Chapter 5

An Approach to Improving Teaching in Higher Education: A Case Study Informed by the Neo-Positivist Research Paradigm

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ABSTRACT

This chapter outlines a case study of the application of the neo-positivist paradigm in the higher education research field. A small scale evaluative study of an attempt to improve teaching and learning provides the case study. The neo-positivist paradigm involves the objective investigation of an aspect of reality, providing a provisional, contemporary understanding of patterns and entities. The ways in which this paradigm informed the research design, methodology, and the interpretation of results in a small-scale evaluative study are discussed. The study represents an attempt to conduct a rigorous empirical research project that incorporated random allocation to intervention and control groups, pre- and post-intervention measures of teaching and learning and the use of psychometrically sound measurement tools and qualitative data. The ways in which the ontology, axiology and epistemology of the neo-positivist paradigm impacted on the study and its findings are outlined.

INTRODUCTION

This chapter focuses on higher education research. Higher education is not a discipline, per se, but a field of professional practice and a field of inquiry. There are a large number of disciplinary backgrounds applied to higher education research. These include a number one might expect, such as psychology, sociology, philosophy, linguistics, politics and management, as well as those that might not be obviously applicable, such as economics, anthropology and biology (Tight, 2004). There is, in fact, no barrier to the application of a disciplinary perspective to higher education research, other than that it has relevance to the investigation being undertaken and that this relevance is articulated.

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Research in higher education is focused across a wide range of themes and topics. Much of it falls into the following categories:

- Teaching and learning;
- Curriculum and course design;
- The student experience;
- Academic work;
- Institutional management;
- Quality; and
- Policy (Adapted from Tight, 2004).

This is by no means an exhaustive list but it provides an indication of the areas where much higher education research is undertaken. The two most common genres of higher education research identified by Tight (2004) are the small-scale evaluative study and the descriptive policy analysis or critique. These are often the genres in which higher education research students’ work.

There are many paradigms, or worldviews or sets of assumptions and understandings, that can be and are used in higher educational research. This chapter focuses on one of these—the neo-positivist paradigm. This paradigm involves the objective investigation of an aspect of reality. Neo-positivism provides a provisional, contemporary understanding of patterns and entities and is distinguished from positivism, which uncovers the way an element of the world is.

The ways in which this paradigm informed the research design, methodology, and the interpretation of results in a small-scale evaluative study are discussed. A case study of the PhD thesis of the author (see Devlin, 2007), which also led to a number of peer refereed papers, is presented to illustrate the application of this paradigm in a higher education research student context. It is hoped that this illustration might serve to assist both instructors and students in education research methods and researchers and research students engaged in education research, and those who supervise them.

A common challenge in undertaking higher education post-graduate research is determining the nature of the study to be pursued, the most appropriate research paradigm for the study, and the methods, data, forms of analysis, and nature of conclusions appropriate to progressing a topic of interest. This chapter provides higher education researchers, research supervisors and research students with one framework to consider when working to locate research interests in a paradigm and in determining a research design congruent with the paradigm.

The PhD study to be used as a case study was about teaching in higher education. It was concerned with improvement in the teaching of individual university academic staff. The author’s disciplinary background is Psychology and the PhD involved the application of an adaptation of a psychological approach to a higher education teacher context and the determination of the impacts of that approach on teaching. A particular approach to improving individual teaching based on, and adapted from a psychological technique, Solution Focused Brief Therapy (SFBT), was examined to determine the effects of this approach on the development and improvement of higher education teaching. In effect, the study was around an educational intervention—a focus of wide interest across a range of higher education research topics.

Designing and conducting research to determine the effects of educational interventions is a challenging endeavor (Devlin, 2008). There is a paucity of rigorous examination of the outcomes of attempts to improve higher education teaching and the PhD study on which this chapter is based sought to contribute to knowledge and the literature in this area. The study represents an attempt to conduct