

My Inquiry Title

Culture, Worldview and Transformative Philosophy of Mathematics Teacher Education in Nepal: A Cultural-Philosophical Inquiry

Through this research my aim is to develop an alternative culture sensitive philosophy of mathematics teacher education for Nepal.

My Objectives

During this inquiry I propose to accomplish the following tasks.

1. I intend to review critically the existing philosophies that have guided mathematics teacher education programs in Nepal. My aim is to reflect on my lived reality, associated documents and the field experiences that I propose to undertake.
2. I wish to explore the similarities and contradistinctions between the Nepali cosmology and the Western Mathematical Worldview. In so doing, I shall explore more of the epistemological and ontological nature of Western Mathematical and Nepali Worldviews.
3. I plan to develop an alternative philosophy of mathematics teacher education that helps me in designing and implementing teacher education programs.

My Inquiry Agenda

My inquiry intends to answer the following questions.

1. Which philosophies have been governing existing Mathematics Teacher Education programs in Nepal?
2. In what ways are the Western Mathematical Worldview and Nepali Worldview similar and different in terms of their epistemologies and ontologies?
3. In what ways can wisdom traditions of the East (e.g., Hinduism and Buddhism) contribute to the development of an alternative philosophy of mathematics teacher education in Nepal?
4. What are alternative ways of knowing mathematics in my cultural context?
5. How can mathematical knowledge for teacher education in Nepal be made holistic, ecologically balanced and discursive?
6. What can a transformative philosophy of mathematics teacher education be for Nepal?

Research Paradigms

My research is influenced by recent post-modern and Integral traditions. By using a post-modern research paradigm, I will be able to employ multiple genres so as to generate deep understandings about the nature of mathematics teacher education in Nepal. This paradigm further enables me to embark on a journey that paves the way for adapting multi-perspectival knowing through multiple genres. The unfolding paradigm of Integralism helps me to generate wisdom by uniting different – often contradictory – realms of knowing through alternative logics, such as dialectics, poetics, narrative and metaphor.

Overall Quality Standards of My Research

Standards	Brief discussion
Verisimilitude	<p>The dictionary meaning of the term verisimilitude is a state of being verisimilar (answers.com). In qualitative research it has been introduced as a quality standard after the onset of the triple crises of representation, legitimacy and praxis (Guba & Lincoln, 2005; Van Manen, 1991). By using verisimilitude as a research standard one can judge my research text on the basis of the following questions.</p> <ul style="list-style-type: none"> • Does the text sound true according to your experience? • Are educational issues raised by my texts relevant beyond the research context?
Pedagogical Thoughtfulness	<p>The idea of creating pedagogical thoughtfulness through educational research comes from hermeneutical-phenomenological traditions (Van Manen, 1991). According to Van Manen, pedagogical thoughtfulness is an act of becoming attentive of and reflective upon those situations which have direct or indirect bearings with education and pedagogy. By applying this research standard, readers of my research text will search for answers to the following questions.</p> <ul style="list-style-type: none"> • To what extent does my text arouse interest in exploring the reader's pedagogical history? • Does my text provoke readers to reflect upon their pedagogical beliefs and values?
Critical Reflexivity	<p>The term reflexivity signifies the extent to which the researcher has made his/her background information available to readers. By this, the readers will be able to judge, without difficulty, his predisposition. However, this naïve meaning of reflexivity does not seem to help much to realise the researcher's false consciousness developed over a lifetime. Such false consciousness can be created by her/his chosen epistemology, methodology, and theoretical referents. Therefore, the idea of critical reflexivity entails the notion of exposing self as well as being self-conscious of my own (unfolding) subjectivity, thereby being aware of the limitations of my chosen epistemology, methodology and theoretical referents (Denzin, 2003). Searching for answers to the following questions helps readers to judge the quality of my critical reflexivity.</p> <ul style="list-style-type: none"> • Have I exposed enough about myself? • Have I made my theoretical standpoints clear to the reader? • Have I demonstrated my conscious awareness of my own subjectivity?
Holism	<p>The idea of holism comes from the paradigm of Integralism. To apply the standard of holism, the researcher needs to take into account possible adversaries inherent in the phenomenon under study. According to Aurobindo (1998), the notion of holism is underpinned by three major principles - freedom, creativity and uniqueness - so as to realise that the 'whole' is ever-expanding. The following questions can be helpful in judging my research based on the standard of holism.</p> <ul style="list-style-type: none"> • To what extent does the researcher take into account alternative viewpoints (adversaries)? • To what extent does the researcher unify logic, emotion and imagination so as to generate holistic understanding of issues/phenomena under study? • To what extent is the researcher motivated towards generating wisdom?

He Never Quoted His Father

He produced a lecture. He told us mathematics is difficult. He positioned himself up there. He looked at us down here. He symbolised us as subjects. He quoted Western mathematicians. He never quoted his parents.

He used harsh words. He took an hour to eulogise the capital M. He harassed the young people. He preached his dogma. He situated himself within the territory of capital M. He did not see our potential. He intimidated everyone of us. He drank two cups of water. He used abstract mathematical concepts. He didn't challenge Whitehead or Russel. He was condescending of schoolteachers. He never quoted his wife.

He said, "Research in Mathematics is difficult. You have to stop eating while doing mathematics. You have to stop mundane thinking while doing mathematics. You have to be away from nasty reality while doing mathematics. You have to be an alien while doing mathematics. You have to forget yourself while doing mathematics. You have to think about mathematics all the time. You have to be an isolated hermit to be a mathematician."

He implied that we cannot be mathematicians. He predicted that we would be bad losers. He made use of his oxymoron capital M theorems. He made us sleep. He tried to convince us that capital M is all powerful. He did not quantify its power though. He told the grand story of his mathematics. He did not use humorous language. He required us to be serious. He never quoted his daughter.

He told us that children's maths is not capital M. He dismissed the 'gogy' business. He advocated pure content. He dismissed my presentation as untouchable. He mythicised mathematical symbols. He quoted self and many unfamiliar names. He never quoted his son.

Questions for discussion

- To what extent does this poem represent your experience?
- To what extent is the poem expressive? Does it communicate well?
- Are educational issues raised by my poem relevant beyond the research context?
- To what extent does my text arouse interest in exploring your pedagogical history?
- Does my text provoke you to reflect upon your pedagogical beliefs and values?

List of References

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- Sri Aurobindo. (1998). *Supramental manifestation and other writings* (2nd ed.). Twin Lakes, WI: Lotus Press
- Van Manen, M. (1991). *The tact of teaching: the meaning of pedagogical thoughtfulness*. Albany: State University of New York Press.