaining students.

A fresh new perspective

'Student engagement' is an idea specifically focused on university students and their interactions with university. The idea touches on aspects of teaching, the broader student experience, respondents' lives beyond university, and institutional support. Students lie at the heart of such conversations, however, which focus squarely on enhancing individual learning and development.

Contemporary perspectives on student engagement define it as students' involvement with activities and conditions likely to generate high-quality learning. Fundamentally, engagement is based on the assumption 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 student involvement.

Knowing how students engage with their university and learning plays a critical role in improving the quality of education. AUSSE data:
- Provides real-time information on learning processes
- Offers the most reliable proxy measures of learning outcomes
- Provides excellent diagnostic measures for enhancement activities
- Helps identify how to attract and, importantly, retain students
- Can be benchmarked against international and institutional points of reference
- Highlights the value added by a university experience
- Helps manage resources, and monitor programs and services

Specific values of the AUSSE include:
- Psychometrically validated instrument
- Efficient and robust sampling strategy
- Quality-assured survey methodology
- High-quality analysis and reporting practices
- Collaborative research and enhancement approach

AUSSE 2007 institutions

In total, 25 higher education institutions participated in the 2007 AUSSE – more than half of the universities in Australia and New Zealand. Two further institutions assisted with a pilot test but did not take part in the cross-institutional administration. The 25 Australian and New Zealand institutions that participated in the cross-institutional administration are shown in the following table.

Australian institutions
Australian Catholic University
Australian National University
Central Queensland University
Charles Sturt University
Curtin University of Technology
Griffith University
James Cook University
La Trobe University
Macquarie University
Murdoch University
Southern Cross University
University of Ballarat
University of Canberra
University of Melbourne
University of New England
University of Newcastle
University of Queensland
University of South Australia
University of the Sunshine Coast
Victoria University

New Zealand institutions
Auckland University of Technology
Massey University
UNITEC New Zealand
University of Canterbury
Victoria University of Wellington

Review of this list indicates that it covers the range of each country's higher education providers. This is important, as it facilitates the production of meaningful benchmarks and provides a solid foundation for cross-institutional conversations.

Student Engagement Questionnaire

The AUSSE instrument is called the Student Engagement Questionnaire (SEQ).

The SEQ is based on the College Student Report, the instrument used in the USA NSSE. Psychometric links between the two instruments provide a basis for benchmarking.

While the College Student Report has been administered at over 1,200 higher education institutions, the SEQ has been administered in Australasia for the first time in 2007.

The SEQ is designed for administration to undergraduate students in under 15 minutes in online or paper form. The same SEQ form is used for students from all backgrounds and courses.

The SEQ is designed to measure six scales. The following scales offer summary measures of students' interactions with university.

Active Learning — students' efforts to actively construct their knowledge

Academic Challenge — extent to which expectations and assessments challenge students to learn

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.

ACER further developed and validated the College Student Report before deploying it in Australia and New Zealand as the Student Engagement Questionnaire. A range of new and redesigned items were included. Validation included 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 in the USA of the College Student Report, the instrument used in the NSSE.

A critical feature of the SEQ is its foundation in empirically based theories of student learning. Items in the SEQ are based on findings from decades of research on the activities and conditions linked with high-quality learning. This foundation helps assure the educational significance of the phenomena measured by the instrument.

Like the phenomenon of student engagement itself, the SEQ will grow with further development of the AUSSE. Growth of the instrument depends on evidence of the kinds of engagement that are linked with high-quality learning outcomes. The format of the instrument will also continue to change, with the anticipated introduction of item sampling and other state-of-the-art techniques.

Research and enhancement process

The AUSSE survey methodology is designed to be valid, efficient and innovative. It deploys approaches which hitherto have been rarely, if ever, used in Australasian higher education.

The AUSSE reflects a collaboration between participating institutions and ACER. While largely centrally managed by ACER, key activities are conducted by institutions.

Preparation for the AUSSE is led by ACER. It involves refining instruments and systems, securing any necessary approvals, liaison 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[1] and the Australian Council for Educational Research 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 any internal human research ethics or other approvals.

AUSSE fieldwork is designed to be efficient and 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 August to mid October, identified materials are sent from institutions to students and completed responses are returned directly to ACER. ACER prepares and analyses the AUSSE data, and produces the institutional and cross-institutional reports.

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[1] National Health and Medical Research Council, Australian Research Council, Australian Vice-Chancellors' Committee (NHMRC, ARC, AVCC) (2007). *National Statement on Ethical Conduct in Human Research*. Canberra: Australian Government.

Interpreting, analysing and acting on survey results is the most significant component of the AUSSE. This institution report provides an overview of 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.

A valid and efficient sample

Rather than a census of all students, an efficient and robust sampling strategy is used to identify students who will be invited to take part in the AUSSE. A stratified systematic sampling strategy is deployed to produce powerful, generalisable and representative estimates of first-year and later-year student engagement.

The sampling strategy is important, as it reduces the number of students that need to be approached, and builds-in control over the quality of results. Oversampling is used to reduce the need for complex follow-up. Post-stratification weighting is used to ensure that responses represent the target population. As possible given available information, these weights account for year level, attendance type, and respondent sex.

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 sample verification process, and the conversations that surround it, is a major form of quality assurance in the survey design and fieldwork. In 2007 it prevented major administrative errors at many participating institutions.

A total of 67,379 students at 25 institutions were invited to take part in the 2007 AUSSE. Around 310 mail surveys were undeliverable and returned to ACER. Feedback from institutions suggests that an average of 50 emails per institution (approximately 1,250 total) were undeliverable. Assuming some overlap in these distributions, the target population was more likely to be around 66,000. A link to the online survey form was sent to all students. A total of 20,000 students were also sent a paper survey form.

A total of 9,585 responses were received prior to production of the final data file. This included 2,463 paper and 7,122 online responses. The sample design included a target response rate of 25.0 per cent. The secured response rate, not adjusted for undeliverable contacts, was 14.2 per cent. The response rate varied from around 7.5 per cent at two institutions to 28.3 per cent at one institution, with a mean rate of 13.9. Other survey activities underway at most

institutions at the same time as the AUSSE most likely account for this low rate of response. Demographic and course information for responding students is presented in the respondent characteristics report.

As with all large-scale surveys, the AUSSE offers indicative rather than definitive evidence of the phenomena being measured. Results should be treated with caution, especially when respondent sample sizes are small.

Evidence for enhancement

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

The AUSSE Institution Report presents a range of resources and ideas to help institutions make the most use of their AUSSE data and results. It includes information about the AUSSE data, reports and resources, and about how to use this emerging source of information for institutional, cross-institutional and cross-national conversations about the nature and quality of university education.

AUSSE team and resources

A team of research and support staff manage the AUSSE at the Australian Council for Educational Research (ACER). Dr Hamish Coates is the AUSSE Project Director. The 2007 AUSSE team includes Ms Kylie Hillman, Ms Deirdre Jackson, Mr Ling Tan, Dr Alisdair Daws, Mr David Rainsford and Mr Martin Murphy.

Please make contact with the ACER team if you would like further information about the AUSSE. The team can be contacted at ausse@acer.edu.au or +61 3 9835 7487. Information is available at www.acer.edu.au/ausse. The postal address is: AUSSE, ACER, Private Bag 55, Camberwell, Victoria, 3124, Australia.

This AUSSE Institution Report forms part of a suite of AUSSE resources. Other key resources include the AUSSE Institution Administration Manual and the AUSSE website (www.acer.edu.au/ausse).

Reports

It is critical that the AUSSE results are interpreted in technically and educationally appropriate ways. As necessary, the AUSSE makes use of weights to help ensure the representativeness of sample estimates. These weights adjust, as appropriate given data constraints, for year level, attendance type and respondent sex. The following reports summarise different aspects of students' perceptions of their engagement with university education.

Respondent characteristics	Summary information on response, student and course characteristics.
Frequency distributions	The raw and weighted number and weighted per cent of responses to response categories of all survey items on the Student Engagement Questionnaire (SEQ). Results are provided for first-year and later-year students at your institution, and for several comparison groups.
Item statistics	Statistics that summarise item results, including tables of weighted means, standard deviations and counts. Results are provided for first-year and later-year students at your institution, and for several comparison groups. Includes summary effect-size statistics.
Scale statistics	Statistics that summarise scale results, including tables of weighted means, standard deviations and counts. Results are provided for first-year and later-year students at your institution, and for several comparison groups. Includes summary effect-size statistics.
Subgroup statistics	Summary AUSSE scale statistics for key student subgroups.

This selection of reports presents key survey results. AUSSE data can be analysed and reported in many different ways. Data files are provided to institutions to facilitate further analysis and reporting.

It is important to note that the 2007 AUSSE has been designed to provide results that represent the engagement of first-year and later-year students. While results for subgroups are presented, they are not as reliable as the year level estimates and should be treated with caution.

Australasian University

Respondent Characteristics Report
November 2007

This report provides summary information on selected response, student and course characteristics.

Results are provided for your institution (the column titled INST), and for all Australian (AUS), New Zealand (NZ) and Australasian (AUSTL) institutions.

Results are given for first-year and later-year students, and for all students combined.

Information on response characteristics includes the actual sample size, the target response sample and the secured response sample. The target sample is smaller than the actual sample due to oversampling.

	First-year students								Later-year students								All students				
	INST		AUS		NZ		AUSTL		INST		AUS		NZ		AUSTL		INST		AUS		NZ
	r	%	r	%	r	%	r	%	r	%	r	%	r	%	r	%	r	%	r	%	r
Response characteristics																					
Actual sample	1300		25754		8266		34020		1300		24145		9214		33359		2600		49899		17480
Target response sample	325	25	6439	25	2066	25	8505	25	325	25	6036	25	2303	25	8340	25	650	25	12475	25	4370
Secured response sample	400	31	2944	11	1257	15	4201	12	400	31	3661	15	1723	19	5384	16	800	31	6605	13	2980
Student characteristics																					
Age																					
Under 20	250	65	1718	61	812	72	2530	65	14	4	93	3	68	5	161	4	264	38	1811	31	880
20 or over	132	35	1077	39	315	28	1392	35	308	96	2892	97	1219	95	4111	96	440	63	3969	69	1534
Gender																					
Male	171	45	1195	43	424	38	1619	41	126	39	1348	45	477	37	1825	43	297	42	2543	44	901
Female	209	55	1610	57	702	62	2312	59	198	61	1649	55	808	63	2457	57	407	58	3259	56	1510
Permanent resident or citizen of Australia																					
Yes	270	72	2685	96	64	6	2749	70	219	68	2737	92	76	6	2813	66	489	70	5422	94	140
No	107	28	118	4	1051	94	1169	30	105	32	248	8	1195	94	1443	34	212	30	366	6	2246
Aboriginal or Torres Strait Islander																					
Yes	4	1	32	1	2	0	34	1	2	1	40	1			40	1	6	1	72	1	2
No	371	99	2751	99	1107	100	3858	99	319	99	2925	99	1259	100	4184	99	690	99	5676	99	2366

Statistics reported for each characteristic include the number (r) of responses and the percentage (%) of responses. Raw rather than weighted numbers are reported.

Australasian survey of student engagement

AUSSE

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Australasian University

Frequency distributions
November 2007

This report shows the distribution of students' responses to each item's response categories.

Results are provided for your institution (the column titled INST), and for all Australian (AUS), New Zealand (NZ), Australasian (AUSTL) and US and Canadian (USCA) institutions.

USCA figures are not available for all items.

Results are given for first-year and later-year students, and for all students combined.

AUSSE 2007 Response Category Report
Australasian University

Items are presented in the order in which they appear on the SEQ.

			First-year students										INST			
			INST			AUS		NZ		AUSTL		USCA		INST		
			r	n	%	n	%	n	%	n	%	r(K)	%	r	n	%	n
Asked questions in class or contributed to online discussions	Never		48	0.3	12	4.8	9	2.7	23	7.5	11	5	4	38	0.2	9	4
	Sometimes		206	1.3	51	28.3	50	5.8	51	34.1	50	56	39	164	0.9	42	26
	Often		104	0.7	28	16.4	29	2.1	19	18.6	27	53	35	122	0.6	30	17
	Very often		40	0.2	9	7.1	13	0.8	7	8.0	12	35	22	73	0.4	20	10
		Total	398	2.6	100	56.7	100	11.5	100	68.2	100	149	100	397	2.1	100	58
Sought advice from academic staff	Never		41	0.2	9	5.8	10	1.6	14	7.4	11			24	0.1	6	4
	Sometimes		242	1.6	63	33.4	59	6.8	59	40.2	59			193	1.0	48	29
	Often		94	0.6	22	14.4	25	2.6	23	17.1	25			132	0.7	34	17
	Very often		22	0.1	6	3.1	5	0.5	4	3.6	5			49	0.3	12	6
		Total	399	2.6	100	56.8	100	11.5	100	68.3	100			398	2.1	100	58
Made a class or online presentation	Never		135	0.9	35	16.6	29	4.9	43	21.5	32	20	16	71	0.4	17	9
	Sometimes		155	1.0	39	24.1	43	4.4	39	28.6	42	81	53	153	0.8	39	24
	Often		85	0.5	21	12.6	22	1.7	15	14.3	21	37	23	111	0.6	27	16
	Very often		23	0.1	6	3.1	6	0.4	4	3.5	5	11	7	61	0.4	17	7
		Total	398	2.6	100	56.5	100	11.5	100	68.0	100	149	100	396	2.1	100	58
Worked hard to master difficult content	Never		11	0.1	3	1.3	2	0.4	3	1.6	2			3	0.0	1	1
	Sometimes		110	0.6	24	15.8	28	3.8	33	19.6	29			114	0.6	29	15
	Often		196	1.3	51	27.9	50	5.5	48	33.4	49			177	0.9	45	27
	Very often		82	0.6	22	11.4	20	1.8	16	13.2	19			100	0.5	26	13
		Total	399	2.6	100	56.4	100	11.5	100	67.9	100			394	2.1	100	58

Australasian survey of student engagement

AUSSE

Statistics reported for each response category include the raw number (r) of responses, weighted number (n) of responses in thousands (e.g. 1.5 equals 1500 responses) and weighted percentage (%) of responses. Note that USCA raw (not weighted) numbers are also shown in thousands (r(K)) rather than units.

Australasian University

Item statistics report

November 2007

This report shows summary descriptive statistics for each item.

Item results are provided in separate tables for first-year and later-year students, and for all students combined.

USCA figures are not available for all items. Results are reported for items in which the wording of certain items has been changed slightly for the Australasian context. The USCA figures for 'all students' have been computed by ACER. NSSE does not report combined year figures due to differences between these cohorts.

Effect differences are also reported. These statistics report the standardised difference between your institution's results and results of various comparison groups. Generally, an effect size of 0.2 is considered 'small', an effect size of around 0.5 'medium' and an effect size above this 'large'. All but two items on the SEQ are positively worded, such that a negative result implies that your institution is lower than the comparative group and a positive result implies that your institution is higher than the comparative group. The interpretation should be reversed for the two negatively worded items: 'Come to class without completing readings or assignments' and 'Was unable to keep up to date with studies for work, personal or family reasons'.

Results are given for your institution (the column titled INST), and for all Australian (AUS), New Zealand (NZ), Australasian (AUSTL) and US and Canadian (USCA) institutions.
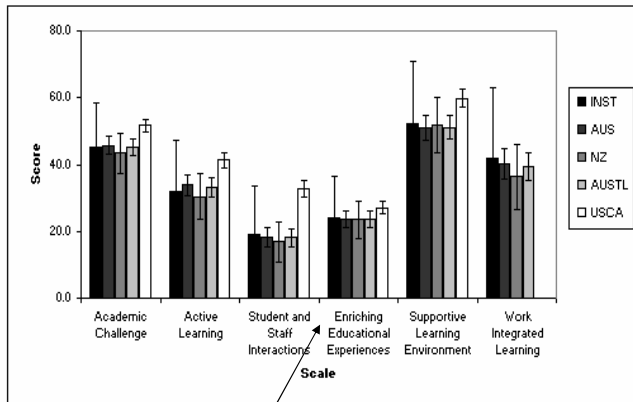
Items are presented in the order in which they appear on the SEQ.

The reporting metric for each item corresponds to the response scale, which is shown in the report.

AUSSE 2007 Item Descriptives Report
Australasian University
First Year Students

1=Never; 2=Sometimes; 3=Often; 4=Very often

	INST			AUS			NZ			AUSTL			USCA			Effect differences				
	X	s	n	X	s	n	X	s	n	X	s	n	X	s	r(K)	LY	AUS	NZ	AUST	USCA
Asked questions	2.3	0.8	2.6	2.5	0.8	56.7	2.1	0.8	11.5	2.4	0.8	68.2	2.7	0.8	149.1	-0.3	-0.1	0.3	-0.1	-0.5
Sought advice from academic staff	2.2	0.7	2.6	2.3	0.7	56.8	2.2	0.7	11.5	2.2	0.7	68.3				-0.4	0.0	0.1	0.0	
Made presentation	2.0	0.9	2.6	2.0	0.9	56.5	1.8	0.9	11.5	2.0	0.9	68.0	2.2	0.9	149.0	-0.5	-0.1	0.2	0.0	-0.3
Worked hard to master difficult content	2.9	0.8	2.6	2.9	0.7	56.4	2.8	0.7	11.5	2.9	0.7	67.9				0.0	0.1	0.2	0.1	
Prepared two or more drafts	2.3	1.0	2.6	2.2	1.0	56.8	2.3	1.0	11.5	2.3	1.0	68.3	2.6	1.0	149.0	-0.1	0.0	-0.1	0.0	-0.4
Used library resources on campus or online	3.1	0.9	2.6	3.2	0.9	56.7	3.0	0.9	11.5	3.2	0.9	68.2				-0.3	-0.1	0.1	-0.1	
Integrating from various sources	3.0	0.8	2.6	3.1	0.8	56.7	3.0	0.8	11.5	3.1	0.8	68.2	3.0	0.8	148.9	-0.5	-0.1	0.0	-0.1	0.0
Used student learning support services	1.8	0.9	2.6	1.9	0.9	56.7	1.6	0.9	11.5	1.9	0.9	68.3				0.0	-0.1	0.2	-0.1	
Blended academic learning with workplace experience	2.1	1.0	2.6	2.0	1.0	56.6	1.8	0.9	11.5	2.0	1.0	68.1				-0.2	0.1	0.3	0.1	
Included diverse perspectives	2.4	0.9	2.6	2.3	0.9	56.7	2.3	0.9	11.5	2.3	0.9	68.2	2.8	0.9	148.8	-0.1	0.0	0.1	0.0	-0.5
Not completing readings	2.0	0.8	2.6	2.1	0.8	56.7	2.1	0.8	11.5	2.1	0.8	68.2	2.0	0.8	148.8	-0.1	-0.1	-0.1	-0.1	0.0
Failed to keep up to date with study	1.9	0.8	2.6	2.0	0.8	56.7	1.9	0.8	11.5	2.0	0.8	68.2				-0.1	-0.2	0.0	-0.1	
Worked with students during class	2.1	0.8	2.6	2.2	0.8	56.7	2.1	0.8	11.5	2.2	0.8	68.2	2.4	0.8	148.9	-0.2	-0.1	0.0	-0.1	-0.4
Worked with students outside class	2.2	0.8	2.6	2.3	0.8	56.7	2.3	0.8	11.5	2.3	0.8	68.2	2.4	0.8	148.9	-0.3	-0.1	-0.1	-0.1	-0.2
Put together ideas or concepts	2.3	0.8	2.6	2.4	0.8	56.6	2.3	0.8	11.5	2.4	0.8	68.0	2.6	0.8	141.5	-0.4	-0.1	0.0	-0.1	-0.3
Tutored other students	1.3	0.6	2.6	1.2	0.5	56.7	1.3	0.6	11.5	1.2	0.6	68.3	0.7	0.8	141.6	-0.1	0.1	0.0	0.1	0.7
Participated in community-based project	1.2	0.6	2.6	1.3	0.7	56.7	1.2	0.5	11.5	1.3	0.6	68.2	1.5	0.8	141.5	-0.3	-0.1	0.1	-0.1	-0.4
Used an electronic medium for assignment	2.3	1.1	2.6	2.3	1.1	56.8	2.3	1.0	11.5	2.3	1.1	68.3	2.6	1.0	141.5	-0.1	0.1	0.0	0.1	-0.3
Used email to communicate with teaching staff	2.6	0.9	2.6	2.6	0.9	56.7	2.3	0.9	11.5	2.6	0.9	68.3	3.1	0.8	141.6	-0.4	-0.1	0.3	0.0	-0.6
Discussed grades with teaching staff	1.8	0.8	2.6	1.8	0.8	56.6	1.7	0.7	11.5	1.8	0.8	68.1	2.6	0.8	141.5	-0.2	0.0	0.2	0.0	-0.9
Talked about career plans	1.5	0.7	2.6	1.5	0.7	56.7	1.4	0.6	11.5	1.4	0.7	68.3	2.1	0.8	141.5	-0.3	0.0	0.1	0.0	-0.8
Discussed ideas from your classes with teaching staff	1.5	0.7	2.6	1.5	0.7	56.7	1.4	0.7	11.5	1.5	0.7	68.2	1.8	0.9	141.5	-0.1	0.1	0.1	0.1	-0.4
Received feedback on academic performance	2.4	0.8	2.6	2.3	0.8	56.1	2.3	0.8	11.3	2.3	0.8	67.4	2.6	0.8	139.1	-0.1	0.1	0.1	0.1	-0.3
Worked harder than you thought you could	2.3	0.8	2.6	2.3	0.8	56.1	2.2	0.8	11.2	2.2	0.8	67.3	2.6	0.8	139.1	-0.1	0.0	0.1	0.0	-0.4
Worked with teaching staff on other activities	1.2	0.5	2.6	1.2	0.5	55.9	1.2	0.5	11.2	1.2	0.5	67.2	1.6	0.8	139.0	-0.2	0.0	0.0	0.0	-0.5
Discussed ideas from your classes with others	2.6	0.8	2.6	2.6	0.8	56.1	2.7	0.9	11.2	2.6	0.9	67.3	2.7	0.9	139.0	-0.1	0.0	-0.1	0.0	-0.1
Conversations with students of different ethnic group	2.7	1.0	2.6	2.7	1.0	56.0	2.8	0.9	11.2	2.7	1.0	67.2	2.6	1.0	139.0	-0.1	0.0	-0.2	-0.1	0.1
Conversations with students who are very different	2.7	1.0	2.6	2.6	0.9	56.0	2.7	0.9	11.2	2.7	0.9	67.3	2.7	1.0	139.0	0.0	0.0	0.0	0.0	0.0

Statistics reported for each item include the weighted means (X), weighted standard deviations (s) and weighted response numbers (n) in thousands (e.g. n=1.5 equals 1500 responses). Please note that USCA raw (not weighted) numbers are also shown in thousands (r(K)) rather than units.

A large number of comparisons could be made between AUSSE items, and many different 'statistically significant differences' could be reported. Statistical significance is a function of sample size, the level of confidence required in an inference and variation in the phenomenon being measured. A four-point response scale is used for most items on the SEQ. The standard deviations of these average around 0.9 units on the four-point scale, implying that with a sample size of 10, a difference of 0.9 or more is likely to reflect a 'statistically significant difference' between two item means. The required difference falls to 0.4 with a sample size of 50, and 0.2 with a sample size of 200. Other SEQ items have between five and eight response categories, and the standard deviations for these lie around 1.3 units on the response scale. For these, a difference of 1.4 between items means is likely to be statistically significant with a sample size greater than 10, 0.6 with a sample size of around 50, and 0.3 with a sample size of 200.

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

Australasian survey of student engagement

AUSSE

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Scale statistics report

November 2007

Scale scores are calculated by converting item scores into a metric running from 0 to 100, then taking the mean of items within each scale. While not the most psychometrically rigorous approach, this scoring algorithm is transparent, parsimonious and facilitates reporting.

Scale results are provided in separate tables for first-year and later-year students, and for all students combined.

Results are provided for your institution (the column titled INST), and for all Australian (AUS), New Zealand (NZ), Australasian (AUSTL) and US and Canadian (USCA) institutions.

Please note that USCA raw (not weighted) numbers are also shown in thousands (r(K)) rather than units.

The USCA results reported in the 'all students' table have been computed by ACER. NSSE does not report combined year figures due to differences between these cohorts in the USA context. All AUSSE and NSSE scales contain the same items, except for the omission of a single item about independent study and self-designed majors, which was not included in the SEQ. Unlike NSSE, AUSSE Academic Challenge scale results are not adjusted for attendance type. No NSSE results are available for the Work Integrated Learning scale, which is unique to the AUSSE.

AUSSE 2007 Scale Descriptives Report
Australasian University
First Year Students

	INST			AUS			NZ			AUSTL			USCA			Effect differences				
	X	s	n	X	s	n	X	s	n	X	s	n	X	s	r(K)	LY	AUS	NZ	AUSTL	USCA
Academic Challenge	45.4	12.9	2.6	45.6	12.2	56.0	43.4	12.3	11.2	45.2	12.3	67.2	51.8	13.3	136.5	-0.3	0.0	0.2	0.0	-0.5
Active Learning	32.1	15.0	2.6	33.8	14.2	56.8	30.4	14.0	11.5	33.2	14.2	68.3	41.3	16.2	149.4	-0.5	-0.1	0.1	-0.1	-0.6
Student and Staff Interactions	19.1	14.3	2.6	18.4	13.5	56.2	16.9	12.2	11.3	18.1	13.3	67.4	32.8	17.8	138.3	-0.2	0.1	0.2	0.1	-0.8
Enriching Educational Experiences	23.8	12.1	2.6	23.6	11.8	55.5	23.5	11.3	10.9	23.5	11.8	66.4	27.1	13.1	133.1	-0.3	0.0	0.0	0.0	-0.2
Supportive Learning Environment	52.3	17.9	2.5	51.0	17.1	55.0	51.8	16.5	10.6	51.2	17.0	65.6	59.9	18.6	130.3	0.0	0.1	0.0	0.1	-0.4
Work Integrated Learning	41.7	20.8	2.6	40.1	21.0	55.5	36.3	19.6	10.9	39.5	20.9	66.3				-0.4	0.1	0.3	0.1	

A large number of comparisons could be made between AUSSE scales, and many different 'statistically significant differences' could be reported. Statistical significance is a function of sample size, the level of confidence required in an inference and variation in the phenomenon being measured. The standard deviations of these scales range from 10 to 20 on the reporting scale, with an average of 15. As a guide, a difference of around 15 or more would likely be statistically significant with a sample size of 10, a difference of 7 or more with a sample size of 50, a difference of 5 or more with a sample size of 100, and a difference of 3.5 or more with a sample size of 200.

Statistics reported for each scale include the weighted means (X), weighted standard deviations (s) and weighted response numbers (n) in thousands (e.g. n=1.5 equals 1500 responses).

The scale means are graphed with 95 per cent confidence intervals. These have been adjusted for the multiple comparisons made during interpretation of the graphical information.

Effect differences are also reported in both tabular and graphical format. These statistics report the standardised difference between your institution's results and results of various comparison groups. Generally, an effect size of 0.2 is considered 'small', an effect size of around 0.5 'medium' and an effect size above this 'large'. All AUSSE scales are positively worded, such that a negative result implies that your institution is lower than the comparative group and a positive result implies that your institution is higher than the comparative group.

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

Australasian survey of student engagement
AUSSE

Academic Challenge
- Worked harder than you thought you could to meet a teacher's standards or expectations
- 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
- Number of assigned textbooks, books or book-length packs of subject readings
- Number of written essays or reports of fewer than 1,000 words
- Number of written essays or reports of between 1,000 and 5,000 words
- Number of written essays or reports of more than 5,000 words
- Preparing for class (studying, reading, writing, doing homework or lab work, analysing data,
  rehearsing and other academic activities)
- Spending significant amounts of time studying and on academic work

Active Learning
- Asked questions in class or contributed to online discussions
- 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 (students, family
  members, co-workers, etc.)

Student and Staff Interactions
- 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 on your academic performance
- Worked with teaching staff on activities other than coursework (committees, orientation,
  student organisations, etc.)
- Work on a research project with a staff member outside of coursework requirements

Enriching Educational Experiences
- Used an electronic medium for assignment
- Conversations with students of different ethnic group
- Conversations with students who are very different
- Practicum/internship
- Community service
- Learning community/study group
- Foreign language
- Study abroad or student exchange
- Culminating final-year experience
- Participating in extracurricular activities
- Encouraging contact with people of different backgrounds
- Used an electronic medium for assignment

Supportive Learning
- Environment Relationships with other students
- Relationships with teaching staff
- Relationships with administrative personnel and offices
- Providing the support you need to help you succeed academically
- Helping you cope with your non-academic responsibilities (work, family, etc.)
- Providing the support you need to socialise

Work Integrated Learning
- Blended academic learning with workplace experience
- Improved knowledge and skills that will contribute to your employability
- Explored how to apply your learning in the workplace
- Industry placement or work experience
- Acquiring job or work-related knowledge and skills

AUSSE

Australasian
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Subgroup statistics report
November 2007

This report shows subgroup descriptive statistics for each of the AUSSE scales.

Results are shown for your institution (the column titled INST), and for all Australian (AUS), New Zealand (NZ) and Australasian (AUSTL) institutions.

Results for US and Canadian (USCA) institutions are not presented in this report.

Results are provided for first-year and later-year students, and for all students combined.

Statistics reported for each item and scale include the weighted means (X) and weighted standard deviations (s).

Statistics are reported for selected subgroups for each scale.

AUSSE 2007 Scale Subgroup Report
Australasian University

	First-year students								Later-year students								All students							
	INST		AUS		NZ		AUSTL		INST		AUS		NZ		AUSTL		INST		AUS		NZ		AUSTL	
	X	s	X	s	X	s	X	s	X	s	X	s	X	s	X	s	X	s	X	s	X	s	X	s
Academic Challenge																								
Age																								
Under 20	44.6	12.6	45.5	11.8	43.4	12.1	45.2	11.9	45.8	15.0	47.9	10.9	49.1	12.7	48.3	11.9	44.7	12.7	45.6	11.8	44.0	12.3	45.3	11.9
20 or over	47.1	12.1	46.0	12.0	43.8	12.7	45.7	12.0	49.2	12.3	48.0	12.2	47.8	12.6	47.9	12.1	48.4	12.6	47.4	12.2	47.0	12.7	47.3	12.1
Gender																								
Male	43.9	12.5	45.8	12.1	43.0	12.5	45.3	12.2	48.7	13.0	47.9	13.1	47.1	13.1	47.7	13.1	46.0	12.9	46.8	12.6	45.2	12.0	46.5	12.7
Female	46.0	12.9	45.7	12.3	44.0	12.0	45.4	12.3	49.1	12.3	48.0	12.2	48.5	12.2	48.1	13.0	47.3	12.7	46.8	12.3	46.5	12.3	46.7	12.7
Permanent resident or citizen of Australia																								
Yes	45.5	12.9	45.6	12.2	42.2	11.9	45.5	12.2	49.8	12.3	48.1	13.1	49.0	11.8	48.1	13.1	47.3	12.9	46.7	12.7	46.2	12.3	46.7	12.7
No	45.3	12.6	48.2	13.4	43.6	12.3	44.5	12.6	47.3	12.7	47.4	13.3	47.7	12.7	47.6	12.9	46.2	12.7	47.6	13.3	45.8	12.7	46.3	12.9
Aboriginal or Torres Strait Islander																								
Yes	50.7	13.3	45.2	11.9	40.0	6.0	45.1	11.8	49.7	13.3	49.1	13.1			49.1	13.1	50.4	13.3	47.0	12.6	40.0	6.0	46.9	12.6
No	45.7	12.7	45.7	12.2	43.5	12.2	45.4	12.2	48.9	12.5	47.9	13.2	47.7	12.6	47.9	13.0	47.1	12.7	46.8	12.7	45.8	12.6	46.6	12.7
Main language spoken at home																								
English	45.2	12.9	45.4	12.1	43.4	12.3	45.1	12.1	48.7	12.5	48.0	13.2	48.1	12.5	48.0	13.1	46.6	12.8	46.6	12.7	45.9	12.6	46.5	12.7
Language other than English	49.1	11.8	48.0	13.4	44.5	12.1	47.3	13.3	51.1	12.2	48.0	12.3	46.9	13.0	47.7	12.9	50.1	12.0	48.0	13.1	46.0	12.7	47.6	13.1
Attendance type																								
Full time	45.8	12.5	45.9	12.1	44.2	12.0	45.7	12.1	48.8	12.7	48.1	13.1	48.0	12.5	48.1	13.0	47.2	12.6	46.9	12.6	46.3	12.4	46.8	12.6
Part time	44.5	14.1	43.6	13.1	39.1	12.8	42.9	13.2	50.4	11.5	47.4	13.7	45.3	13.4	47.2	13.7	48.1	13.6	45.7	13.6	42.0	13.5	45.2	13.6
Proportion of study online																								
None	45.5	14.1	44.3	13.3	42.7	13.2	44.0	13.3	46.8	11.4	45.4	13.8	48.6	12.4	46.3	13.5	46.0	13.1	44.8	13.5	45.9	13.1	45.1	13.4
About a quarter	45.0	12.2	45.5	11.6	43.5	12.0	45.2	11.7	48.3	12.6	48.9	12.2	47.4	12.7	48.6	12.4	46.4	12.5	47.1	12.0	45.5	12.5	46.8	12.1
About half	45.7	11.9	46.9	11.8	45.3	13.3	46.7	11.7	49.7	12.6	48.3	13.4	46.8	11.9	48.0	13.2	47.5	12.4	47.6	12.6	46.2	11.5	47.4	12.5
All or nearly all	47.6	13.7	47.0	13.2	43.2	11.8	46.7	13.2	55.2	12.2	48.5	13.3	51.1	14.6	48.8	14.0	50.9	13.6	47.9	13.6	48.0	14.1	47.9	13.7
Location of study																								
External/distance	45.6	11.7	44.3	12.8	41.7	11.9	43.9	12.7	51.2	11.3	48.4	13.4	46.9	13.3	48.2	13.4	48.0	11.8	46.6	13.3	44.5	12.9	46.2	13.2
On one campus	45.5	12.9	45.7	12.3	43.3	12.2	45.4	12.3	48.9	12.7	48.0	13.1	47.5	12.4	47.9	13.0	47.0	12.9	46.8	12.7	45.6	12.5	46.6	12.7
On two campuses	47.8	12.5	46.1	13.3	47.8	12.6	46.4	11.2	46.8	10.0	46.4	13.2	50.8	12.8	47.9	13.2	47.3	11.3	46.2	12.0	49.7	12.8	47.2	12.4
On more than two campuses	31.3	9.2	53.7	14.7	58.3	3.6	54.2	14.0	24.0	0.0	48.4	11.6	52.0	13.5	49.1	13.7	30.2	8.3	50.5	13.2	53.4	13.4	51.0	14.0

Australasian survey of student engagement

AUSSE

Scale scores are calculated by taking the mean of items within a scale and converting these into a metric that runs from 0 to 100. While not the most psychometrically effective approach, this algorithm is transparent, parsimonious and facilitates reporting.

Enhancement

Developing insights into student engagement

Developing the AUSSE

Developing and validating the AUSSE and SEQ in 2007 has been the major means of enhancing conversations about student engagement in Australasian higher education. A overview of the process is given here, and further information will be provided in the Australasian Student Engagement Report.

A consultative and technically rigorous approach was used to develop and validate the SEQ. It involved conversations with many people, and psychometric testing and review. The work built on the considerable amount of validation undertaken in the USA.

The large number of institutions taking part in the inaugural 2007 administration necessitated development of an efficient and robust survey methodology. This offered a unique opportunity to build a sophisticated large-scale survey process incorporating a range of techniques not hitherto deployed in Australasian higher education.

The AUSSE survey process has been designed to be robust and efficient, and to produce reliable and valid results. The survey is managed by ACER, with institutions assisting with sampling and the distribution of materials. Technical procedures are used to ensure the quality of survey processes and hence the integrity of survey outcomes.

The centralised but collaborative nature of the survey process is its defining characteristic. All aspects of the survey process except survey engagement activities, constructing of the specified population list, and distribution of identified materials, were managed by ACER.

The AUSSE invites all Australian and New Zealand higher education institutions to share in developing a new perspective on the nature and quality of teaching, learning and student support. The aim is to enhance new conversations about students' engagement in university education.

The AUSSE methodology incorporates a continuous improvement process aimed at further enhancing the quality and efficiency of the survey process. Development of the AUSSE is ongoing. The AUSSE was initiated in 2007, stemming from conversations about student engagement in late 2006. ACER has developed and validated the AUSSE in 2007 in collaboration with participating institutions, and managed a large-scale cross-national administration.

ACER will continue to work with higher education institutions to develop the following resources:

- Student Engagement Questionnaire
- AUSSE Institution Administration Manual
- AUSSE Institution Report
- Enhancement resources and meetings
- Staff Survey of Student Engagement (based on the FSSE)
- A possible 'Subject Student Engagement Questionnaire'.

A formative review of the AUSSE will be conducted in late 2007. The review will invite people to provide feedback on the conduct and development of the AUSSE using an online survey and a range of follow-up conversations.

Analysing AUSSE quantitative data

The AUSSE Institution Report includes a file of each institution's own survey data. This standard AUSSE data file is provided in SPSS 14.0 format. The file includes codes and labels that institutions can use to further manage and analyse their own data. A syntax file is also provided to assist with preparation and analysis of the data.

The same file format is used for all institutions, and institutions can share and compile cross-institutional files at their own discretion. The file format mirrors that used by a large number of US and Canadian institutions, enabling benchmarking across these jurisdictions.

In future, ACER will calculate 'benchmark group' reports for institutions that identify themselves as being part of a group. Such groupings may reflect more formal classifications (such as the Group of Eight [Go8] or Australian Technology Network of Universities [ATN]), or they may be more ad hoc or engagement-specific in nature.

It is very important to weight the data (using the 'weight2' variable) before undertaking any statistical analyses. Please note that these weights are constructed to support institution-level analyses and reports. There may be a need to calculate further weights for specific analyses.

ACER offers a data analysis service and can assist institutions with their AUSSE data in greater detail. Please contact ACER for further information.

Analysing AUSSE qualitative data

By Geoff Scott

Overview of the software

The IT-enabled qualitative analysis tool, CEQuery, was developed and tested through a partnership of 10 Australian universities in 2003 and distributed free of charge, with a user manual and training, to all Australian universities in 2004 and 2005. The tool can effectively identify those components of university experience that students themselves see as most (or least) engaging them in productive learning, both at an overall institution level and for different fields of tertiary education. It can help produce a framework to enable the use of these findings to improve the quality of learning design, course delivery, student support and assessment in university learning programs along with their associated support services, administrative systems and infrastructure.

What the software delivers

CEQuery can be used to automatically classify respondent written comments provided on the SEQ into 5 main domains (Outcomes, Staff, Course Design, Assessment, and Support) and 26 sub-domains using a custom-tailored dictionary. Further, users can undertake a wide range of customised analyses against any of the variables gathered in the SEQ (university, field of education, qualification, fees, sex, age, mode and type of attendance, etc.), as well as SEQ quantitative results. There is also a custom search facility to be employed when a more detailed analysis of themes within a sub-domain is needed. Finally, the dictionary itself can be modified.

The following figure illustrates what the program delivers. In this example a small database of just over 16,000 responses to a question about which areas of institutional provision are 'most in need of improvement' have been scored. The screen shows the number of hits for each CEQuery domain. The following figure shows that the user left-clicks on the (blue) Staff bar, and a second (green) screen appears. This shows the hits for each sub-domain that constitute the count for the Staff domain. Clicking a particular green bar such as Teaching Skills would display the full set of comments that make up the count.
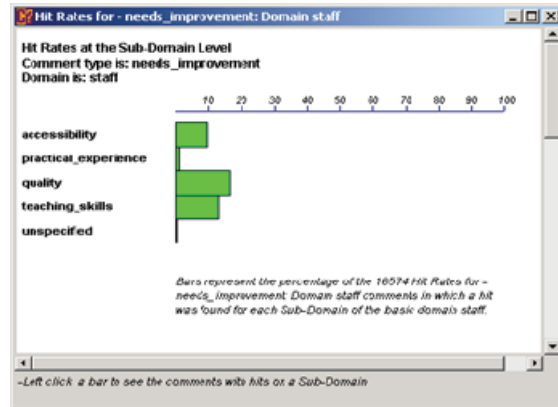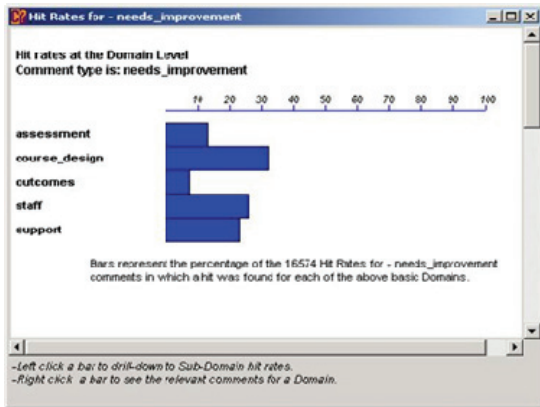
How the software works

CEQuery 'scores' comments by looking for key words or combinations of words from its dictionaries for each of the sub-domains that are in proximity to each other. When these are found, the relevant section of the comment is placed into the count for that sub-domain. This is called a 'hit'. This means that, when a comment covers more than one sub-domain, this overlap is picked up. In order to test the veracity of CEQuery's scoring, the analyst can click on the CEQuery results for any domain or sub-domain and the comments allocated to it are then presented for checking, with the dictionary words used to allocate them to that sub-domain highlighted.

Accessing the software

CEQuery is in routine use at most Australian universities. CEQuery is distributed by Graduate Careers Australia (GCA). For further information, please contact GCA on +61 3 8344 9333 or info@graduatecareers.com.au.

Stakeholder engagement meetings

The AUSSE offers an opportunity to stimulate new conversations about student engagement. These conversations focus on learners and their interactions with university.

Institutions are encouraged to hold internal meetings and workshops. These might bring together people from across an institution. These people are teaching, supporting students, developing policy and strategy, learning, managing staff and learning resources, and managing relationships with external stakeholders.

In the USA and Canada, communities of practice have developed to help people share insights and resources for enhancing student engagement. In 2008 ACER plans a series of multi-institutional meetings to stimulate these conversations by facilitating analysis and interpretation of AUSSE data, and identifying the best ways of using the data to enhance practice. Meetings will be planned around Australia and New Zealand.

The AUSSE is intended to provide a basis for publication and presentation of analyses within higher education communities more generally, at conferences, and in magazines and journals.

Learning more about student engagement

This AUSSE Institution Report offers a foundation for further inquiry into student engagement. A range of resources are available to learn more about relevant ideas and practices.

Most institutions in Australia and New Zealand have staff developing ideas and practices for enhancing student engagement in learning. Many such staff work in academic development units, planning offices, education faculties, student services, libraries, and online support areas.

Key websites include:
- www.acer.edu.au/ausse – Australasian Survey of Student Engagement (AUSSE) homepage
- http://nsse.iub.edu/index.cfm – USA National Survey of Student Engagement (NSSE) homepage.

Key texts, which include references to further texts, are:
- Coates, H. (2006). *Student Engagement in Campus-based and Online Education*. New York: Routledge.
- Kuh, G., Kinzie, J., Schuh, J.H., Whitt, E.J. & Associates (2005). *Student Success in College: Creating conditions that matter*. San Francisco: Jossey-Bass.
- Kuh, G., Kinzie, J., Schuh, J.H. & Whitt, E.J. (2005). *Assessing Conditions to Enhance Educational Effectiveness: The inventory for student engagement and success*. San Francisco: Jossey-Bass.

The AUSSE 2007 Cross-institution report provides further summary information about the AUSSE, including its technical characteristics.

Workshopping AUSSE data: A guide for facilitators

By Marcia Devlin, Hamish Coates and Jillian Kinzie[2]

A guide to support institutional leaders facilitate discussions on using Australasian Survey of Student Engagement (AUSSE) data with university stakeholders.

About this guide

Purpose

In essence, the AUSSE results provide information that universities can use to improve the quality of the undergraduate student experience and their learning outcomes.

In considering how to put AUSSE data to use, it is important to understand what the results mean and to disseminate the findings to staff within universities who have the capacity to influence student engagement.

Simply reporting AUSSE results will not, by itself, necessarily lead to action. Many institutions in the US who have used the equivalent National Survey of Student Engagement (NSSE) data have found that analysing and discussing the results at events such as retreats, staff development workshops and seminars, and first-year coordinator meetings, for example, are productive ways to stimulate action. This guide is designed to help institutional leaders facilitate such discussions about AUSSE data with various university stakeholders.

How the guide can be used

This guide provides suggestions for leading a workshop or other discussion-based session on understanding, interpreting and taking action on AUSSE data. It suggests interpretative and enhancement approaches that are likely to help develop conversations about student engagement.

We have included step-by-step instructions for facilitating a group session using the data provided in the Institution Report that each university receives. Each section contains a program that includes components such as an overview of the data report, general notes, suggestions for how a facilitator can prepare for discussions about various aspects of the AUSSE results and Institution Report, definitions of key terms, exercises, and suggested discussion points. Sample worksheets are provided to accompany the exercises.

The guide is not prescriptive, but rather, offers suggestions that may be used in their entirety, adapted for use within an institution, or used as a basis for thinking about different strategies appropriate to a particular context.

Overview of the AUSSE

The concept of student engagement

Student engagement is defined as students' involvement with activities and conditions likely to generate high-quality learning.

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

The concept has emerged from many decades of research into higher education student learning and development. In addition to confirming the importance of ensuring appropriate academic challenge, this research has emphasised the importance of examining students' integration into institutional life and involvement in educationally relevant, beyond-class experiences.

Student engagement measures are increasingly understood to be important for higher education quality. 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.

According to research, student engagement data provides information on learning processes, is a reliable proxy for learning outcomes, and provides excellent diagnostic measures for learning enhancement activities.

What is the AUSSE and what does it do?

The AUSSE provides quantitative information on the time and effort students devote to educationally purposeful activities and on students' perceptions of the quality of other aspects of their university experience. The AUSSE was conducted for the first time in 2007.

The AUSSE measures student engagement through the administration of the Student Engagement Questionnaire (SEQ) to an institutionally representative student sample. The SEQ is designed for administration in under 15 minutes in online or paper form. It has been validated for use in Australasian higher education.

The SEQ provides measurement of six scales. Data on these areas of student engagement are included in the information provided to each institution:
- Active Learning – students' efforts to actively construct knowledge

- Academic Challenge – the extent to which expectations and assessments challenge students to learn
- Student and Staff Interactions – the level and nature of students' contact and interaction with teaching staff
- Enriching Educational Experiences – students' participation in broadening educational activities
- Supportive Learning Environment – students' feelings of legitimation within the university community
- Work Integrated Learning – integration of employment-focused work experiences into study.

With formative links to the North American National Survey of Student Engagement (NSSE), data from the AUSSE provides the opportunity for institutions to gather internationally comparable data focused on the quality of teaching and the learning environment. It thus provides each university with a valuable mechanism for improving the effectiveness of learning and teaching.

The AUSSE complements existing evaluation processes within institutions. Linking the AUSSE results to other evaluation data, such as student evaluation of teaching and of student support, may help staff see its relevance. Providing accessible examples and resources to help staff increase student engagement may be beneficial. At a broad level, if contributions to improving student engagement are recognised and rewarded by institutions, this will do much to garner buy-in from individuals, teams and academic units within universities.

Introducing staff to student engagement and the AUSSE

A useful first step is to ensure that the concepts of student engagement and effective educational practice, and their relevance to the particular audience in a particular workshop or other session, are clearly understood. The details provided above, on student engagement and on the AUSSE, may be helpful in providing an overview for audiences in most kinds of discussion-based sessions. Further general materials can be sourced from the NSSE.[3]

To introduce staff to the AUSSE, it is often helpful to ask session participants to identify the items in the first question of the Student Engagement Questionnaire that they believe are most important to student learning for a particular group of students. One common group used for this type of exercise is first-year students, but of course, the group(s) chosen will depend on institutional priorities. Using the original questionnaire for reference, participants might spend a short period of time in pairs or small groups discussing their perspectives on the importance of individual items.

This conversation can also be focused around the worksheets included in this guide. For example, using Worksheet 1, participants can be asked to record

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[3] See: http://nsse.iub.edu/institute

their predictions of student responses to particular questions. The results from this informal exercise can then be used for comparison with an institution's actual AUSSE results. The gaps between staff predictions and student responses can be a stimulating starting point for discussions about educational practice and institutional change.

Working with the AUSSE reports

Overview

This overview provides information for working with each of the presentations included in the AUSSE Institution Report.

Each AUSSE Institution Report contains the following presentations:
- Respondent characteristics
- Frequency distributions
- Item statistics
- Scale statistics.

Given the depth and breadth of data contained in an Institution Report, it will also usually be helpful to develop clear objectives and desired outcomes for a session in order to ensure that fruitful discussion can be achieved in the time available. Depending on which of the reports a discussion session might focus on, it may be helpful to make copies of selected survey results from an Institution Report prior to each group session as appropriate.

Report 1: Respondent characteristics

Purpose

It is important to establish the validity of the data the institution receives. Respondent characteristics provide the means to determine how representative a sample is of a student population. Comparisons can also be made with targeted benchmark institutions.

Report overview

The respondent characteristics report provides summary information on selected response, student and course characteristics.

Information on response characteristics includes the actual sample size, the target response sample and the secured response sample. The target sample is smaller than the actual sample due to oversampling.

Results for student and course characteristics are given for:
- First-year and later-year students, and for all students combined
- Your institution (the column titled INST), and for all Australian (AUS), New Zealand (NZ) and Australasian (AUSTL) institutions.

Statistics reported for each characteristic include the:
- Number (r) of responses
- Percentage (%) of responses.

Raw rather than weighted numbers are reported.

Preparation notes

It might be helpful to prepare an institutional student body profile in advance of the session.

It would also be advisable for a facilitator to be prepared to explain the terms 'response rate', 'sample weighting' and the AUSSE sample design. Your university's planning, quality or statistics unit may be able to assist here.

If the respondent characteristics are of particular interest to a group, the facilitator might lead an examination of how representative respondents are of the institution student body or of particular fields of study, for example.

If the participants in a particular session are not in a position to judge how representative a sample are of the population(s) of interest, the facilitator should provide some information on this aspect of the data.

It might be useful to explain that weighting is applied to all comparison reports and adjusts for respondents within universities by sex and enrolment status.

Weights are calculated separately for first-year and later-year students.

It might also be helpful to clarify that the determination of student year ('first year' or 'later year') is based on information provided by students in their survey response.

Possible exercises

A potentially useful exercise is to review demographic features of student respondents. Suggested questions to use as the basis for discussion on the topic of respondent characteristics include:

- Does the AUSSE sample reflect our student body profile?
- If the sample seems skewed, what cautions might be exercised?
- What generalisations are, or are not, possible based on these data?
- How does our institution's response rate stack up against other institutions?

Report 2: Frequency distributions

Purpose

Reviewing frequencies with which students responded to particular items along with comparisons to selected peers and the entire AUSSE cohort provides an accessible basis for thinking through student engagement at your institution.

Report overview

The frequency distributions report shows the distribution of students' responses to each item's response category presented on the Student Engagement Questionnaire (SEQ).

The frequency distributions for the items are reported in the order in which they appear on the SEQ.

Results are provided for:
- First-year and later-year students, and for all students combined
- Your institution (the column titled INST), and for all Australian (AUS), New Zealand (NZ), Australasian (AUSTL), and US and Canadian (USCA) institutions.

USCA figures are not available for all items.

Statistics reported for each response category include the:
- Raw number (r) of responses
- Weighted number (n) of responses in thousands (e.g. 1.5 equals 1500 responses)
- Weighted percentage (%) of responses.

Note that USCA raw (not weighted) numbers are also shown in thousands (r(K)) rather than units.

Preparation notes

Review the frequency distributions report. It is not necessary to go into great depth when exploring these results. Asking questions for group discussion can help facilitate reflection and understanding among participants.

Identify items that might be of greatest interest to the institution given its mission and goals or to the particular group attending the session. Consider presenting these percentages to participants as a way to capture their interest.

Be prepared to explain the terms 'sample weights', 'raw response numbers', 'weighted response numbers', and 'weighted percentages'. Your university's planning, quality or statistics unit may be able to assist here.

Possible exercises

Identify the most important items to the institution, faculty, department, unit, or group. The worksheets in this guide might be helpful in this exercise.

One suggestion for working with frequency distributions contained in this sub-report is that the facilitator invites the group to identify percentages of 'never' responses that cause them some particular concern. These might then be ranked by the group in order of priority and as many as possible discussed in the time available.

Equally, the group can be invited to identify items with 'positive percents' in which the majority of students report that they 'very often' or 'often' engage in this activity as examples of what the institution is doing well. A discussion of how and why these positive results might have come about might then be used to determine the 'success factors' that the institution might focus on to ensure they continue support.

You can lead a discussion about whether the responses correlate with what the institution, unit, or department expected. For example, if an institution values 'career advising for later-year students', is it adequate for 30 per cent of the students at that level to report that they 'never' talked with a member of staff about career plans?

You could invite participants to explore whether the percentage distributions are appropriate for items. Invite them to discuss how the distributions differ between your institution and other groupings of the data.

You might lead group discussion on some or all of the following questions:
- What results are adequate?
- What results need attention?
- What results are reflective of our institutional type?
- How does our institution compare to others?
- Are there important differences between first- and later-year responses that need to be followed up?

Report 3: Item statistics

Purpose

Analysing item statistics helps review the mean scores for each survey item and compare institutional results against the AUSSE cohort and other comparison groups.

Report overview

The item statistics report shows summary descriptive statistics for each of the AUSSE items.

Item results are provided for:
- First-year and later-year students, and for all students combined
- Your institution (the column titled INST), and for all Australian (AUS), New Zealand (NZ), Australasian (AUSTL), and US and Canadian (USCA) institutions.

Items statistics are reported in the order in which they appear on the SEQ. The reporting metric for each item corresponds to the response scale, which is shown in the report.

USCA figures are not available for all items. Results are reported for items in which the wording of certain items has been changed slightly for the Australasian context. The USCA figures for 'all students' have been computed by ACER. NSSE does not report combined year figures due to differences between these cohorts.

Statistics reported for each item include the:
- Weighted means (X)
- Weighted standard deviations (s)
- Weighted response numbers (n) in thousands (e.g. n=1.5 equals 1500 responses).

Please note that USCA raw (not weighted) numbers are also shown in thousands (r(K)) rather than units.

Effect differences are also reported. These statistics report the standardised difference between your institution's results and results of various comparison groups. Generally, an effect size of 0.2 is considered 'small', an effect size of around 0.5 'medium', and an effect size above this 'large'. All but two items on the SEQ are positively worded, such that a negative result implies that your institution is lower than the comparative group and a positive result implies that your institution is higher than the comparative group. The interpretation should be reversed for the two negatively worded items: 'Come to class without

completing readings or assignments' and 'Was unable to keep up to date with studies for work, personal or family reasons'.

A large number of comparisons could be made between AUSSE items, and many different 'statistically significant differences' could be reported. Statistical significance is a function of sample size, the level of confidence required in an inference, and variation in the phenomenon being measured. A four-point response scale is used for most items on the SEQ. The standard deviations of these average around 0.9 units on the four-point scale, implying that with a sample size of 10, a difference of 0.9 or more is likely to reflect a 'statistically significant difference' between two item means. The required difference falls to 0.4 with a sample size of 50, and 0.2 with a sample size of 200. Other SEQ items have between five and eight response categories, and the standard deviations for these lie around 1.3 units on the response scale. For these, a difference of 1.4 between item means is likely to be statistically significant with a sample size greater than 10, 0.6 with a sample size of around 50, and 0.3 with a sample size of 200.

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

Preparation notes

Review the item statistics report. There is a lot of information in these reports, and it may be wise to be selective in what can be discussed with session participants in the time available.

Look carefully at items with large effect sizes in the item statistics report. Make a note of these and use them to stimulate discussion with the group.

Be prepared to explain the terms 'sample weights', 'means', 'standard deviations', 'weighted response numbers' and 'effect differences'. Your university's planning, quality or statistics unit may be able to assist here.

Possible exercises

Ask the group to identify the most important items to the institution, faculty, department, unit, or group. The worksheets in this guide might be helpful in this exercise.

The group might review the results for each item and identify distinctive patterns and trends, and determine which differences appear to be of practice significance.

You can lead a discussion about whether the responses correlate with what the institution, unit, or department expected. For example, if an institution values

'engaging students in using learning resources', is it acceptable that activity may be lower on this dimension for later-year students compared to first-year students?

Invite participants to explore if the mean results, variation and group differences are appropriate for these items. Invite them to discuss how the distributions differ between your institution and other groupings of the data.

Report 4: Scale statistics

Purpose

Examination of AUSSE scale statistics helps focus discussion on the importance of student engagement and institutional improvement efforts in terms of the six defined areas of effective educational practice.

Report overview

The scale statistics report shows descriptive statistics for each of the six AUSSE scales.

Scale results are provided for:
- First-year and later-year students, and for all students combined
- Your institution (the column titled INST), and for all Australian (AUS), New Zealand (NZ), Australasian (AUSTL), and US and Canadian (USCA) institutions.

The USCA figures for all students have been computed by ACER. NSSE does not report combined year figures due to differences between these cohorts in the USA context. All AUSSE and NSSE scales contain the same items, except for the omission of a single item about independent study and self-designed majors, which was not included in the SEQ. Unlike NSSE, AUSSE Academic Challenge scale results are not adjusted for attendance type. No NSSE results are available for the Work Integrated Learning scale, which is unique to the AUSSE.

Scale scores are calculated by converting item scores onto a metric running from 0 to 100 then taking the mean of items within each scale. While not the most psychometrically effective approach, this scoring algorithm is transparent, parsimonious and facilitates reporting.

Statistics reported for each scale include the:
- Weighted means (X)
- Weighted standard deviations (s)
- Weighted response numbers (n) in thousands (e.g. n=1.5 equals 1500 responses).

Please note that USCA raw (not weighted) numbers are also shown in thousands (r(K)) rather than units.

The scale means are graphed with 95 per cent confidence intervals. These have been adjusted for the multiple comparisons made during interpretation of the graphical information.

Effect differences are also reported in both tabular and graphical format. These statistics report the standardised difference between your institution's results

and results of various comparison groups. Generally, an effect size of 0.2 is considered 'small', an effect size of around 0.5 'medium', and an effect size above this 'large'. All AUSSE scales are positively worded, such that a negative result implies that your institution is lower than the comparative group and a positive result implies that your institution is higher than the comparative group.

A large number of comparisons could be made between AUSSE scales, and many different 'statistically significant differences' could be reported. Statistical significance is a function of sample size, the level of confidence required in an inference, and variation in the phenomenon being measured. The standard deviations of these scales range from 10 to 20 on the reporting scale, with an average of 15. As a guide, a difference of around 15 or more would likely be statistically significant with a sample size of 10, a difference of 7 or more with a sample size of 50, a difference of 5 or more with a sample size of 100, and a difference of 3.5 or more with a sample size of 200.

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

Preparation notes

Review the scale statistics section of your AUSSE Institution Report. Make a note of areas of small and large difference. Examine and note particular patterns between various scales.

Identify scores, patterns and trends that might be of greatest interest to the institution given its mission and goals or to the particular group attending the session. Consider presenting these separately to participants as a way to capture their interest.

It might help to prepare and distribute a short summary of the focus of each scale, and a list of the survey items that contribute to the scale.

Be prepared to explain the terms 'sample weights', 'means', 'standard deviations', 'confidence intervals', 'weighted response numbers' and 'effect differences'. Your university's planning, quality or statistics unit may be able to assist here.

The comparative data are intended to help institutions determine if the engagement of their typical student differs in a statistically significant and meaningful way from the average students in various comparison groups.

Possible exercises

Discuss some of the following questions:
- What patterns emerge from the scale results?
- What was surprising about the results?
- Which areas appear to be the areas of strength?
- Which areas need improvement?
- What assumptions about the university were confirmed or refuted?
- How does our institution perform, given our student and institutional characteristics?
- How does our institution compare, given our student and institutional characteristics?
- What are the important differences between first-year student responses and later-year student responses?

Worksheet 1

Predicting AUSSE item results
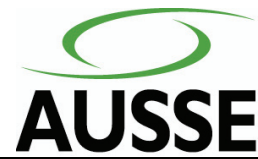
This exercise is designed to facilitate consideration and discussion about the quality of the student experience from the perspective of staff, compared to the perspective of students.

Items from the first section of the AUSSE are listed below.[4] Select several items of interest from the table. You can use this worksheet to record what you predict the combined percentage of responses that say 'often' and 'very often' will be. Similarly, you can record what you would prefer this percentage to be. Comparisons of your predictions and preferences to actual AUSSE results are then possible. You will need to refer to your AUSSE Institution Report to complete the exercise.

Consider what the gaps between student responses and your predictions and preferences reveal about the quality of the student experience at your institution. What ideas might you have to address some of these gaps?

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[4] Items used with permission from The College Student Report, National Survey of Student Engagement, Copyright 2001–07, The Trustees of Indiana University. Items adapted and validated for Australasia by the Australian Council for Educational Research (ACER).

Student Engagement Questionnaire items	Percentage of 'often' and 'very often' responses		
	Pre-diction	Pre-ference	Actual
Asked questions in class or contributed to online discussions			
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 (different races, religions, genders, political beliefs, etc.) in class discussions or written assignments			
Come to class without completing readings or assignments			
Was unable to keep up to date with studies for work, personal or family reasons			
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 electronic medium (e.g. Blackboard or WebCT) to discuss or complete an assignment			
Used email 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 on your academic performance			
Worked harder than you thought you could to meet a teacher's standards or expectations			
Worked with teaching staff on activities other than coursework (committees, orientation, student organisations, etc.)			
Discussed ideas from your readings or classes with others outside class (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 from you in terms of their religious beliefs, political opinions or personal values			

Worksheet 2

Predicting AUSSE scale results

This exercise is designed to facilitate consideration and discussion of the quality of the student experience from the perspective of staff, compared to the perspective of students.

The six AUSSE scales are listed below. Select a scale of interest. You can record what you predict the combined score out of 100 will be. Similarly, you can record what you would prefer this score to be. Comparisons of your predictions and preferences to actual AUSSE results are then possible. You will need to refer to your AUSSE Institution Report to complete the exercise.

Consider what the gaps between student responses and your predictions and preferences reveal about the quality of the student experience at your institution in relation to the particular scale you have chosen. What ideas might you have to address some of these gaps?

Student Engagement Questionnaire scales	Percentage of 'often' and 'very often' responses		
	Prediction	**Preference**	**Actual**
Active Learning			
Student and Staff Interactions			
Academic Challenge			
Enriching Educational Experiences			
Supportive Learning Environment			
Work Integrated Learning			

Using AUSSE data for enhancement

By Marcia Devlin, Hamish Coates and Jillian Kinzie[5]

Introduction

A guide to using AUSSE data

The Australasian Survey of Student Engagement (AUSSE) provides data for each institution on student engagement that is both generalisable and sensitive to institutional context. The data can help universities monitor and enhance the quality of education.

This guide suggests how Australasian universities might use AUSSE data in a productive manner to bring about positive educational change. The idea of student engagement crosses conventional institutional divisions. Differentiated materials and methods may be required to communicate effectively to different audiences and it is likely that a range of strategies will be helpful in generating conversations about student engagement.

Why student engagement?

Student engagement measures are increasingly understood to be important for higher education quality. Student engagement is defined as students' involvement with activities and conditions likely to generate high-quality learning.

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

The concept has emerged from many decades of research into higher education student learning and development. In addition to confirming the importance of ensuring appropriate academic challenge, this research has emphasised the importance of examining students' integration into institutional life and involvement in educationally relevant, beyond-class experiences.

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[5] Acknowledgement: This guide is based on one developed by Jillian Kinzie as part of the USA NSSE. We are grateful for her permission to adapt and use this guide and for her input as co-author.

Several enhancement activities have been sourced and adapted from: Coates, H. (2006). *Student Engagement in Campus-based and Online Education: University connections*. London: Routledge.

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.

Student engagement data provides information on learning processes, is a reliable proxy for learning outcomes, and provides excellent diagnostic measures for learning enhancement activities.

The AUSSE measures student engagement through the administration of the Student Engagement Questionnaire (SEQ) to an institutionally representative student sample. The SEQ is designed for administration in under 15 minutes in online or paper form. It has been validated for use in Australasian higher education.

The SEQ provides measurement of six scales. Data on these areas of student engagement are included in the information provided to each institution:
- Active Learning – students' efforts to actively construct knowledge
- Academic Challenge – the extent to which expectations and assessments challenge students to learn
- Student and Staff Interactions – the level and nature of students' contact and interaction with teaching staff
- Enriching Educational Experiences – students' participation in broadening educational activities
- Supportive Learning Environment – students' feelings of legitimation within the university community
- Work Integrated Learning – integration of employment-focused work experiences into study.

With formative links to the USA National Survey of Student Engagement (NSSE), data from the AUSSE provides the opportunity for institutions to gather internationally comparable data focused on the quality of teaching and the learning environment. It provides each university with a valuable mechanism for improving the effectiveness of learning and teaching.

Responding to challenges and opportunities
As experience in the USA and Canada has shown, 'student engagement' provides a practical lens for addressing the significant dynamics, constraints and opportunities facing higher education institutions. The lens provides key insights into what students are actually doing, a structure for framing conversations about quality, and a stimulus for guiding new thinking into practice.

The last decade has been a time of great change for higher education around the world. Tertiary education markets have changed with the growth of commercial, corporate and online providers of tertiary education, increasing internationalisation, and shifting funding dynamics. The increasing mobility of

students and knowledge has increased the need to understand the emerging borderless forms of university education.

Knowledge and skill development offered by universities has been flagged in conversations about 'education for all', and linked with national and regional economic growth. The demography of university students has changed, with students coming from increasingly diverse national, cultural, economic, employment, and age backgrounds. Even those students once considered 'conventional' are bringing a perspective to their university education that is different to that of their comparable peers in the past.

Higher education is facing increasing pressures to produce 'knowledge workers' who can participate in contemporary developed economies, to respond to perceived commercial and competition dynamics, and to maintain and improve quality standards.

Widespread changes are penetrating campus-based undergraduate education, challenging practices and longstanding assumptions. There has been a loosening of the close, and sometimes historically dependent or intrinsic, connections between on-campus learning and specific locations and buildings. University education is being increasingly freed from fixed institutional timetables and, accordingly, rather than being grouped together in batches, students are being given greater flexibility to vary the rhythms of their learning.

Ever more powerful and pervasive information and communications technologies are supplementing or replacing whiteboards, overhead projectors and printed materials. Constructivist pedagogical perspectives have started to have a real influence on instructional practices in lectures, laboratories and tutorials. Rather than passive recipients of university activities, students are being seen as 'clients' or 'customers' whose needs must be placed at the centre of educational considerations.

It is important to note in particular the large growth in international higher education and workplace learning in the last decade. Such changes are challenging many conventions and characteristics of campus-based learning.

As this guide suggests, 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 attract, engage and retain students in university education.

Designing dissemination activities

Reporting opportunities

The most important role institutions play in the AUSSE is in determining how best to leverage survey results for internal quality improvement. The AUSSE focuses on student behaviours and effective educational practice. This emphasis relates directly to issues of major contemporary relevance to higher education.

AUSSE results can be used in many different ways. It is likely that a multifaceted approach is likely to be most effective. Possibilities include:
- Assessing institutional performance
- Determining the value added by university education
- Monitoring learning outcomes
- Informing improvement efforts
- Informing student learning and development support
- Developing a cohort experience for groups of students
- Facilitating student retention and engagement
- Monitoring academic standards
- Accountability purposes
- Managing resources, programs and services
- Guiding staff development initiatives
- Improving internal communication
- Marketing to prospective students
- Communicating with alumni
- Providing a means for stakeholder engagement.

Some of these possibilities are explored below. Many options exist, but the most effective uses of AUSSE results are determined through consideration of how reporting is most likely to enhance educational policy and practice. This involves identifying the audience and contexts that surround reporting activities.

Identifying the audience

In order to effectively communicate results internally, it is necessary to first determine what data is most relevant for the different audiences to whom data might be given. Decisions about the areas in which improvement efforts might be made initially will also help determine what is communicated and to whom.

For example, the results that are shared with Deans might be 'big picture' overview results that relate to the degree program or year levels within a program broadly. Heads of Departments might benefit from having access to more nuanced data on particular cohorts of students.

A useful first step is to determine the audiences to whom various data will be communicated. Typical targeted audiences include Deputy and Pro Vice-Chancellors, Deans, Academic Registras, Heads of administrative divisions,

Directors of academic development units, Department Heads, and student representative bodies.

Institutions might also consider communicating summary data to the wider academic community, internally and externally, including academic and general staff, alumni, employers and other stakeholder groups.

Improvement approaches

Institutions must make informed, professional decisions about what particular student engagement data they will act on and about how to take necessary action.

Focusing on data that indicates what is working well in terms of engaging students is as important as focusing on data that indicates gaps or weaknesses. In order to keep doing what is working and further enhance those efforts, close scrutiny of areas of excellence is critical. Analysis of positive data also provides 'good news' that can be shared internally and externally and that recognises the work of staff that has led to positive outcomes. Data that points to areas in need of improvement are also useful and can be used strategically to direct, guide and encourage improvement efforts.

In both cases, triangulation of the AUSSE data with other sources of data will be helpful in ensuring validity per se and in reassuring staff within institutions of the validity of the AUSSE data. Data sources such as student evaluations of teaching, student experience questionnaires, and graduate surveys are obvious starting points for triangulation.

In terms of bringing about action, the Provost at many higher education institutions in the United States asks Faculty Deans to submit plans for improving NSSE scores in areas where they are low in relation to institutional priorities. Once Deans and staff within institutions become more familiar with AUSSE data over a number of years, it may be helpful to develop templates like those used by some US Provost offices for updating Deans on response rates and significant findings so that Faculty specific trend data can be assembled. Over time, these and similar sorts of resources will be developed for the AUSSE.

Dealing with obstacles

Questions about the validity and reliability of the AUSSE and SEQ are inevitable as staff in Australian and New Zealand universities are introduced to the concept of student engagement and to the AUSSE data. It is important that these questions are adequately addressed so that staff are more likely to accept the findings and consider changes to their practice to address areas in which they might be able to enhance student engagement.

The AUSSE and SEQ are underpinned by a considerable amount of development and validation, in the USA, Canada, New Zealand and Australia. The quality of

the processes and instrument have been assured through consultations, expert reviews, research reviews, focus groups, cognitive interviews, pilot testing, and psychometric and statistical analysis. These development activities build on nearly a decade of national administration of the NSSE, involving around 1,200 institutions.

A small sample size will limit the generalisability of the data an institution receives. While institutions are encouraged to promote the AUSSE and facilitate, as far as possible, a reasonable response rate, it may be the case that, for a number of reasons outside the control of the institution, an institutional response rate is lower than desirable.

However, small data sets can still be helpful in providing indicative information that can be followed up with further investigation. This is particularly so if the sample is representative of student populations of interest and this can be communicated to staff.

In order to foster interest in the data, the relevance of the data for staff needs to be established. Effective internal communication systems are critical in establishing, maintaining and increasing interest in the concept of student engagement and what might be done to improve an institution's efforts in this regard.

As suggested, linking the AUSSE results to other evaluation data, such as student evaluation of teaching and of student support data, may help staff see its relevance. Providing accessible examples and resources to help staff increase student engagement may also heighten staff interest. Finally, if contributions to improving student engagement are recognised and rewarded by institutions, this will do much to garner buy-in from relevant individuals within universities.

Learning from the NSSE

Collective experience gained through the USA NSSE provides a wealth of insights that Australasian institutions can interpret in the AUSSE context. The following suggestions for incorporating AUSSE data in institutional change efforts have been adapted from the NSSE advice:

1. **Make sure staff understand and endorse the concept of student engagement.** The value of student engagement results to improving teaching and learning needs to be convincingly explained to those academic staff less familiar with assessment in general and the engagement concept in particular.
2. **Collect results from enough students so the information is usable at the department or unit level.** Surveying more students than called for by the AUSSE standard sampling strategy can allow institutions to produce department or unit level results, which may increase staff interest in using engagement data.

3. **Understand what student engagement data represent and use the results carefully.** It will take time, perspective, and experience to understand and make the best use of AUSSE results.
4. **Report student engagement results in a responsible way.** Institutions are encouraged to share their results in ways that lead to a better understanding of collegiate quality and promote institutional improvement efforts.
5. **Don't allow the numbers to speak for themselves.** Every number and comparison reported should be accompanied by an explanation and interpretation of what can and cannot be concluded from the results.
6. **Examine the results from multiple perspectives.** Use the available comparisons (normative perspective) to confirm or challenge assumptions about institutional performance. Consider a criterion-referenced view of student engagement in the context of the institution's mission. It is also wise to compare the engagement levels of specific student groups, such as, for example, first-year male students or later-year students in various disciplines.
7. **Link the results to other information about the student experience and complementary initiatives.** The positive impact of student engagement results will be multiplied if the data can be made relevant to groups of staff working on different reform efforts in various parts of the institution.
8. **Don't go it alone.** The chances that changes in policy and practice will succeed tend to increase when institutional teams are formed and institutions work together in consortia on topics of mutual interest. Even greater success may be achieved when institutions develop these partnerships at the start of the SEQ administration cycle to make early decisions about strategic use of the data.

Using AUSSE insights internally

Focusing educational strategy and reviews
Ideas about student engagement can be infused into strategic plans in relation to research, internationalisation, community engagement, infrastructure, resources, and student access and equity.

Goals and strategies might be directly derived from aspects of engagement. That is, 'enhancing engagement' might itself be set as a goal, with a series of derivative strategies concentrated on: enhancing challenging, active and collaborative learning; enhancing students' interaction with staff; enhancing development of individual talent; developing supportive and responsive learning environments; enhancing the online experience; and developing adaptive and online pedagogies.

Alternatively, the idea of engagement might be infused across a range of different areas in an institution. For example, engagement ideas could be

distributed through strategies pertaining to educational quality, internationalising learning experiences, promoting an institutional 'ethos of learning', or developing online pedagogy.

In a more applied way, evaluations of student engagement can and should be woven into cycles of institutional evaluation and research. The information about key learning processes, which are captured in measures of engagement, occupies a critical position in performance indicator systems that integrate information on student, teacher and institution inputs, processes and outcomes. At an operational level, the measurement of student engagement can be conducted alongside the measurement of phenomena such as teaching quality, the teaching qualifications of academic staff, institutional resources, levels of prior academic performance, and academic outcomes.

Timely information about student engagement provides coincident data on the participation of a particularly significant group of stakeholders in institutional and educational processes. Without such information, institutional managers and leaders may be left to rely on assumptions or ad hoc anecdotal reports about how students are interacting with valuable resources and with their learning.

Linking institutional data

Linking engagement data with data in administrative systems provides a means of studying issues such as student retention and attrition. Engagement data provides rich information on key aspects of students' interactions with their institutions. Analysing engagement data in light of information about attrition and retention may well expose specific patterns of interaction that are distinctive to students who choose to discontinue their courses. This might help develop strategies and practices for preventing student attrition or at least managing student retention.

Institution teaching and learning collaborations

Institution-wide committees, partnerships or interest groups can be a powerful means of managing, taking responsibility for, and promoting discussions about engagement. Engagement is a broad idea that brings together a range of ideas, activities and people. Engaging students in beyond-class collaboration, for instance, may require the people who design and develop spaces around campus, and who develop online tools that support specific interactions within groups, to support such work. Equally, the support of teaching staff who develop courses, learning activities and assessments, and of student support staff to manage diverse non-academic aspects of the student experience is also necessary. Such developments typically require co-ordination of ideas, work and people across an institution, and may benefit from the direction and support that institution-wide committees provide.

Academic staff development

Explicit steps can be taken to infuse the idea of 'student engagement' into both formal and colloquial discussions about teaching. The induction and development of new and experienced academic staff can include discussion of student engagement and its importance to educational outcomes, as well as offer pedagogical strategies and practices for enhancing engagement.

Discussions about teaching in departmental seminar series and colloquia can emphasise the value of stimulating engagement. Academic staff can be encouraged to record evidence of their 'capacity to engage students' into the academic or teaching portfolios that are used for appointment, confirmation and promotions procedures. Clearly, if criteria used to judge applications for employment and advancement include evidence of contributions to student engagement, this would be ideal as efforts to this end could be recognised and rewarded.

Institutions can do much to develop the capacity of teaching staff to enhance engagement. Incorporating key ideas about engagement into staff development policies, particularly those pertaining to supportive and adaptive teaching practices, is one strategy. Academic development activities provide a key means of embedding perspectives on engagement into teaching processes, and helping faculty and support staff understand how to manage and lead effective forms of engagement.

Other ways in which AUSSE insights might be used internally include teaching and learning colloquia, summits and other fora where discussion of initiatives to target the increase of student engagement might be facilitated and teaching grant schemes that specifically target the development of initiatives that promote student engagement.

Involving students in improvement activities

Students are an often under-utilised source of assistance in efforts to improve student engagement. Students can provide insightful first-hand interpretation of AUSSE results, which can assist institutions in raising awareness of and interest in the phenomenon.

Learners can be involved in conversations about engagement in a range of ways. They can have representation on groups developed to stimulate and manage organisational conversations about engagement. Focus groups can be held with students from target cohorts, or from a cross-section of the institution. Student fora and colloquia may be useful, and/or students can be given a voice in staff fora or colloquia. Finally, targeted reports can be factored into student publications and academic or administrative communications.

Developing resources for students

One of the most immediate steps that institutions can take to enhance student engagement is to develop resources and other strategies to help students learn about engagement.

The incorporation of seminars and classes about engagement into orientation and transition activities, and the dissemination of key ideas through first-year lectures, laboratories and tutorials are some of the ways in which students can learn about how to help themselves make the most of their educational experiences. Thus it may be useful to supply academic staff with generic materials about engagement, and perhaps even disseminate resources and 'useful tips' via online learning management systems. Multimedia resources could be developed to give life to findings about students' engagement at a particular institution.

The process of simply using the SEQ to measure students' perceptions of their university study may in itself be one of the most effective means of enhancing overall engagement. Responding to student engagement questionnaires provides students with an opportunity to reflect actively on university study. Along with exposing students to a list of good online and general educational practices, students may value the opportunity to participate in organisational feedback processes.

General staff development

Students' engagement with university cuts across a range of academic and administrative activities and areas and managing student engagement is a whole-of-institution activity. In particular, managing beyond-class interactions plays a critical role in enhancing students' engagement in learning and development activities.

General staff play a significant role in shaping the student experience and are central in student engagement activities. Specific activities, such as briefings or internal conferences, focused on how general staff might contribute to improving student engagement, might be worth considering in some institutions. There would be considerable value in hosting combined events for both general and academic staff.

Survey engagement

Research has shown that there is great value in taking active steps to enhance students' participation in survey processes.[6] Staff at institutions can use a range of approaches to engage students in the AUSSE, including:

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[6] Coates, H., Tilbrook, C., Guthrie, B. & Bryant, G. (2006). *Enhancing the GCA National Surveys: An examination of critical factors leading to enhancements in the instrument, methodology and process.* Canberra: Department of Education, Science and Training.

- Informing potential respondents about the AUSSE during general teaching activities
- Affirming the importance of the survey and student feedback during the collection period
- Disseminating feedback about the survey to all relevant stakeholders.

The scope of the AUSSE is institution-wide, and much value is derived from providing institutional stakeholders other than students with an overview of the survey. Such stakeholders might include senior staff, teaching staff, interested researchers, support staff, and relevant committees.

There might be value in targeting information at particular cohorts or groups of students. First-year students, 'at risk' students, students in equity groups, and students who are first in their family to attend higher education may benefit from knowing about how to engage with university, and about opportunities that exist to provide feedback.

These stakeholders can be provided with basic information about the AUSSE (see: www.acer.edu.au/ausse). There would also be value in stimulating more substantive conversations with these groups as they can play a critical role in enhancing conversations about and the improvement of student engagement.

Survey engagement is critical. The quality of survey responses influences the quality of survey results, which then influence important decisions about educational quality and provision. For future administrations, as part of ACER's work to enhance conversations about student engagement within Australasian universities, a suite of survey engagement resources, which institutions can use to enhance students' participation in the important survey feedback process itself, will be supplied.

Using results externally

Public reporting considerations
Whether a participating institution makes public its student engagement results is up to the institution.

Institutions may choose, over time, to report AUSSE findings publicly. When doing so, particular care should be taken to ensure that the data on which the report is based has been analysed in technically appropriate ways, that privacy and confidentiality considerations are respected, and that reports are likely to support appropriate and informative interpretations.

The Australian Council for Educational Research (ACER) encourages public disclosure of student engagement results in ways that increase understanding of educational quality and support institutional improvement efforts.

Disclosing institutional results from the AUSSE survey provides an opportunity to help educate the wider tertiary education community and the public about the value of student engagement as a new metric for defining and examining higher education quality. ACER especially supports public reporting of student engagement results in ways that enable thoughtful, responsible institutional comparisons while encouraging and celebrating institutional diversity.

ACER does not make institutional scores available to third parties. Institutions may do so if they wish. After thoroughly vetting the results, institutions are encouraged to:
- Focus on educationally meaningful indicators that are linked to student success in the context of the institution's mission
- Provide a rationale for selecting institutions included in any comparison groups so that people can draw their own conclusions about the merits of the comparisons
- Explain what types of students, kinds of behaviours, and institutional characteristics and actions the indicators represent and what they do not represent, as well as what can and cannot be concluded from them.

ACER does not support the use of student engagement results for the purpose of rankings. ACER believes that reducing student engagement to a single indicator obscures complex dimensions of student behaviour and institutional performance. Comparisons become particularly problematic in the case of institutions that differ in terms of mission, resources and student mix.

Benchmarking between groups

Institutions are able to benchmark measures of engagement within the institution and between institutions. Benchmarking can formalise assessment and evaluation activities by placing them in more enduring and generalisable frameworks. It can provide an impetus to assure the quality of measurement activities, generate methodological discussions about the measurement, analysis and reporting of engagement, and generate collaborative interaction between organisations, consortia and networks focused on engagement.

The cross-national and cross-institutional scope of the AUSSE offers institutions the potential to partake in broader regional, sectoral, national and international conversations about engagement. Key activities here include linking data and benchmarking results, giving presentations at conferences about engagement, documenting and disseminating initiatives, programs and resources that have a record of fostering engagement, and cataloguing and distributing novel pedagogies and resources.

Several forms of data-focused benchmarking activities might be considered. Institutions could compare their results with like-institutions if collaborations are formed. Such comparisons would help identify areas of strength and those in

need of improvement. Alternatively, institutions might work from engagement results, and source out institutions with similar student engagement profiles. Benchmarking student engagement profiles can bring out complementarities in student mixes and educational practices that institution-level comparisons can mask.

A matter to consider is whether to take a normative or criterion approach to benchmarking. The normative approach involves comparing results across groups. A criterion-referenced approach focuses instead on comparing results against targets. Such targets may have been derived from past practice, institutional strategy or the performance of like-institutions.

There may be value in coordinating the reporting of AUSSE results. Coordinated NSSE reports have been used with a range of networks and consortia in the USA. Interesting reports could also be produced for various fields of education. Combined reports can help build more synthesised understanding of the nature and characteristics of student engagement in a range of institutional or course environments.

Scholarly research

Ideally, the study of engagement within universities will flow beyond institutional research into academic research activities. Stimulating research about student engagement that is scholarly in nature has the potential to expand conversations about student engagement into institutional learning. Research-driven inquiry about the nature and trends in student engagement within an organisation has the potential to stimulate forms of organisational activity that will enhance the effectiveness of education.

ACER will be working to develop research-based papers and resources that provide insight into contemporary students' engagement with university. ACER encourages individual institutions to use their own data to document patterns of student engagement.

Communicating with potential students

Data on student engagement can be used to communicate with potential students. While such practices will depend on an institution's student markets and mix, internal contexts, and general operating environments, a few key approaches can be sketched.

Information on student engagement can be added to relevant sections of an institution's website and course promotion materials. Student engagement data can be included in materials specifically prepared for distribution to potential students. Such materials, which may be distributed through schools, recruitment agencies and networks, or industry and employer organisations, can provide information on the characteristics of cohorts and learning environments at an institution.

Engagement data can be used to shape informational materials. Knowledge of student characteristics and activities helps understand how to pitch and deliver course information. It can also be used to set expectations and suggest possibilities for student involvement in key educational activities.

External quality assurance activities

Measures of student engagement are being increasingly woven into conversations about educational quality. It is becoming common for determinations about the quality of university education to be made with information about whether students are engaging with the kinds of practices that are likely to generate productive learning, and about whether institutions are providing the kinds of conditions that, based on many years of education research, seem likely to stimulate such engagement.

Enhancing conversations about engagement

Collecting and documenting information about how institutions are using student engagement information is an ongoing process. We would very much like to hear about how you are using your AUSSE data so that we can share best practice across Australia and New Zealand. If you would like to send us specific examples of internal reports or brochures highlighting AUSSE data, usage strategies, and particular activities you have undertaken in relation to improving student engagement, our contact details appear below. These examples will form a free, shared resource for universities and assist in our continuing efforts to improve the quality of the undergraduate experience for all students.

Please email ausse@acer.edu.au or send hard copy material to the following postal address: AUSSE, ACER, Private Bag 55, Camberwell, 3124, Victoria, Australia.

Australian Council for Educational Research

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 250 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 explores influences on the educational and occupational pathways of young people as they progress from school to further education, training and work. Studies investigate the labour market and social outcomes of different pathways as well as evaluations of particular policies and programs.

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 and leadership focuses on the relationship between teacher professional development and improved student learning.

The learning processes program investigates cognitive, affective and behavioural processes and factors that affect 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.

Australasian Survey of Student Engagement