

# Early impact and outcomes of an institutionally aligned, student focused learning perspective on teaching quality assurance<sup>1</sup>

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This paper describes an evidence-based quality assurance system for teaching and learning, which takes as its starting point a well-researched theoretical perspective on student learning in higher education. We argue this explicit use of a relevant theoretical base promotes coherence between quality assurance and improvement processes. We outline the principal features of our university's quality assurance strategy, systems and processes, and describe how the university's teaching quality assurance policy and systems have been implemented. We then consider the extent to which the project has achieved its goals of fostering an evidence-based approach to teaching consistent with the student learning perspective on which the policy and systems are based. We also present data on student learning experiences showing reliable changes in the quality of the student learning experience. We discuss the applied significance of these changes, with a particular focus on changes in the experiences of commencing first year university students.

## Introduction

Quality assurance in teaching and learning has been a topic of consideration, interest and debate in recent years (Harvey & Knight, 1996; Woodhouse, 1999; Guest & Duhs, 2003). However, while there has been considerable discussion of the definitions of quality and evidence which can be used to support assertions of quality, there has until recently been very little consideration of the concepts of teaching and learning underlying such processes (Prosser & Barrie, 2003).

In 1998 the university's Strategic Plan identified, as one of primary goals, the maintenance and enhancement of its position as an outstanding provider of high quality undergraduate and postgraduate teaching. In 1999 the university prioritized the

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intention to improve its teaching performance in the context of an institution whose focus had been substantially on research, through the appointment of its first Pro-Vice-Chancellor (Teaching and Learning). This was an internal response based on increasing external calls for accountability in relation to teaching in the Australian higher education system. In 1999, the university developed a new policy on the quality assurance of teaching and learning. The university's academic development unit, the Institute for Teaching and Learning (ITL), was charged with supporting the university community in implementing and enacting this policy. This involved a new approach to academic development (Asmar, 2002; Barrie & Prosser, 2002; Prosser & Barrie, 2003). It also involved the development of systems to enact the policy in ways that would promote alignment between policy and management directives, faculty strategic initiatives and teaching and learning practices at the level of actual subjects. We have argued elsewhere that such alignment is the key to effective quality improvement in higher education (Barrie & Prosser, 2002) and that in order to achieve such alignment, a clear theoretical perspective on what constitutes a high quality teaching and learning experience is required to underpin the policies and processes. It is this theoretical underpinning which can provide the coherence within, and between, policies and processes across an institution.

Since 1999, ITL has conducted an annual survey of students using a modified version of the Course Experience Questionnaire (CEQ), called the Student Course Experience Questionnaire (SCEQ). This survey gathers information on currently enrolled students' experiences of teaching and learning in their degrees at the university. Student ratings from the SCEQ form the central plank of the university's quality assurance of teaching strategy. Both the survey and the university's quality assurance strategy are based on a view of quality teaching and learning that is firmly anchored in the student learning research literature. The information from the survey has been used both as an indicator of performance and to target and inform faculty wide initiatives to improve teaching and learning. With five years of survey data, and some faculties now entering their third year of implementation of strategies to address issues identified from SCEQ results, we can now begin to look for evidence of initial change and improvement in students' experiences as a result of such interventions.

In this paper we briefly outline the theoretical perspective on teaching and learning from which we, and our university, have been working in developing teaching quality improvement policies and processes—the so-called student learning perspective (Biggs, 1999; Prosser & Trigwell, 1999; Ramsden, 2003). We then outline ITL's teaching evaluation and quality assurance systems and the other processes that have been developed to support the university community in implementing this quality assurance policy. We then examine how effective these systems and processes have been in facilitating improvements in students' learning experiences, by considering evaluation results in various areas of the institution in relation to the initiatives that have been implemented. These results include:

1. Qualitative data showing the impact of the ITL's Evaluation and Quality Assurance support processes across the university.

2. A case study example of how results are being used to effectively inform and monitor strategic teaching and learning initiatives at a faculty level.
3. Results showing statistically significant changes in SCEQ survey results over time at an institutional level.

In doing so we will present empirical evidence that begins to address the question of the effectiveness and impact of the ITL's systems to support such a quality assurance and enhancement strategy.

### **The evaluation and quality assurance project**

#### *A teaching and learning theory to underpin quality assurance policies and processes: the student learning perspective*

Research on student learning has shown that students adopt qualitatively different approaches to their studies, depending upon their prior experiences of studying and the particular context in which they find themselves (Marton & Säljö, 1976; Biggs, 1999; Prosser & Trigwell, 1999; Ramsden, 2003). These different approaches lead to qualitatively different learning outcomes. Student approaches to study are not stable aspects, but are conceived of as relations between the student and the context (see Ramsden, 2003, for a recent discussion of this point). The student learning perspective suggests that students' experiences of teaching and learning contexts are a function of both their prior experiences and of the present context. It is in relation to these that they approach their studies. Thus, students who perceive that the workload required across a subject or degree is high (e.g., agree with statements like 'The sheer volume of work to be got through in this degree means it can't all be thoroughly comprehended') and that assessment focuses on rote memorization of facts (e.g., agree with statements like 'To do well in this degree all you really need is a good memory') will tend to adopt a surface approach to learning, with little interest in understanding the topic holistically. In contrast, students who perceive that the teaching is good (e.g., agree with statements like 'The staff make a real effort to understand difficulties I may be having with my work') and that expected goals and standards are clear (e.g., agree with statements like 'I have usually had a clear idea of where I am going and what is expected of me in this degree course') will tend to adopt a deep approach to learning, focusing on integrating the topics covered into a coherent understanding. Furthermore, students who adopt a deep approach to learning tend to have better learning outcomes—e.g., grade point average or final grades in a specific class—than those who adopt a surface approach (see Crawford *et al.*, 1998; Lizzio *et al.*, 2002). For a meta-analysis of correlates of approaches to learning, including perceptions of the learning environment and learning outcomes, see Watkins (2001).

If the aim of quality assurance is to assure and improve teaching and learning then a clear theoretical understanding of what constitutes quality teaching must inform all aspects of the evaluation and quality assurance (EQA) system. In order to improve students' learning outcomes, we need to be concerned about both the context and

their experiences of that context. Institutional policies and practices of student evaluation of teaching would be expected to have substantial effects on the way staff approach their teaching and structure the teaching and learning context, and institutions need to establish their policies and practices with an explicit view of student learning in mind.

### *Institutional context*

The University of Sydney is a large, research-intensive, multi-disciplinary university. It has a student enrolment of about 40,000, with about 28,000 enrolled in Bachelor degree programs and about 10,000 in graduate and postgraduate programs. It has a total of about 5000 staff, with about 2500 academic staff.

Since 1999, the Pro-Vice-Chancellor (Teaching and Learning), in cooperation with the college pro-vice-chancellors, deans and the Chair of the Academic Board, has instituted a number of institutional level quality assurance initiatives. These include:

- A performance-based funding model for teaching and learning utilizing indicators developed from the theoretical perspective on teaching and learning discussed above. This fund is about \$A 4.3 million—or about 5% of the allocation for undergraduate teaching, increasing to about \$A7 million in 2005.
- Faculty teaching and learning plans focusing on improving the quality of student learning experiences. That is, these plans identify targets using these student learning perspective indicators and improvement strategies based on the same student learning perspective.
- A teaching improvement fund to support faculty initiatives in implementing these student focused teaching and learning plans (about \$A1.3 million).
- A scholarship of teaching index to reward evidence-based practice supported by these same student focused indicators and strategies (about \$A600,000).
- Academic Board reviews of faculties' teaching, learning and research training with an explicit focus on the student learning experience. These reviews draw not only on the quality assurance results already described but extensive interviews with students and staff.

In order to qualify for funding from the performance-based funding model, the teaching improvement fund and the scholarship of teaching index, each faculty has to produce a faculty teaching and learning plan, based upon evidence of performance, including the teaching performance indicators and approved by the Academic Board. Faculties can then apply for a teaching improvement fund allocation to support various aspects of their teaching and learning plan and to address recommendations for improvement arising from the Academic Board's reviews. In the next section we will briefly describe some aspects of the teaching evaluation system, which put into practice the student learning perspective embodied in the university's policies.

*Student evaluation of teaching*

The experiences of students are primary in determining the quality of the outcomes of their learning; thus, the student experience sits at the heart of the university's quality assurance strategies. ITL has developed a student evaluation of teaching system to support the university's quality assurance and improvement strategies, which is theoretically aligned with such a view of learning (Barrie, 2001). The system is multi-layered, incorporating (1) feedback for individual teachers; (2) unit of study evaluation; (3) student course experience; and (4) graduate course experience (see [www.itl.usyd.edu.au/teval](http://www.itl.usyd.edu.au/teval)).

The system takes as its external point of reference the Course Experience Questionnaire (CEQ; Wilson *et al.*, 1997). This survey of graduates' experiences of their degrees has been conducted nationally in Australia for many years. The CEQ is derived from the student learning perspective, the same perspective on student learning that underpins the university's quality assurance policies. It was used as the basis for the development of the university's internal survey of current students, the Student Course Experience Questionnaire (SCEQ). The SCEQ factor scale results contribute the majority of the performance indicator information used in the university's internal quality assurance process. As a result of the close alignment between the SCEQ and the CEQ this internal performance indicator data is directly comparable with the national data set allowing benchmarking. For example, in calculating the performance indicators for funding, the ranking of the university's faculties on the internal SCEQ data is based on a comparison of each faculty's SCEQ scores with the CEQ scores of identified benchmarking Australian universities. Moreover, the SCEQ is now also being used overseas at universities such as Oxford, thus allowing international benchmarking of the results. (See Ginns & Prosser, 2004, under review, for psychometric analyses of the SCEQ.)

The SCEQ gathers data on students' experiences of their degree courses, yet clearly these courses comprise diverse combinations of subjects (or units of study as they are called in our university). There is a need for departments to be able to see how students' learning experiences in different units of study might contribute to the overall learning experience of the degree. This information is collected through the Unit of Study Evaluation system (USE). At this level there is a need for richer and more explanatory information on students' learning experiences to inform curriculum and teaching development, yet these results must still relate to data on overall course experience gathered by the SCEQ for quality assurance purposes. In designing the USE survey the underlying theoretical perspective on learning in the SCEQ and CEQ is mirrored in the survey items. The items also correspond to the aspects of the learning experience tapped by the SCEQ and CEQ factor scale scores and used in calculating the university's teaching performance indicators (for additional detail on the survey design relationship see Prosser & Barrie, 2003). This system encourages individual academics to focus teaching improvement and curriculum development efforts on important (from the student learning research) aspects of the student learning experience, and on the same aspects that are embodied in the faculties' and

university's strategic teaching and learning plans. It is important to acknowledge that the above survey-based instruments for quality assurance and improvement are intended to provide predictors of student learning, through their influence on approaches to learning, rather than providing direct evidence of student learning. As noted above, however, there is a considerable body of evidence linking the constructs measured by such instruments with learning outcomes (Crawford *et al.*, 1998; Watkins, 2001; Lizzio *et al.*, 2002).

#### *How these results are used by the university community*

The quality assurance results collected using these systems are used in a variety of ways. In addition to its role in contributing to the calculation of the university's teaching performance indicators and hence faculty funding, the SCEQ results underpin a variety of other quality assurance and enhancement strategies.

The SCEQ results, including the open response comments, provide valuable sources of information for the Academic Board reviews of faculties. This review process includes the preparation of an evidence-based self-assessment by the faculty and a subsequent audit visit by the Academic Board review committee to discuss the processes and strategies identified in this report. Students' comments from the SCEQ surveys have been particularly useful to the committee in assisting them to frame their review questions.

The Academic Board visits have also highlighted how faculties at the university are systematically and strategically using the results collected by the USE surveys as an evidence base to plan and to focus curriculum development initiatives where most needed. USE results are used by faculties to monitor their performance against their individual faculty teaching and learning plans. Revisions of these plans are often based on such results. The way the results are being used to support evidence-based approaches to teaching will be considered in more detail in a subsequent section.

This sort of use of the SCEQ results has been supported by the establishment of a university-wide, 'Evaluation and Quality Assurance' (EQA) working group. The membership of this group includes a nominee of the Dean of each faculty of the university. The group's purpose is primarily to support the faculties in interpreting and responding to quality assurance data. Several other working groups have been established focusing on particular projects, for instance the experience of first year students. These groups also regularly draw upon the quality assurance data collected by the SCEQ and CEQ to help set strategic priorities and to plan new initiatives.

#### *How these results are used by the university's academic development unit*

In addition to the use of the student experience evaluations as the evidence base for faculty initiatives and the work of academics in enhancing teaching in their own courses, the data support a range of institutional projects which assist staff in developing effective teaching and learning strategies. An example of this is the university's First Year Experience Project.

The First Year Experience Project was established substantially to address issues emerging from the analyses of the student evaluations relating to first year students. The SCEQ results suggested that much of first year teaching was more teacher-focused rather than student-focused. The students had little understanding of the overall goals of their programs and standards to be achieved in their programs. Many saw the assessment processes focusing on reproduction rather than understanding. Key performance indicators suggested some of the retention rates for some of the first year programs needed to be improved. In response to the evaluation and quality assurance results, most of the faculties have developed first year experience plans outlining the ways in which a given faculty plans to orient its students to their programs of study, and how it will support students throughout their first year of study (see [www.itl.usyd.edu.au/FYE/](http://www.itl.usyd.edu.au/FYE/)). The plans have been designed to address issues emerging from the ongoing student evaluation of their first year programs. The university is supporting many of these plans through the Teaching Improvement Fund initiative.

Like most such units, the academic development work of the ITL covers many areas; for example, there are similar projects on Research Led Teaching (see [www.itl.usyd.edu.au/RLT/](http://www.itl.usyd.edu.au/RLT/)) and Graduate Attributes (see [www.itl.usyd.edu.au/GraduateAttributes/](http://www.itl.usyd.edu.au/GraduateAttributes/)), as well as the ITL's teaching of formal courses in the discipline of Higher Education. The EQA Project provides a common student-focused evidence base for many of these academic development initiatives and these projects draw heavily upon the EQA results to direct curriculum development fostering student-focused approaches to teaching and learning.

The aim of the initiatives described above was to facilitate a change in the teaching and learning culture of the university to one which was characterized by evidence based approaches to teaching and learning which are consistent with a student focused perspective. Such a change in the teaching and learning culture of the university should, in time, lead to an improvement in the quality of the student learning experience as measured by the student surveys we have described. To facilitate such a cultural change in a large research intensive university like the University of Sydney is an undertaking of some magnitude and not one that is likely to be achieved quickly. However, five years after the commencement of this project there are already indications that such a change is occurring. There are also indications of the changes in the students' learning experiences to which such a cultural change is intended, in the long term, to lead. In the following section we will outline some of the early indications of such a cultural shift as well as the results suggesting an improvement in the quality of the students learning experiences at the university.

## **Outcomes of quality assurance and enhancement processes**

### *Indications of a change in the teaching and learning culture of the institution*

The broad goal of the EQA project described above is to facilitate a change in the teaching and learning culture of the university, to one that is characterized by an

evidence-based scholarly approach to the enhancement of teaching and learning, embodying a student focused learning perspective. Perhaps the most obvious way in which the project is influencing the teaching and learning culture of the university is in the consistent implementation of the university's policies on the management and evaluation of teaching. These policies are based on the student learning perspective and include quality assurance measures that provide an evidence base which embodies this perspective.

One aspect of this policy is the requirement that all faculties of the university submit teaching and learning plans, which document their strategic responses to issues, identified in the survey results on students' experiences of their courses. This represents an evidence-based approach to strategic teaching initiatives. All faculties have had such plans approved. Moreover, all faculties have submitted successful applications for teaching improvement funds based upon the survey results, again an indication of evidence-based approaches. This scholarly approach to teaching and learning is further underlined in the faculties' successful bids for scholarship index funds. These funds reward scholarly work on teaching carried out by staff in the faculties, such as publications on educational research in teaching and learning journals. Thus the project not only promotes evidence based teaching and curriculum development but also paves the way for staff to engage in research and scholarship on teaching and learning. An indication of the extent to which such scholarship is happening across the university is seen in the distribution of approximately three quarters of a million dollars (Australian) in scholarship funds rewarding such work across the three colleges of the university last year.

The 2002 Academic Board reviews of faculties noted the widespread effective use of evaluation and quality assurance data in planning teaching and curriculum enhancement strategies. These reviews included interviews with staff and students in the faculties to ascertain the extent to which the university's evaluation and management of coursework teaching policies were implemented in practice.

The 2003 Academic Board evaluation of ITL (Academic Board, 2003) noted the impact of the ITL's work on evaluation and quality assurance on the university's teaching and learning culture:

The review team commends the Institute on the focus on student learning experience which has had a cascading effect on their practice. The role of the institute was seen to be fundamental in improving perceptions of the importance of teaching across the university. There is an evidence based approach about how the institute operates, in their presence in faculties and the availability of staff. (Academic Board Review of ITL Report, 2003, Commendation 5)

The extent to which the EQA project is facilitating a cultural change to evidence based approaches to teaching consistent with a student focused perspective across *all levels* of the institution, from strategic faculty level initiatives to individual classroom teaching, can perhaps best be demonstrated in a 'drill down' consideration of how the results are being used in one faculty of the university.

*A case study of evidence based teaching development drawing on the EQA project*

*What is the evidence base?* The faculty of Veterinary Science is one of the 17 faculties of the university represented on the Evaluation and Quality Assurance Working group. Veterinary Science was one of the first faculties to implement strategies at a faculty level in relation the university policy. In the four years since the EQA Working group was formed the faculty has consistently led the way in responding to the policy. While not all faculties are as advanced as this small and professionally focused faculty, other larger and multi-disciplinary faculties are now following their lead and implementing similar strategies. In addition to the CEQ and SCEQ data the faculty gathers information on the quality of student learning experiences in individual units of study with the Unit of Study Evaluation (USE) survey.

*How the faculty considers the data.* The data provide an evidence base for peer review and collaborative discussion of teaching and learning in a variety of fora. These include the biannual teaching and learning development days in which all staff of the faculty now participate. In supporting these discussions the faculty posts the results of the student surveys on the faculty intranet where they are available to all staff and students. The teaching and learning committee prepares a formal report to faculty and students on the SCEQ results reflecting students' experiences of their overall course and the related USE data for the various units of study. This report is discussed by teaching and learning coordinators, who have a special responsibility for liaising with students in their year. Similar discussion of the EQA results occurs in all faculties though some use somewhat different processes.

*How the EQA Project supports the faculty.* The faculty representatives are supported through the EQA Working Group in establishing and facilitating these processes in their faculty. This includes the development of their faculty's four additional items for the USE and the planning of this survey process. The Group members also have access to support in interpreting their survey results and in accessing the student learning research underpinning the results. They can also access the ITL's expertise in staff development and curriculum planning to address issues identified in the data. This sort of use of the EQA project data as an evidence base to inform teaching improvement is occurring in all seventeen faculties of the university.

*How the faculty responds to the results.* With the support of the EQA working group the faculty has effectively used the results collected by the teaching evaluation system to enhance teaching and learning in the faculty. The issues identified in the results provide the agenda for faculty wide academic and curriculum development initiatives such as teaching and learning workshops and curriculum improvement projects

funded through the university's Teaching Improvement Fund. For example, in 2001 the faculty identified particular issues with students' experiences of assessment which were seen to be promoting surface learning approaches. For instance in 1999 only 29% of the students disagreed with the statement 'The staff seem more interested in testing what I have memorized than what I have understood'.

In response to this the faculty employed an educational consultant with particular expertise in assessment and ran a series of practical workshops for staff on assessment and developed an Assessment Blueprint (principles for quality assessment) and a range of initiatives. An example was the development of an integrated assessment task using a modified essay question covering content from several units of study as a strategy to encourage integration (a feature of a deep approach). The faculty also responds at the level of individual units of study and these responses are aligned with the strategic faculty wide responses by virtue of the alignment between the evidence underpinning these responses. That is, the same theoretical perspective from the research informs both the faculty level responses to the SCEQ and the unit level responses to the USE. These improvements in units of study are then monitored in subsequent SCEQ and USE survey results. For instance on the aforementioned item ('The staff seem more interested in testing what I have memorized than what I have understood') between 1999 and 2003 the percentage of students disagreeing improved from 29% to 43%. This represents nearly a 50% improvement in a key factor associated with quality learning (Biggs, 1999) providing clear evidence of the effectiveness of these targeted curriculum developments.

The influence of the EQA project on the faculty's teaching and learning culture can also be seen in the internal Academic Board (2001) review of the faculty which noted:

Evidence based teaching is working well ... research into teaching methods is now seen as an alternative to other research streams ... the high value and quality of teaching is recognized ... (Academic Board review, 2001)

The faculty is also using the results as evidence to support external quality assurance and accreditation. For example:

- The faculty has made extensive use of the EQA project data in recent external benchmarking discussions with Murdoch University on veterinary science curricula.
- The recent report of the American Veterinary Medical Association Accreditation visit to the faculty praised the excellence of these quality assurance and enhancement processes.

Faculties of the university are clearly using the EQA results as an evidence base for planning teaching and learning improvement. Given that the evidence upon which these improvements are planned is survey data based on the student learning perspective, these improvements should, in time, lead to an enhancement in student learning consistent with that perspective. So what has been the impact of this new teaching and learning culture on students' learning experiences at the university? The

university monitors students' experiences of their degree programs using the SCEQ. How then have the SCEQ results changed in the first few years of this attempted cultural revolution?

*Changes in the student learning experience at the University of Sydney*

In describing changes in students' experiences in terms of institution wide course experience questionnaires (where students are rating their experience of a whole year's study, not individual components of a year's study), we must consider the issue of how big a change is meaningful. One criterion is that of statistical significance, but the level of statistical significance is heavily dependent on sample size. Another measure—increasingly favored by many journals—is the effect size. The effect size commonly used for differences in mean score between two groups is the standardized mean difference, also known as Cohen's *d*. Cohen (1992) suggested the following conventions for judging the size of such an effect: 0.2=small, 0.5=medium, 0.8=large. Tallmadge (1977, p. 34), in a review of best practice in educational evaluation noted, 'one widely applied rule is that the effect must equal or exceed some proportion of a standard deviation—usually one-third (i.e., 0.33), but at times as small as one-fourth (i.e., 0.25)—to be considered educationally significant'. However, other authors have argued that these conventions need to be treated carefully (see Prentice & Miller, 1992; Breaugh, 2003). They caution that in situations in which the dependent variable is difficult to influence (e.g., overall degree evaluations), and in which the independent variable is diffuse (e.g., a number of interventions attempting to drive broad cultural changes) then even quite small effect sizes may be significant. Under these conditions, small effect sizes ranging from 0.1 to 0.2 may be considered educationally significant.

While Cohen's *d* is an indicator of the effect size in the sample, it is possible to identify 95% confidence intervals around this effect size, indicating the range of plausible values for the population effect size. It is now recommended that the effect size and confidence intervals around the effect be reported (APA, 2001; Thompson, 2002). Table 1 shows the effect sizes and 95% confidence intervals for the SCEQ scales for undergraduates at all degree levels; all commencing first year students; and all commencing first year students broken down by College of enrolment. The asterisks (\*, \*\* & \*\*\*) refer to the obtained probability (*p*) value of a Type 1 error—when the obtained *p* value is less than 0.05, we can conclude that the observed results are unlikely to have arisen by chance.

Considering the responses of students at all degree levels, the results given in Table 1 demonstrate statistically significant changes in average scores for all scales except the Clear Goals and Standards Scale. For at least two variables, Good teaching and Appropriate assessment, there appears to be small yet statistically significant improvements between the 1999 and 2003 surveys ( $d = 0.11$ , 95% CI [0.07–0.14], and  $d = 0.18$ , 95% CI [0.15–0.22], respectively). On the other hand, there has been a small but statistically significant decline in student' perceptions of appropriate workload, ( $d = -0.08$ , 95% CI [-0.11–0.04]).

Table 1. Standardized mean difference effect sizes and 95% confidence intervals (in brackets) for tests of changes from 1999 to 2003 in average Student Course Experience Questionnaire ratings

SCEQ scale	Commencing first years						
	All undergraduates		College 1		College 2		College 3
	Effect size & 95% CI	Effect size & 95% CI	Effect size & 95% CI	Effect size & 95% CI	Effect size & 95% CI	Effect size & 95% CI	Effect size & 95% CI
Good teaching	0.11*** (0.07–0.14)	0.17*** (0.09–0.25)	0.15* (0.00–0.30)	0.20** (0.03–0.37)	0.20** (0.03–0.37)	0.20** (0.07–0.33)	
Clear goals and standards	0.03 <sup>ns</sup> (–0.002–0.07)	0.07 <sup>ns</sup> (–0.02–0.15)	0.06 <sup>ns</sup> (–0.09–0.20)	0.23** (0.06–0.40)	–0.06 <sup>ns</sup> (–0.19–0.07)		
Appropriate workload	–0.08*** (–0.11–0.04)	–0.07 <sup>ns</sup> (–0.15–0.02)	0.03 <sup>ns</sup> (–0.12–0.17)	–0.08 <sup>ns</sup> (–0.25–0.09)	–0.03 <sup>ns</sup> (–0.16–0.10)		
Appropriate assessment	0.18*** (0.15–0.22)	0.21*** (0.13–0.30)	0.27*** (0.12–0.41)	0.12 <sup>ns</sup> (–0.05–0.29)	0.28*** (0.15–0.41)		
Generic skills	0.06*** (0.03–0.10)	0.12** (0.04–0.21)	0.16* (0.01–0.30)	0.03 <sup>ns</sup> (–0.15–0.19)	0.09 <sup>ns</sup> (–0.05–0.22)		
Overall satisfaction	0.04* (0.01–0.08)	0.10* (0.01–0.18)	0.10 <sup>ns</sup> (–0.05–0.25)	0.06 <sup>ns</sup> (–0.11–0.23)	0.09 <sup>ns</sup> (–0.04–0.22)		

\*  $p < 0.05$  \*\*  $p < 0.01$  \*\*\*  $p < 0.001$  ns: not significant at  $\alpha < 0.05$ .

Many of the students in the whole university sample have experienced three or four years of teaching at the university—and recent changes in the teaching and learning culture might be tempered by previous experiences. What then of those students new to the university—our commencing first year students? How have the experiences of first year students changed since the inception of the project? Are the experiences of first year students in 2003 different to those of the first year students prior to the commencement of the project in 1999?

While the overall changes described above are small, we have reason to expect more substantial improvements in the experience of a particular sub-group, commencing first-year students. As for the overall (students at all degree levels) results, the standardized mean differences between 1999 and 2003 ratings are generally small in magnitude, but in most cases they are also noticeably larger than the results obtained for all undergraduates. While the result for Appropriate Workload is similar for this group of students ( $d = -0.07$ , 95% CI [-0.15–0.02]) to that for all undergraduates, the results for Good teaching ( $d = 0.17$ , 95% CI [0.09–0.25]) and Appropriate assessment ( $d = 0.21$ , 95% CI [0.13–0.30]), Generic skills ( $d = 0.12$ , 95% CI [0.04–0.21]) and Overall satisfaction ( $d = 0.10$ , 95% CI [0.01–0.18]) are all positive and greater than for all undergraduates.

The results for commencing students also indicate some variability in results across Colleges, meaning that ‘educationally significant’ effects (or effects approaching educational significance according to Tallmadge’s (1977) suggestion of  $d = 0.25$ ) are masked to a certain extent if results are only considered at the whole university level. For example, Clear Goals and Standards effect sizes ranged from  $d = -0.06$  (95% CI [-0.19–0.07]) to  $d = 0.23$  (95% CI [0.06–0.40]). This has important implications for colleges, indicating strengths and areas for improvement.

## Discussion and conclusion

The above results can be summarized as follows. Considering all undergraduates, the results are heartening in that four of the six indicators showed statistically reliable improvement in mean ratings in the expected direction, although we are yet to see educationally significant changes, i.e., standardized mean differences greater than 0.25. The small decline in students’ ratings of appropriate workload indicates a potential problem for the university, however, and recent discussions within the EQA working group have focused on this issue. Turning to all commencing first year students, the changes are again statistically reliable on four of the six measures and the obtained effect sizes appear to be larger than those for all undergraduates, particularly in certain colleges, in some cases approaching or exceeding the level commonly accepted for educational significance.

It is important to judge the magnitude of these effects in light of the nature of the enterprise described in this paper: that is, engendering broad cultural change from a teacher-focus to a student-focus. Much educational research is conducted under short time frames ranging from less than an hour to several hours, with experimental conditions receiving intensive one-on-one treatments in that time. Under such

conditions, large effects might be observed, but the ecological validity of the findings is often questionable—could the same strong findings be generated under realistic classroom, lecture or tutorial conditions?

In contrast, we argue our results have intrinsic ecological validity, insofar as students' ratings reflect their experiences across their whole degree (i.e., under realistic lecture or tutorial conditions) across extended time spans. While we expect that our results will continue to improve at an institutional level, we emphasize that the cultural change driving such improvements is diffuse, existing within the interactions of thousands of staff with tens of thousands of students over an extended period of time. Improvements in the student experience are thus likely to be small and incremental rather than large and revolutionary.

The University of Sydney has developed a quality assurance system, including processes and performance indicators, that is explicitly based on a theoretical model of teaching and learning. The operationalizing of this theoretical perspective in data collection processes at different levels of the institution has helped to support the alignment of quality enhancement initiatives undertaken by individuals, course teams, faculties and university management. The evaluation and quality assurance initiatives of the university have contributed to a new culture of teaching and learning at the institution. This culture is characterized by more evidence-based approaches to teaching and teaching development and reflects the student focused learning perspective in which the university's teaching and learning policies and academic development practices are based.

There are indications that this cultural change is leading to improvements in the actual quality of students' learning experiences at the university, as measured by the SCEQ. While these changes are small though consistently positive for the university as a whole, the changes for first year students are marked and clearly significant by any measure of statistical or educational impact. This cohort would be expected to be the first to show signs of such a change as their experience of their degree is relatively 'pristine' and improvements are not as likely to be 'diluted' by prior poor experiences. Moreover, the transition to university has been a focus of many university and faculty teaching enhancement initiatives (Asmar, 2002). It might be hoped that this improvement in the first year student learning experience will continue through subsequent years of the student degree and the pleasing trends in the overall university results will gather momentum in coming years.

The university's performance based funding of teaching strategy is now embedded in the university's overall funding model in much the same way as performance based funding of research. As such we expect it will continue to shape institutional culture. While the amounts are relatively small in comparison with research funding we have found them sufficient incentive for change. In the five years since its inception, all faculties have now successfully implemented the university's teaching and learning quality assurance strategy. That is, all faculties have developed student focused teaching and learning plans, all faculties have successfully applied for Teaching Improvement funding for initiatives to improve the quality of their students' learning experience, and all faculties have successfully applied for scholarship index allocations.

Of course faculties have implemented the university's policy in different ways and to different extents, and with varying degrees of acceptance from staff. We have found that those faculties that have been most successful are characterized by strong visionary leadership, coherent collegial systems and processes to enact and communicate policy, and a willingness on the part of the staff to engage in implementing the policy in a way that suited their particular context. At an institutional level these features are again important. In particular we have found it important for the university to make space (for example through the working group and the faculty level implementation process) for faculties to engage with the policy in their own various ways.

### Note

1. An earlier version of this paper was presented at the Eleventh International Student Learning Symposium at Hinckley, UK, 1–3 September 2003.

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