



Validating the Course Experience Questionnaire in West Bengal higher secondary education



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ABSTRACT

The Course Experience Questionnaire (CEQ) is a 36-item instrument that is intended to measure six different aspects of students' perceptions of the academic quality of their programmes. It has been widely used in Western countries, and it has also been used in non-Western countries, including China, Hong Kong, Japan and Pakistan. Nevertheless, in the latter countries, it has sometimes not been possible to identify the full range of constructs that were supposed to be measured by the original CEQ. We translated the CEQ into Bengali and administered this to 552 science students at 15 higher secondary schools in West Bengal, India. A confirmatory factor analysis found that their responses provided a poor fit to the original six-factor model of the CEQ. An exploratory factor analysis identified just four constructs, which reflected good teaching, generic skills, student support and appropriate workload. The items with salient loadings on the four factors were used to construct four scales. The students' scores on three of the four scales showed satisfactory levels of internal consistency. A factor analysis of their scores on all four scales yielded one overarching factor that could be interpreted as a measure of perceived academic quality. A reduced version of the CEQ consisting of the 30 items that constitute these four scales can be recommended as a measure of students' perceptions of the academic quality of programmes in West Bengal.

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1. Introduction

An important source of evidence about the quality of any educational provision is feedback from the students themselves. This can be obtained through meetings with students, but in recent years there has been an increased interest in the use of formal questionnaires to obtain student feedback (for reviews, see Richardson, 2005; Spooren, Brockx, & Mortelmans, 2013). The constructs that are reflected in students' responses to such questionnaires might be expected to vary from one educational system to another, and so it is important to consider whether or not they generalise across different cultures. In the present study, we evaluated a questionnaire that is often used in English-speaking countries in the different and distinct context of higher secondary education in the Indian state of West Bengal.

1.1. The Course Experience Questionnaire

The Course Experience Questionnaire (CEQ) was originally developed by Ramsden (1991a) as a performance indicator for monitoring the quality of teaching on individual programmes of study at Australian universities. In the light of preliminary evidence, a national trial of the CEQ was commissioned, and this yielded usable responses from 3372 final-year students at 13 Australian universities and colleges of advanced education (see also Ramsden, 1991b). The instrument used in this trial consisted of 30 items in five scales which had been identified in previous research as reflecting different dimensions of effective instruction: good teaching (8 items); clear goals and standards (5 items); appropriate workload (5 items); appropriate assessment (6 items); and emphasis on independence (6 items). The defining items of the five scales (according to the results of the national trial) are shown in Table 1. The respondents were instructed to indicate their level of agreement or disagreement (along a scale from "definitely agree", scoring 5, to "definitely disagree", scoring 1) with each statement as a description of their programme of study. Half of the items referred to positive aspects, whereas the other half referred to negative aspects and were to be scored in reverse.

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Table 1
Defining items of the scales in the original Course Experience Questionnaire.

Scale	Defining item
Good Teaching	Teaching staff here normally give helpful feedback on how you are going
Clear Goals and Standards	You usually have a clear idea of where you're going and what's expected of you in this course.
Appropriate Workload	The sheer volume of work to be got through in this course means you can't comprehend it all thoroughly. ^a
Appropriate Assessment	Staff here seem more interested in testing what we have memorised than what we have understood. ^a
Emphasis on Independence	Students here are given a lot of choice in the work they have to do.

^a Items to be coded in reverse.

As a result of this national trial, it was decided that the Graduate Careers Council of Australia should administer the CEQ on an annual basis to all new graduates through the Graduate Destination Survey, which is conducted a few months after the completion of their degree programmes. In these surveys, shorter versions of the CEQ have been employed. The Emphasis on Independence scale was replaced by a new scale concerned with Generic Skills to “investigate the extent to which higher education contributes to the enhancement of skills relevant to employment” (Ainley & Long, 1994; p. xii). Additional items were included but not assigned to any of the scales; one of these measures the respondents' general level of satisfaction with their programmes. Wilson, Lizzio, and Ramsden (1997) argued that for research purposes the original version of the CEQ should be augmented with the Generic Skills scale to yield a 36-item instrument measuring six scales.

Research studies have typically focused on the validity of the CEQ: that is, whether it measures the personal traits that it purports to measure (for a review, see Richardson, 2009). Its *construct validity* is demonstrated by confirmatory or exploratory factor analysis showing that it measures several distinct scales that reflect different aspects of effective instruction. For instance, Wilson et al. (1997) used both exploratory and confirmatory factor analysis to show that a six-factor model provided a good fit to Australian students' responses to the 36-item CEQ. They and other researchers have found that students' scores on the six scales are positively correlated with each other, which is consistent with the assumption that they reflect different aspects of perceived academic quality.

The CEQ's *criterion validity* is demonstrated by correlations between students' scale scores and their scores on some independent criterion, such as their responses to the additional item concerned with general satisfaction. For instance, Wilson et al. (1997) found that students' scores on all of the CEQ's scales were positively correlated with their ratings of general satisfaction, and this too has been confirmed by other researchers.

The CEQ's *discriminative validity* is demonstrated by the extent to which it yields different scores on groups of participants who would be expected to differ on the underlying traits. For instance, Wilson et al. (1997) found that students who had followed programmes in the same disciplines but with different teaching philosophies and methods produced different patterns of responses on the CEQ. In addition, the Australian graduate surveys have consistently shown that students' scores on the constituent scales of the CEQ vary across different academic disciplines and across different institutions of higher education offering programmes in the same discipline (see, e.g., Ainley & Long, 1994).

Finally, the CEQ's *convergent validity* is demonstrated by correlations with students' scores on other instruments with which the CEQ should theoretically be related. For instance, Wilson et al. (1997) found that students' who had more positive perceptions of their courses and programmes were more likely to adopt a deep approach to studying and were less likely to adopt a surface approach to studying. This pattern has been confirmed by a number of researchers (e.g., Parpala, Lindblom-Ylänne, Komulainen, & Entwistle, 2013; Richardson, 2007; Rytönen, Parpala,

Lindblom-Ylänne, Virtanen, & Postareff, 2012). As another example, Dorman (2014) found that students' scores on the CEQ were strongly related to their general perceptions of their classroom environment.

1.2. The CEQ in non-Western contexts

The CEQ has been mainly used in Australia and the United Kingdom, although items from the CEQ were incorporated in the Experiences of Teaching and Learning Questionnaire, which is used to obtain student feedback annually at the University of Helsinki (Parpala et al., 2013). A Dutch version of the CEQ has also been validated with postgraduate students in The Netherlands (Jansen, van der Meer, & Fokkens-Bruinsma, 2013). However, the CEQ has also been used in some non-Western contexts.

Zhang, Lu, and Cheng (2006) administered a Chinese version of the CEQ to 3125 first-year students at Xi'an Jiaotong University in China. They carried out a factor analysis of their responses and found just four factors. Three were concerned with appropriate workload, generic skills and good teaching, and the fourth combined items measuring clear goals and standards and appropriate assessment. Ten items failed to show salient loadings on any of the four factors. However, Price et al. (2011) suggested that Zhang et al. (2006) had extracted too many factors. Price et al. (2011) themselves administered a Chinese version of the CEQ to 356 students at Gansu Radio and Television University, a distance-learning institution in China. A factor analysis of their responses led to just two factors: one was concerned with the quality of the academic support; the other was concerned with the academic demands of the courses.

Ning and Dowling (2010) administered a short English version of the CEQ on two occasions a year apart to 396 students at a university in Hong Kong. This version contained 23 items intended to measure five of the six scales. It should be noted that the educational system in Hong Kong was imposed under colonial rule by the British, many teachers are not themselves ethnically Chinese, and Western cultural influences have been prominent for 170 years. Confirmatory factor analysis showed a good fit to the intended scale structure on both occasions. However, Law and Meyer (2011) found different results when they administered a Chinese version of the CEQ to 1572 students at six post-secondary colleges in Hong Kong. They carried out exploratory factor analysis of the students' responses and found four factors: three were concerned with good teaching, appropriate workload and generic skills, and the fourth combined items concerned with appropriate assessment, good teaching and clear goals.

Yin, Lu, and Wang (2014) administered the CEQ to a large sample of students at 15 universities in different regions of China. In contrast to the studies by Zhang et al. (2006) and Price et al. (2011), they found a marginally acceptable fit to the intended six scales in a confirmatory factor analysis after one item had been dropped. Yin and Wang (2015) obtained similar results in a separate study of students at one teaching-oriented university and one research-oriented university in China (see also Yin, Wang, & Han, 2016). These findings may indicate that the more nuanced

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