Chapter 12

Paradigm Surfing Across Disciplines in Scholarship and Education Research:
Paradigm Surfing

Catherine Lang
La Trobe University, Australia

ABSTRACT

This chapter presents the experiences of a researcher conducting scholarship and education research in the computing discipline. It provides evidence of a journey through several paradigms, hence the chapter title: "Paradigm Surfing". This chapter includes a case-by-case retrospective analysis of several influential research projects referring to the categorization of paradigms presented by Ling and Ling in Chapter 1 of this book, and other scholars. The scholarships as distinguished by Boyer are also exemplified. An understanding of paradigm shift influenced by the environment, the research purpose, and perceived maturity of the researcher are presented. The interaction of Boyer's five scholarship areas – discovery, teaching, application, integration, and engagement – constitutes a central thread. The reflexive lens used demonstrates how these developmental scholarship and research experiences have contributed to a rich understanding of the importance of paradigms and the nature of interdisciplinary educational scholarship and research.

INTRODUCTION

In this chapter, the author presents the experiences of a researcher engaging in education scholarship and research in the computing discipline, and in doing so provides evidence of a journey through several paradigms, hence the chapter title: Paradigm Surfing. A retrospective lens is applied to four major scholarship and research activities that shaped the career trajectory of the author from schoolteacher to university academic. The end-point of this 20-year scholarly journey is acknowledgement of "surfing" through aspects of paradigms such as neo-positivist and interpretivist paradigms as defined by Ling and

Ling in Chapter 1 of this book. The constructivist paradigm is based on the assumption that reality is socially constructed (Mertens, 2005) and has led to an identification with the pragmatic paradigm as the best fit for the author's axiology.

A case-by-case retrospective analysis of the projects was conducted with the objective of providing the reader with an understanding of the paradigm shifts the author experienced on this scholarship and research journey, while not perhaps understanding the importance of this at the time. In each case the set of assumptions held at that time (ontology) are presented to demonstrate how these were influenced by the environment in which the research was undertaken. The axiology, or intent of the researcher in each case was influenced by the employer, the thesis supervisors as well as an intrinsic desire to gain an understanding of the various issues under investigation. The reflexive lens used demonstrates how scholarship and research experiences contribute to the development of a rich understanding of the importance of paradigms and the nature of interdisciplinary educational research (epistemology).

BACKGROUND TO MY RESEARCH JOURNEY

As a practicing schoolteacher with 10 years' experience, I gained the opportunity to undertake a university-based Teaching Fellowship, which was a collaboration with one university and the Department of Education in my State. This award recognized my significant contributions in the areas of the scholarships of teaching, application, integration (Boyer, 1990) and engagement (Boyer, 1996). I was released from my school to the university for twelve months and retained my current school position and salary, not an unimportant consideration for anyone working as an academic in a university without a higher degree. The year-long secondment involved three key aspects. The first aspect involved a commitment to teach into the undergraduate degree program thus extending and consolidating my skills, values and attributes in the scholarship of teaching. The second aspect involved interacting with university academics to promote the smooth transition of students to higher education, which drew heavily on my skills and knowledge in the scholarships of integration, application and engagement. The third was a commitment to undertake a research project related to teaching and learning, hence blending the scholarships of teaching and discovery in a way that extended the scholarship of teaching into that of discovery, as it was intended to result in the addition of new understandings to the current wisdom in the discipline area of the teaching of ICT in both schools and higher education.

In my school I was expert in two disciplines, Geography and Information Technology. While I was passionate about both areas I was aware of the growing importance of Computing and Information Technology in all aspects of education and business. I had observed that my senior classes were consistently dominated by male students, and despite my active petitioning to female students, I had little success in attracting them into the senior computing classes. Serendipitously, in my Teaching Fellowship application I proposed a research topic related to gender and computing that caught the attention of the Dean of the Faculty of Computing, who also was becoming increasingly aware of the gendered skew of students studying the discipline at university level.

The Teaching Fellowship led to my first taste of a research project beyond that of the student projects that were part of the final year school assessment in the subjects I taught. For example, in senior Geography this involved a systems approach to investigating inputs to a system, studying and evaluating processes within the system, and their subsequent effects on the outputs. In the Information Technology discipline, the students investigated a current computing system or business process to evaluate its ef-

Related Content

Hybrid Metaheuristic to Optimize Traceability in the Food Industry
Saima Dhouib (2021). *International Journal of Strategic Engineering (pp. 14-27).*
www.irma-international.org/article/hybrid-metaheuristic-to-optimize-traceability-in-the-food-industry/279643

Comparing the Behaviour of Two Topic-Modelling Algorithms in COVID-19 Vaccination Tweets: LDA vs. LSA
Jordan Thomas Bignell, Georgios Chantziplakisand Alireza Daneshkhah (2022). *International Journal of Strategic Engineering (pp. 1-20).*
www.irma-international.org/article/comparing-the-behaviour-of-two-topic-modelling-algorithms-in-covid-19-vaccination-tweets/292445

Designing Mixed Methods Studies to Contribute to Social, Economic, and Environmental Justice: Implications for Library and Information Sciences
Donna Mertens (2022). *Handbook of Research on Mixed Methods Research in Information Science (pp. 173-189).*
www.irma-international.org/chapter/designing-mixed-methods-studies-to-contribute-to-social-economic-and-environmental-justice/291193

Investigating the Opportunities to Improve the Thermal Performance of a Case Study Building in London
Yasin Yousefi, Petra Grattonand Dilshad Sarwar (2021). *International Journal of Strategic Engineering (pp. 1-18).*
www.irma-international.org/article/investigating-the-opportunities-to-improve-the-thermal-performance-of-a-case-study-building-in-london/269714

Digital Ethnography Within Indigenous Contexts: An Exploratory Perspective
Suma Parahakaran (2022). *Practices, Challenges, and Prospects of Digital Ethnography as a Multidisciplinary Method (pp. 138-147).*
www.irma-international.org/chapter/digital-ethnography-within-indigenous-contexts/309223