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Shifting conceptualisations of knowledge and learning: equipping teachers to address the needs of '21st century'

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Theoretical arguments related to societal changes in the 'knowledge society' and postmodernity and their implications for educational agendas emphasise the need for a re-conceptualisation of knowledge and learning in educational policies and practices in contemporary '21st century' societies (Richard and Usher 1994; Cope & Kalantzis, 2000; Gee, 2003; Gilbert, 2005; Hargreaves, 2003; Lankshear & Knobel, 2003; OECD, 2000; UNESCO, 2005; Andreotti & Souza, 2008).

Three arguments are central to this literature (Andreotti, 2008). First, that the profile of learners has changed and that teaching 21st century learners requires practitioners to perceive knowledge, learning and education in ways that are different from the ways knowledge, learning and education were perceived in 20th century (when most current practitioners were brought up and trained). Therefore practitioners are expected to provide learners with a sort of education that is different from what they will have experienced themselves (OECD, 2000; UNESCO, 2005).

Second, that for this shift of perception of knowledge, learning and education to happen it will not be enough for practitioners to shift the ways they behave or do things, or even the ways they think – they will need to shift the ways they 'know' (i.e. an 'epistemological shift') and the ways they 'see' (i.e. an ontological shift). These will also prompt a shift of perceptions and relationships which impacts all other areas, including the ways practitioners perceive their disciplines, themselves and their students (Gilbert, 2005; Gee, 2003; Richard and Usher, 1994; Cope & Kalantzis, 2000). Third, that these epistemological and ontological shifts involve knowledge about knowledge construction itself and the conceptual/theoretical underpinnings of current knowledge and future possibilities. (Gilbert, 2005; Andreotti & Souza, 2008).

Despite the contested nature of this debate and the denouncement of the complicity of the 'knowledge society' discourse with neoliberal practices, this emergent literature has started to shape educational reform world-wide, including the revised New Zealand School curriculum published in 2007. The first part of this paper presents the outline of a research project funded by the New Zealand Council for Educational Research on teacher education looking at the shifts in the conceptualisation of knowledge and learning in the implementation of the revised New Zealand curriculum in 10 teacher education settings. This project addresses the following questions: •How are the shifts in conceptualisation of knowledge and learning interpreted within the different knowledge domains of the practitioners in this research? How do these shifts affect the way the revised New Zealand Curriculum is interpreted and implemented?

## Methodology, Methods, Research Instruments or Sources Used

The research design involves data collection related to structural and systemic changes in curriculum design and pedagogical approaches for teacher education based on new conceptualisations of knowledge and learning and outcomes of interventions related to student teachers' and teachers' interpretations of the NZC (pre- and post- interventions). The research design was informed by poststructuralist theory and involves interviews, conceptual maps, observations and surveys.

## Conclusions, Expected Outcomes or Findings

This research uses Magolda's (1992) model of epistemological development to code the data in the ten settings. This model consists of 4 stages: absolute knowing (where knowledge is seen in absolute 'right or wrong' terms); transitional knowing (where absolute and relativist knowledge co-exist); independent (where knowledge is relative); contextual (where knowledge is contingent and provisional). The case study presented in the second part of this paper will summarise the findings of one of the ten educational settings. The analysis of data will be completed in August 2009.

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