

Chapter 16

Reflection on Teaching Observation for Computer Science and Engineering to Design Effective Teaching Resources in Transnational Higher Education

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ABSTRACT

Teaching observation plays an important role in the development of educators in higher education institutions, as this practice facilitates an environment where educators can share and be made aware of good pedagogic practices. This also applies to educators who teach in transnational higher education (TNE) programmes. The work in this article presents a theoretical framework for reflection on educator observations that took place on a semi-structured data and advanced data modelling module delivered to the BSc/MSc computer science programme at Queen Mary University of London. This article also provides an overview of a research methodology for designing and delivering teaching resources based on educational research and theory, as well as personal evaluations of the teaching teams' previous experience. The article illustrates how the approach adopted for the module can be transferrable to TNE programmes.

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INTRODUCTION

Learners' expectations and pace require teaching approaches to be altered to suit their needs (Naeem et al., 2022). To ensure that educators have a better understanding of their own teaching methods, they are encouraged to adopt a practice that includes personal reflection, observations with co-workers, reflections in small groups, and university reflections (Brookfield, 1995). One of the primary purposes of teaching observation is to look for educational inequities among different groups of learners. Using this method, educators may identify and seek to eliminate biases in how different groups of learners are treated based on their gender, socioeconomic status, or other differentiating criteria. The purpose of teaching observation is to provide educators and administrators with feedback on current educational practices and to identify pedagogical problems, which could be useful to promote transnational higher education (Wilkins & Annabi, 2021).

Observing learners in the classroom allows educators to think creatively about their own practices (Gill et al., 2023a). Observational tools and interactive reflection may be used to help learners achieve learning objectives and clarify expectations while also offering targeted feedback and a chance to gather information to enhance both teaching and learning in transnational higher education (Bui, & Nguyen, (2014). Introducing evaluation tools and creative reflection into the continuous improvement cycle fosters a feeling of accountability, trust, and collaboration among employees (Gill et al., 2023b). As a result, educators are better able to implement and disseminate best practises in order to help learners achieve their educational goals while learning in transnational higher education (Gill et al., 2022a).

Motivation and Contributions

This paper presents a theoretical framework for transnational higher education through reflection on teaching observations that took place for *Semi-Structured Data and Advanced Data Modelling*, a module taught on the MSc and BSc Computer Science programmes at Queen Mary University of London. A description of a research process for developing and providing good teaching resources that are based on educational research and theory, as well as personal evaluations of prior experience, is also presented. Finally, the data and evaluation outcomes acquired after using this approach in September 2021 are presented to demonstrate its efficacy in transnational and global higher education institutions. This module was taught online to learners in the United Kingdom and other countries in late September through mid-December 2021, demonstrating that it is suited for future Transnational Higher Education (TNE).

The rest of the chapter is structured as follows: the second section presents the review of relevant literature. The third section details a theoretical framework for teaching observation in computer science education. The fourth section gives the methodology for post-observation action. The fifth section shows the preliminary results from the post-observation action. The sixth section offers recommendations for transnational higher education. Finally, the seventh section concludes the chapter.

BACKGROUND AND ANALYSIS OF LITERATURE

More and more colleges and universities are using transnational higher education (TNE) as a means of internationalising their programmes. In higher education, TNE refers to any form of programmes or educational services in which the learners are situated in a nation other than where the granting institution

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