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Critical Analysis of the Experiences of Teaching and Learning Questionnaire

We recommend first reading the Critical Analysis of the Experiences of Teaching and Learning Questionnaire (ETLQ), which covers basic descriptive and psychometric information, including the number of items, instrument purpose, and psychometric (i.e. validity) data and can help determine if the ETLQ meets your needs. If you are interested in getting more detailed information about the items in the ETLQ, we recommend reviewing the ETLQ instrument file and scoring guide.

Educational Objectives:

1. To describe the purpose and basic properties of the Experiences of Teaching and Learning Questionnaire, including number of items and scales, and psychometric properties.
2. To describe the application of the Experiences of Teaching and Learning Questionnaire to the field of health sciences education.
3. To evaluate the relative strengths and weaknesses of the Experiences of Teaching and Learning Questionnaire; and
4. To provide the Experiences of Teaching and Learning Questionnaire and supplemental materials to aid in its administration.

Resource files:

1. Critical Analysis of ETLQ.pdf
2. Instrument_ETLQ.pdf

A. Original Citation: Entwistle N, McCune V, Hounsell J. Investigating ways of enhancing university teaching–learning environments: measuring students’ approaches to studying and perceptions of teaching. In: De Corte E, Verschaffel L, Entwistle N, van Merriënboer J, editors. Powerful learning environments: unravelling basic components and dimensions. Amsterdam: Pergamon; 2003. p. 89-107.

B. Brief Description/Purpose: The Experiences of Teaching and Learning Questionnaire (ETLQ) monitors how students have studied a course unit and their perceptions of the teaching–learning environment. It is a self-completion instrument that can be administered in the classroom, by postal survey, or online. The first section, Approaches to Learning and Studying, contains 18 statements in four scales concerned with how students have studied the course unit: deep approach (6 items); surface approach (4 items); monitoring studying (4 items); and organized studying (4 items). The second section, Experiences of Teaching and Learning, contains 40 statements in four scales concerned with how they experienced the course unit: organization and structure (8 items); teaching and learning (15 items); students and teachers (7 items); and assessments and other set work (10 items). In both sections, students rate their agreement with each item on a 5-point scale from “agree” (coded as 5) to “disagree” (coded as

1). The third section contains 10 items on the demands made by the course unit; students rate each aspect on a 5-point scale from “very easy” (coded as 5) to “very difficult” (coded as 1). The fourth section contains 8 items on what students have gained from the course unit; they rate each outcome on a 5-point scale from “a lot” (coded as 5) to “very little” (coded as 1). The final section contains one item on how well students feel they have done in the course unit. They respond on a 9-point scale from “very well” (coded as 9) to “rather badly” (coded as 1). Scores are assigned on each scale as the mean of the coded responses to its constituent items.

The instrument file contains a short version of the ETLQ. The first section contains 15 items in four scales: deep approach (6 items); surface approach (4 items); organized effort (4 items); and lack of purpose (1 item). The second section contains 15 items in six scales: congruence and coherence (3 items); teaching for understanding (3 items); staff enthusiasm and support (3 items); constructive feedback (2 items); support from other students (2 items); and interest and enjoyment (2 items). These sections use the same response scale as in the full version, and the other three sections are unchanged. This short version of the ETLQ is intended for monitoring teaching and learning and for carrying out small-scale investigations. For larger studies, the full version (<http://www.etl.tla.ed.ac.uk/questionnaires/ETLQ.pdf>) may be more appropriate.

C. Development and Psychometrics: During the 1970s, interview-based studies in Britain and Sweden found that students in higher education adopted different approaches to studying depending on the content, context and demands of particular tasks: a deep approach aimed at understanding the meaning of the materials; a surface approach aimed at being able to reproduce the materials for assessment; and a strategic approach aimed at achieving the highest possible grades. Various questionnaires were devised to measure approaches to studying in larger numbers of students.¹ Subsequent research has confirmed that there is a close relationship between students’ approaches to studying and their perceptions of the teaching–learning environment: students with more positive perceptions are more likely to adopt deep and strategic approaches but are less likely to adopt a surface approach.²

The ETLQ was developed for use in a project funded by the UK Economic and Social Research Council. The project’s aim was to enhance the quality of the teaching–learning environment in course units taught in 15 different departments across four disciplines: biology; economics; electronic engineering; and history. Students were surveyed under normal classroom conditions at the beginning and end of each unit to provide baseline data; an intervention to enhance the teaching–learning environment was agreed with relevant faculty; and the subsequent cohort of students (who received the relevant intervention) was surveyed in the same manner. Baseline responses were collected from 6488 students, of whom 1950 yielded complete data.³

The items constituting the ETLQ were drawn from a review of the literature and from existing inventories. In particular, the first section built upon the Approaches to Studying Inventory⁴ and the Approaches and Study Skills Inventory for Students,⁵ and the second section built upon the Course Perceptions Questionnaire⁴ and the Course Experience Questionnaire.⁶ A factor analysis of the responses to items concerned with Experiences of Teaching and Learning yielded a five-

factor solution that explained 41% of the variance and broadly confirmed the intended scale structure.⁷ Little information has been published concerning the psychometric properties of the full ETLQ. However, information was published regarding the short version based on data from the 1950 students who provided complete data in the original project,⁸ and this is reproduced in the instrument file. The first two sections exhibited satisfactory internal consistency (with values of Cronbach's coefficient alpha between .67 and .84). They also exhibited satisfactory construct validity: Factor analysis of the first section yielded three factors that explained 55% of the variance, and factor analysis of the second section yielded six factors that explained 71% of the variance. Scores on deep approach and organized effort were positively correlated with each other but negatively correlated with surface approach. Scores on the various aspects of experiences of teaching and learning were positively correlated with each other, consistent with the idea that they reflect different aspects of academic quality.⁹ The items in the other three sections are treated individually and do not constitute valid scales.⁸

D. Additional Studies Reporting Validity Evidence: At the University of Helsinki, the first two sections of the ETLQ were used as the basis for a new student feedback system. Most faculties of the University had adopted a two-cycle system consisting of a three-year Bachelor's degree followed by a two-year Master's degree. However, in the Faculty of Veterinary Medicine, the higher degree lasts for three years and is called a Licentiate, while in the Faculty of Medicine there is no intermediate Bachelor's degree, just a single Licentiate program lasting for six years.

The first two sections of the ETLQ were amended to refer to students' experiences of their courses in general and were then translated into Finnish. An online survey of first-year and third-year students was carried out in 10 of the University's 11 faculties, yielding responses from 2509 students. These were compared with the responses given by 2710 students in the original British study. The internal consistency of the scales in the Finnish questionnaire was broadly satisfactory (with reliability estimates between .59 and .82). Confirmatory factor analysis found significant differences between the British and Finnish students. Both groups showed a clear relationship between approaches to studying and perceptions of the teaching-learning environment, such that the students who had more positive perceptions were more likely to adopt desirable approaches to studying.^{10,11}

Further analyses of the Finnish data showed that the students could be classified into distinct clusters on the basis of their responses to the 18 items measuring approaches to studying; these clusters were differentially represented across the 10 faculties and differed in their perceptions of the teaching-learning environment.¹² Analogous findings were obtained in a re-analysis of the original British data.¹³ In light of these findings, the first two sections of the ETLQ were incorporated into an annual survey of students across the University of Helsinki called Learn.¹⁴ Evidence from bioscience students has been published concerning reliability and construct validity.¹⁵ The section on Approaches to Learning and Studying produced values of Cronbach's coefficient alpha between .59 and .76, and a factor analysis yielded four factors that explained 51% of the variance. The section on Experiences of Teaching and Learning produced values of Cronbach's alpha between .73 and .84, and a factor analysis yielded four factors that

explained 47% of the variance. This study also confirmed the relationship between students' perceptions and their approaches to studying.

E. Application to Health Sciences Education & Health Sciences Education Research: The Faculty of Medicine did not participate in the initial Helsinki trial, but the Faculties of Biological and Environmental Sciences, Pharmacy, and Veterinary Medicine were included, and findings obtained using the ETLQ have been published from all three faculties.¹⁵⁻¹⁷ All 11 faculties (including Medicine) are covered in the annual Learn surveys. The short version of the ETLQ contained in the instrument file could certainly be used in health sciences contexts, but it does require the resources to administer and analyze large-scale surveys. There are no population norms, but published data could be used for comparative purposes.

F. Commentary:

- Medical students are usually highly qualified and highly motivated. This does not exempt their teachers from seeking ways to enhance their experience and to deliver the medical curriculum more effectively. Feedback from students regarding their perceptions of their programs and the approaches to studying that they have adopted on their programs is an important source of evidence for achieving these goals.
- In North America, the practice of obtaining student feedback on individual instructors and course units is widespread. From a practical point of view, the ETLQ may not seem to add much in this context, even though it is based on a solid tradition of theory and research. Nevertheless, from the perspective of an institution seeking to maintain and improve the quality of its teaching, it could be argued that the appropriate focus of assessment would be an entire program of study rather than individual course units.¹⁸
- The Finnish adaptation of the ETLQ might well be useful in this regard. It builds upon 40 years of research into student learning and can be used in a wide variety of contexts and disciplines, although there are other instruments that might be used, such as the Course Experience Questionnaire.¹⁹ For instance, the Course Experience Questionnaire and the Revised Approaches to Studying Inventory have been used to evaluate a range of programs in the health sciences, including those using both problem-based and subject-based curricula.²⁰
- Nevertheless, like any other instrument for obtaining student feedback, the ETLQ would need to be revalidated for use in each new context.
- Research using the short version of the ETLQ confirms that there is a strong association between students' perceptions of a course or program and the approaches to studying that they adopt on that course or program. Nevertheless, the nature and direction of the underlying causal relationship has yet to be determined.²

- Response rates in both the British and Finnish studies typically varied between 30% and 60%, and so sampling bias may be a genuine problem. Researchers and practitioners need to identify ways to ensure that students are motivated to engage with such surveys.

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