

# Australian higher education and the Course Experience Questionnaire

Insights, implications and recommendations

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In recent years, Australian universities have come under pressure from Government and other stakeholder groups to demonstrate the quality of their activities. The Course Experience Questionnaire (CEQ) provides a valuable source of data about student satisfaction regarding the courses that they study at Australian universities. It provides a body of data which is collected systematically at the national level, and has been shown to be a stable, reliable and meaningful measure of course satisfaction. The CEQ data have become increasingly important in institutional performance evaluation, however, not without controversies. The current review provides valuable insights into the CEQ methodology, comments on its significance and usage and highlights some of its major limitations. It also suggests possible means of improvement of the CEQ, imperative towards quality teaching, learning and evaluation in the Australian higher education system.

## The need for teaching evaluation

Twenty years ago, Scriven asserted that 'teacher evaluation is a disaster' because 'the practices are shoddy and the principles are unclear' (Scriven, 1981, p. 244). He also claimed that the practice did not reflect current knowledge and that pressure to reform came from outside the universities, specifically government and the courts (Scriven, 1981).

Regarding evaluation, Cannon (2001) asserts the importance of clarity as a necessary step to addressing accusations of shoddy practices. However, the process might

not be straightforward since the domain of evaluation is extremely complex (Johnson & Ryan, 2000). Scriven (1991) defines evaluation as an analytical process of determining the merit, worth, or value of something. He links the process as involving two dimensions, gathering data and then using the data for judgment and decision making with respect to agreed-on standards.

As a response to external pressure, the past two decades have witnessed focused efforts to improve teaching through research, publication, consultancy, evaluation, and professional development (Cannon, 2001). Governments are taking a close interest in higher education and

are using mechanisms such as performance-based funding to drive change (Cannon, 2001). A gradual reorientation of policies and practices toward learning rather than teaching (Barr & Tagg, 1995; Norris & Malloch, 1997) has had implications for evaluation practices (Cannon, 2001). The role of evaluators in shaping the learning and teaching environment of universities gains importance, in tandem with the seriousness about the quality of student learning and its outcomes (Cannon, 2001). This is achievable by aligning evaluation policy and practice with institutional goals (Biggs, 1996, 1999).

However, the autonomous, teacher-centred construct was never a true representation of all teaching in higher education (Cannon, 2001). It is likely to be even less true in the future, as the diversity of approaches to learning and teaching expands in response to research and development (Centra, 2000). The context for teaching has changed in other ways, too (Cannon, 2001). One imperative for many universities has been to keep a keen eye on the competitive business environment, and this change has been accompanied by the introduction of several evaluation and quality assurance tools, such as benchmarking and audit, that have their origins in the business world (Alstete, 1996; Holmes & Brown, 2000).

Given that teaching involves team work, a valid evaluation of teaching should focus less on individual instructors and more on the ways in which these contributions come together in students' experience of their programme as a whole (Cannon, 2001). Nevertheless, evaluation of teaching has been described as a vehicle for the improvement of teaching (Saroyan & Amundsen, 2001).

### Theoretical framework

The conflicting pressures to expand higher education within severe funding constraints have contributed to worldwide demands for increased efficiency and accountability (Linke, 1991). The term *performance indicators* is now widely used to describe many of the evaluative approaches as shown in Table 1.

The main advantage of having a system of performance indicators lies in their utility in enabling comparisons with peers, assessing change over time, or measuring achievements against a stated goal (Gaither *et al.*, 1994). Indicators, as Cannon (2001) identifies, are management tools used for presenting information about some characteristic of teaching and learning. Indicators can also be used to measure the context of teaching itself, such as student and faculty characteristics and the availability of teaching resources (Cannon, 2001).

There are essentially three kinds of indicators. Simple indicators, expressed in the form of absolute figures, are intended to provide a relatively objective representation of a situation and help in the interpretation of other indicators (Cave *et al.*, 1997). The second, a performance indicator, serve as a relative measure of achievement by providing a point of reference, such as a goal, standard, or comparator (Cave *et al.*, 1997). Finally, general indicators include peer reviews, surveys, accreditation panel reports, and the like (Cave *et al.*, 1997).

The purpose of indicator use in the higher education sector is to facilitate the evaluation and review of institutional operations, through providing evidence on the degree to which institutional teaching and learning quality objectives are being met (Bruwer, 1998; Romainville, 1999; Rowe & Lievesley, 2002). Performance indicators of teaching are used in several ways (Cannon, 2001). Governments use them to inform policy and to allocate resources (Cannon, 2001). Performance indicators are also used increasingly by the media to construct rankings of universities (Cannon, 2001). Dobson (2000) showed how *The Times*, *Financial Times*, *U.S. News and World Report*, and *Asiaweek* constructed their rankings using a wide range of indicators.

The CEQ was developed by Ramsden (Ramsden, 1991; Wilson *et al.*, 1997) as a teaching performance indicator, focusing on aspects of the classroom teaching environment which previous research had found were linked to deep and surface approaches to learning, and higher quality learning (Chalmers, 2007). The scales include *Good Teaching*, *Clear Goals and Standards*, *Appropriate Assessment and Appropriate Workload* (Chalmers, 2007). The CEQ also includes an outcome scale, *Generic Skills*, and an *Overall Satisfaction with Course Quality*

**Table 1. Levels of Evaluation**

<i>Focus of Evaluation</i>	<i>Indicators of Teaching Performance</i>
Individual instructor or teacher	Student evaluation
Teaching items	Peer evaluation
Course, unit, or programme of study	Course Experience Questionnaire
Academic department	Portfolios Audits Benchmarking
Institution	Portfolios Benchmarking Ranking

Source: Cannon, 2001, Table 9.1, p. 89

item (Chalmers, 2007). Arguing that the original CEQ was 'based on a theory of learning which emphasises the primary forces in the undergraduate experience as located within the classroom setting', Griffin *et al.* (2003, p. 260) developed an expanded range of CEQ scales, reflecting features of contemporary higher education settings beyond classroom settings. The expanded scales focus on *Student Support, Learning Resources, Course Organisation, Learning Community, Graduate Qualities and Intellectual Motivation* (Chalmers, 2007).

## Methodology

Education databases namely Academic Onefile, Australian Education Index, A+ Education, Education Research Complete, ERIC, Factiva, Google Scholar, JSTOR, and Scopus were searched with the keywords 'Australian higher education' and 'course experience questionnaire'. The websites of individual Australian universities were also explored for the purpose of the current review.

## Review of related literature

Davies *et al.* (2005) asserted that surveys intended to evaluate student perceptions of teaching and learning are themselves subject to scrutiny. The author in substantiating his claim highlighted numerous researches conducted on the student ratings of teaching. Research in this perspective has been conducted in the United States (Marsh, 1987; Cashin, 1995), Australia (Marsh, 1987; Marsh & Bailey, 1993; Bedgood & Pollard, 1999; Wagner, 1999; Neumann, 2000; Haynes, 2002; Worthington, 2002) and Europe (Husbands & Fosh, 1993; Husbands, 1996, 1997; Shevlin *et al.*, 2000). Nevertheless, according to Marsh & Hocevar (1991), Marsh & Bailey (1993), Ting (2000), and Haynes (2002), most of these studies have been of a short duration. Moreover, Davies *et al.* (2005) raised concern regarding these surveys as purporting to what it is intended to measure as evident from the support and recommendations of discontinuation emanating from these researchers. Several other authors also pointed out the limitations associated with these surveys (McKeachie & Lin, 1979; Hepworth & Oviatt, 1985; Abrami *et al.*, 1990; Solas, 1990; Cashin & Downey, 1992; Dwinell & Higbee, 1993; Greenwald, 1997; McKeachie, 1997; Smith, 2004).

The development of Australia's CEQ had its origins in the educational research base (Scott, 2005). The antecedent to its development was the Course Perceptions Questionnaire (CPQ) that Ramsden and Entwistle (1981)

intended for use to identify factors in the learning environment that influenced how students approached their learning. While intended to measure the perceived quality of teaching at a whole course level, the CEQ provided a source of data which has enabled performance indicators to be implemented for comparisons between institutions and over time (Scott, 2005). Ramsden (1999, p. 25) depicted the CEQ as:

...a proxy measure for the quantity and quality of student learning outcomes, having been constructed from first principles to examine course and teaching attributes associated in students' experiences with more effective learning.

A wealth of subsequent literature has stemmed from the use of the CEQ, with a strong tendency to focus on examining the relationships between teaching and learning which were posited at the core (Scott, 2005). A set of phenomenographic studies since the mid-1980s has sought to test the associative power of the surface to deep learning continuum (Scott, 2005). Some (for example, Webb, 1997) have involved a critique of the construct. Others have involved empirical investigation of a range of potential associations between various aspects of the student experience and the surface-deep learning continuum (Scott, 2005). Kreber (2003), for example, used the Approaches and Study Skills Inventory for Students (ASSIST) survey and the CEQ to investigate relationships between students' approaches to learning and their perceptions of the learning environment. This study identified associations between heavy workload, inappropriate assessment and surface approaches to learning, and between generic skills and deep approaches (Scott, 2005). Vieira (2002) found a strong relationship between students' views, teachers' views, and pedagogic quality. These studies support the call made by Ramsden (1991, p. 93) for avoiding the 'technicist ideology' that underlies the decontextualised use of students' ratings of teaching quality without accounting for the variability in teaching approaches and contexts of learning.

Similarly, there have been many studies that have sought to confirm the psychometric qualities of the CEQ, including Ramsden (1991, 1999), Wilson *et al.* (1997), and numerous other studies referred to in the comprehensive review article by Richardson (2005). Many of these studies have sought to validate the CEQ in different and specific higher education contexts (Scott, 2005). Examples include the work of Byrne and Flood (2003) in accounting education, Broomfield and Bligh (1998) and Lyon and Hendry (2002) in medical education, and Eley (2001), who concluded that varying the

question format would improve the psychometric properties of the CEQ scales.

In spite of the range of studies that have demonstrated the rigour, internal validity and reliability of the CEQ, there has been some increasing concern with the way in which its results are being used for summative as well as for formative evaluation (Scott, 2005). While acknowledging that the content validity of the survey derives from its strong theoretical base, Koder (1999, p. 159) presented a view that political processes have 'led to a multiplication of stakeholders who are now trying to load on to the CEQ additional purposes, that is generating goal displacement'. Koder cautioned against adding new scales to the instrument to account for the multiplying purposes to which the CEQ was being applied.

The additional scales were developed partly in response to the growing recognition that there are many factors beyond the classroom or the teacher that can have an effect on learning e.g. include university's student support and administrative systems, the quality of its learning resources and infrastructure, and the important role played by the formal and informal social contexts in which learning takes place (Scott, 2005). This extension of the CEQ to encompass the broader context in which teaching and learning takes place was particularly tied to growing concerns about the influence of this context on the process of transition from school to university (McInnes, 2001). Subjected to rigorous psychometric testing, the extended CEQ was shown to demonstrate internal validity (McInnes *et al.*, 2001).

The universities that rely most heavily on the CEQ in their performance evaluation processes are those that do not have internal teaching and subject evaluation processes of their own which provide adequate data for monitoring the quality of teaching within their academic units and for their institution as a whole. The following are brief details of how the participant universities use CEQ data for monitoring the quality of courses, and teaching and learning (Hand *et al.*, 1998).

### ***The University of New South Wales***

The University of New South Wales provides detailed analyses of CEQ results to heads of academic units. These analyses do not include other data that may have a bearing on the CEQ results. CEQ data are used to compare performance by field of study with the same field of study in other universities. The Overall Satisfaction Rating from the Course Experience Questionnaire is included in a basket of eleven performance indicators that are used by the University Council to monitor the performance of the Uni-

versity in a broad sense. The Overall Satisfaction Rating is also used as an indicator of student satisfaction in annual reviews of the University's corporate plan. CEQ results, and action to be taken by faculties in response to the data, are discussed with deans in the annual Performance Reporting, Evaluation and Planning (PREP) process.

### ***The University of Melbourne***

The University of Melbourne provides detailed analyses of CEQ results to academic departments. CEQ results are analysed together with other data that are considered to have a bearing on teaching and learning outcomes. Melbourne has an internal subject assessment programme that currently receives 85 per cent coverage. Outcomes of the internal assessment process are reported at faculty and departmental level and are used in annual Planning Group meetings with deans.

### ***Swinburne University of Technology***

Swinburne University of Technology uses an average rating on the CEQ Good Teaching scale and the Overall Satisfaction Rating as an indicator of the quality of teaching, as one of a basket of performance indicators which, together with data from the Swinburne Quality Management System, comprise the Performance Management System. Swinburne has an internal subject evaluation process and the results are available to the subject convenor and the relevant head of the Academic Organisational Unit (Head of School).

### ***Curtin University of Technology***

Curtin University of Technology provides detailed analyses of CEQ results to academic departments. Curtin has developed a data model using Power Play Explorer software for analysis of CEQ data in the context of a range of related data elements. CEQ scales are used as one of four key performance indicators for determining how effective the University is in meeting its teaching and learning goals. The CEQ Good Teaching scale and the Overall Satisfaction Rating are included in a basket of seven course indicators which are being developed as a model for performance assessment.

### ***Queensland University of Technology***

Queensland University of Technology provides analyses of CEQ results to academic departments. Queensland University of Technology has developed a Course Performance Enquiry Database using Microsoft Excel software that includes CEQ data together with a range of related enrolment and performance data. CEQ data are used in

Course Performance Reports along with other 'graduate outcomes' indicators, such as graduate employment and labour market outlook data. The CEQ data are linked to other student information through an individual student indicator. Queensland University of Technology has little interest in linking CEQ data to finance or resource data, believing that this may be impracticable because of differences between institutions in these aspects.

### **The University of Queensland**

CEQ data are made available on request to academic departments at the University of Queensland. Queensland has encountered problems in efforts to make cross-institutional comparisons on CEQ data because of variations between institutions in field of study nomenclature and classification. As with Queensland University of Technology, the University of Queensland is more interested in a simple and robust model that enables analysis of CEQ data against internal student information, while also allowing for broad spectrum comparisons across institutions.

### **Australian higher education and the CEQ**

Australia is a leader in the sector-wide use of surveys of students' experiences of university teaching and learning with the CEQ administered nationally since 1993 (Chalmers, 2007). The original survey was extended with additional scales in 2001 and is now administered with a Graduate Destinations Survey (GDS) (Chalmers, 2007). The GDS has been sent to all graduating students since 1972 (Chalmers, 2007). The Australian Vice-Chancellors' Committee (AVCC, now Universities Australia) and Government Skills Australia (GSA) jointly released Code of Practice and Guidelines for the administration of the CEQ, the Postgraduate Research Experience Questionnaire (PREQ) and the GDS (AVCC, 2006). The CEQ has been developed in Australia to gather feedback from recent graduates about their experience of their programme in terms of the quality of teaching, clarity of goals, workload, assessment methods, and development of generic skills (Ramsden, 1991; Johnson, 1999). The development of the CEQ has been a cumulative process based on the research by Ramsden and Entwistle (1981) in the United Kingdom on factors that promote deeper learning. The instrument, however, has gone through several iterations and developments (Wilson *et al.*, 1997; Johnson, 1999).

The instrument seeks a response in relation to a whole programme of study, for example, in engineering, history, or the performing arts. It therefore differs in level from conventional student evaluation that typically looks at

individual instructors (Cannon, 2001). In Australia, the CEQ was refined after a national trial of a broad range of indicators (Linke, 1991), and now it provides systematic data about teaching, collected at the national level (Cannon, 2001). It has been shown to be a stable, reliable, and meaningful source of evidence about the student experience of their educational programmes (Hand *et al.*, 1998). The instrument consists of twenty-four items that survey the five areas (stated earlier), in addition to one global item measuring overall satisfaction with the student's programme of study (Cannon, 2001).

### **CEQ significance and usage**

CEQ data are now gathered each year from Australian graduates and used largely for internal diagnostic purposes by institutions and organisational units such as faculties or departments. Results from the instrument have also found their way into popular guides to universities that are used by prospective students to assist in their decision making about programme choices (Cannon, 2001).

As a performance indicator, the CEQ has been useful. First, having been used over a number of years, it is yielding data showing that in four of the five scales and the index of overall satisfaction, a positive national trend in improved teaching quality can be identified for the period from 1995 to 1998 (Cannon, 2001). This suggests that institutions are improving teaching quality and services to students (Johnson, 1999). Second, the CEQ is proving useful for making comparisons within fields of study over time and across institutions (Cannon, 2001). Nevertheless, the significance of scores derived from the CEQ should always be interpreted in the context of specific institutional and programme goals and circumstances (Hand *et al.*, 1998).

However, with no systematic research into the influences on institutional policies and practices of the GDS and CEQ, Harris and James (2006) analyse the pros and cons of the CEQ as higher education researchers. First, the authors feel that the GDS and CEQ attend to the teaching function of higher education creating an explicit focus on teaching and learning outcomes rather than inputs or processes. This places their performance on a field of study basis under some objective scrutiny. Second, the GDS and CEQ data have provided important market information for prospective students regarding the quality of the Australian higher education system. However, the use of the data in institutional marketing has not been particularly prominent and the influence of the data on student decision-making is not altogether clear. This leads to student choices patterns following well established institu-

tional reputations and institutional 'positional-status' in the market. Third, the CEQ has stimulated management intervention in the evaluation of the quality of teaching and learning within units, subjects and courses. Arguably, the evaluation of teaching and learning has been to some extent 'de-professionalised' in that top down management requirements tend to dominate the bottom-up initiatives of the academic community itself. The CEQ and its local institutional counterparts are therefore sometimes dismissed as symptoms of the managerialism seen by some to be pervading Australian universities. Finally, the CEQ has had a deep influence on conceptions of effective teaching and has therefore become the dominant paradigm, at least from a management point of view. On the one hand this has been a positive outcome, for the CEQ contains items that indisputably relate to well-established good teaching practices (Harris & James, 2006).

Equally, however, the CEQ is necessarily a broad, generic instrument that might be criticised for being bland, superficial and unlikely to detect important nuances of the educational environment in specific contexts. There have been concerns that the CEQ is not an appropriate instrument for measuring the quality of problem-based or enquiry-based learning environments (Harris & James, 2006).

### CEQ limitations

Higher education has been reasonably successful in developing ways of collecting evidence about teaching, especially at the level of the individual teacher or course (Cannon, 2001). However, the understanding of how that evidence is used and by whom in order to make judgments and decisions is relatively poor (Mullins and Cannon, 1992). Johnson (1999) is apprehensive in that much of the information generated through surveys and the like is not actually used at all.

Components of the Australian Graduate Survey (AGS) and CEQ are now used to contribute to decisions on performance-based funding of institutions, and more recently, cognate disciplines within institutions through the Learning and Teaching Performance Fund (LTPF). This use of the AGS/CEQ has prompted intense discussion within the Australian higher education sector, given concerns over differential survey practices and response rates between

institutions (Chalmers, 2007). To address these concerns, the Department of Education, Science and Training (DEST) commissioned the Graduate Destination Survey Enhancement Project (Graduate Careers Australia, 2006). The broad goals of this project were to '...design and develop the processes, resources, and ideas needed to generate a new era of research into Australian student experiences and graduate outcomes' (Graduate Careers Australia, 2006, p. xxi), in order to improve the quality of responses to the surveys and confidence in their findings and usage (particularly with regards to the LTPF) (Chalmers, 2007).

The CEQ, in this context, has borne the most criticism. The GDS has been less controversial, for the design of the GDS instrument does not depend on the depth of the

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of 'good teaching' embodied in the CEQ items and scales and the expectation that students can make an 'average' judgement across an entire degree programme. These are significant criticisms indeed, for they are at the heart of the validity of the measurement that is being purported (Harris & James, 2006). Other concerns are

more procedural than conceptual, with the variations in survey methodologies among institutions and the variations in response rates raising questions about the appropriateness of comparisons between institutions, the acknowledged difficulty in accommodating demographic differences in the student population and other contextual factors (DEST, 2001).

Borden and Owens (2001) provide a comprehensive overview of the tools used in the USA to measure quality. They note the importance of addressing the technical issues of representativeness of the sample, reliability of the instrument and validity of the instrument. In the context of the CEQ, the most significant limitations and problems are well documented in reviews as in Hand and Trembath (1999). Hand and Trembath (1999) report that the response rates for the CEQ are lower, the results are out of date, inputs by graduates are of a general nature, and multiple responses are elicited with multiple follow up mail outs. They also add that the instrument is too long with repetitions at places, the difficulties in interpretation for graduates from non-English speaking backgrounds and difficulty in the interpretation of results.

To conclude, the data are collected nationally and it takes time to analyse and provide results, hence the student opinions expressed are almost eighteen months old before they are available for the purpose of assisting the quality improvement process. Thus, any changes that might be implemented over the course of a three- or four-year course could take anything up to five to six years to be reflected in the CEQ results.

## CEQ improvement strategies

According to the research by Arreola (2007) which assumes a valid and reliable instrument, the following have been shown to impact ratings:

- Level of the course, where, students in the first and second year do tend to rate instructors lower than students in upper level classes. This is important because it used to be thought that it was class size that mattered (that larger classes rated instructors lower than smaller ones). It is now established that this is not the case, and it is the level of the course (which of course is often conflated with class size) that counts.
- Required courses, in the sense that, students in required courses tend to rate instructors lower than students in non-required ones.
- Faculty, whereby, mathematics and science courses generally receive lower ratings than those in social sciences or humanities. It should be noted that this is not because the former have poorer teachers but rather that there is a faculty effect.

Again, according to the research assuming a valid and reliable instrument, the following have not been shown to impact ratings:

- Time of day the course is taught, in that, early morning classes or after lunch classes do not automatically get lower ratings.
- Popularity, in the sense of student ratings as merely representing a 'popularity contest'.
- Giving disproportionately high (or low) grades, in that one cannot 'buy' good ratings.
- Class size, where, large classes do not automatically get lower ratings.
- Gender of the instructor, where, women do not get consistently lower ratings than men (Arreola, 2007).

Based on the limitations of the CEQ as outlined earlier, the following recommendations are listed as a means to effectively improve the credibility and the intended outcome of the CEQ:

1. Monitoring students' experiences central to examinations and assessment procedures.

2. Tapping their feedback towards modules/course units and different subject areas.
3. Combining questionnaires with other methods e.g. focus group interviews and online forums/ virtual learning environments.
4. Prioritising when to take the feedback, mid-semester or end-of-course so that changes can be incorporated.
5. Making the instrument concise and avoiding repetitions to prevent survey fatigue.
6. Focusing on areas of known student concern for better response rates.
7. Taking into account non-native respondents for better response rates.
8. Easy availability and interpretability of results.

## Conclusion

According to Cannon (2001), the scope and context of evaluation has widened. There has been a shift in evaluation from the individual educator to the evaluation of the pedagogy as a whole (Cannon, 2001). The author stressed that a more sound approach would be to align and integrate evaluation in commensurate with the educational aims and objectives of universities across a range of contexts and levels.

Most of the evaluation in higher education has been closely aligned to the expectations of external bodies with little value placed on the internal parameters within the universities most likely to impact institutional performance (Chalmers, 2007). It is these internal factors within the university that can seriously influence the teaching learning process and in its turn impact student experiences.

In view of the growing demands for evaluation in the higher education sector, the CEQ has evolved as one of the most powerful tools. It has found its applicability for a long time now, but is not without limitations and controversies. The present review highlights some of the tremendous potential of the CEQ and also enumerates some of its major drawbacks and underlying controversies. The review also suggests effective means and scopes of improvement in fortifying the instrument further.

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