

Exploring Threshold Concepts in Research Methodology for Doctoral Candidates

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Mastering social science research methodology is a daunting challenge for doctoral candidates. This paper explores these challenges from the perspective of doctoral faculty and supervisors in the United States and Australia. A discussion of research methodology may be simplified into a linear sequence of selecting a topic, then framing the problem statement, purpose, focus, and research questions. The doctoral candidate then applies the appropriate research paradigm and theoretical perspective to their construction of a credible research design. As straight forward as this sequence appears, the doctoral candidate is confronted with an overwhelming number of methodological decisions prior to implementing their research study which geometrically expand with each step taken.

Doctoral degree non completion rates have remained consistently high for the past 50 years. Approximately only 50% of humanities candidates and 56% of social sciences candidates successfully complete their doctoral degree in the United States (Grasso, Barry & Valentine, 2009). In Australia completion rates are recently faring better than the United States yet remain unacceptably high (Group of Eight, 2013; Bourke, 2004). Clearly, high rates of non-completion continue to vex higher education. In no small part the challenges of research methodology play an important role when considering that this represents a key ingredient for the doctoral candidate completing the dissertation.

Threshold concepts offer a means to deconstruct and restructure teaching and learning of research methodology concepts for doctoral candidates. As Jan Meyer (2012) contends, the process is "... energising and provoking discussion by faculty about their own courses in their own disciplines, and often leading to the discovery of transformational concepts that occasion epistemic and ontological shifts in their students" (p. 8).

Drawing upon the extensive supervisory experiences of the authors and review of related literature (Gardner, 2010; Humphrey & Simpson, 2012; Kiley, 2009; Lovitts, 2008; Melles, 2009; Moss, et al., 2009; von Strumm, et al., 2011; Walker et al, 2008) a survey instrument was developed to identify potential threshold concepts in research methodology from the perspective of doctoral faculty and supervisors. The survey targeted members in the International Doctoral Education Research Network (IDERN) and a representative sample of supervisors at the universities which the authors are affiliated with. The study provides a transnational exploration of the "ways in which the idea of threshold concepts is interpreted by teachers" (Irvine & Carmichael, 2009, p. 116) and framed the scope of the inquiry to the following themes:

- Building a logical cohesive scholarly argument
- Recognizing when to bring theory into the study
- Gaining critical value from the literature to the study
- Progressing from description to analysis
- Credible evidence-based analysis and interpretation
- Contributing trustworthy high quality research

Particular attention is given in this paper to the dissertation phase of learning and the critical role of supervision. Underlying this research is the critically important need to improve instruction in research methodology and to increase successful completion rates for doctoral students. The study acknowledges the importance of scaffolding learning and teaching which supports student mastery

of concept knowledge. Conclusions examine strategies which promote the modeling of concepts beyond the procedural aspects of research methodology.

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