

Research for Social Justice with Culturally Inclusive Mathematics Pedagogy: An Asian Indian's doctoral study with Indigenous Indians in Canada

Shiraz Ramji

Simon Fraser University

Abstract

Kanwal Inder Singh Neel (2008), a Canadian Asian Indian, did his doctoral research on culturally inclusive mathematics pedagogy with Canadian Indigenous Indians, also known as First Nations people, and wrote his PhD thesis entitled, *Numeracy in Haida Gwaii BC: Connecting community, pedagogy and epistemology*. I read about Neel's research for social justice in Simon Fraser University's (SFU) alumni newsletter AQ (November, 2008). Prior to his doctoral journey, Neel was a mathematics teacher in Canada for thirty years in elementary and high schools, and during the period as the President of B.C. Association of Mathematics Teachers, Neel recognized the need to research a meaningful community-based mathematics pedagogy for Indigenous students so that they could participate actively in the learning process and improve their performances in the high school mathematics. As a fellow Canadian Asian Indian doing First Nations studies, I asked myself - What motivated Neel to do the research for social justice with Canadian Indigenous Indians? What research methodologies did Neel use to partner with Indigenous Indians? How did Neel work with Indigenous communities including the Elders and the Educators? What are the challenges for a Canadian Asian Indian, as an outsider, to do research with Canadian Indigenous Indians? What did I learn from Neel's research methodology?

Keywords: Social Justice, Mathematics Pedagogy, Indigenous Indians

1.0 INTRODUCTION

To answer these questions I read Neel's thesis and had a short conversation with Neel to reflect on my observations of his thesis, and on our common experiences as Mathematics teachers and as former students of colonial education. Neel and I were born in East Africa during the colonial period of occupation by the British government, and schooled with Euro-centric curriculum and pedagogy. Neel and I, as colonized citizens, were subjects of colonial research for domination, and were trained in conventional hierarchical research methodologies in which the researcher is not accountable to the community of researched group. The contrast between community-based research for social justice and colonial imperial research for domination and manipulation is best illustrated by Maori Professor Linda Tuhiwai Smith of New Zealand. The Indigenous peoples of Canada, Australia, New Zealand, and a significant population of Africans and Asians were colonized by the British government and exposed to Euro-centric curriculum and education. The sun never set in the British Empire. The imperial research methodologies for domination and manipulation were used in all colonies, and therefore the alternative research methodologies for self-determination and social justice, proposed by Smith, has universal application.

In her 1999 book, *Decolonizing Methodologies: Research and Indigenous Peoples*, Smith reviews the European imperialistic research of New Zealand Indigenous Maori people, and articulates an alternative humanizing and empowering community-based Indigenous research agenda for social justice for all people. As a Maori researcher and a Director of the International Research Institute for Maori and Indigenous Education at the University of Auckland, Professor Smith gives a comprehensive account of the history and the impact of dehumanizing colonial research and representation of Indigenous people in New Zealand. Smith observes that the European imperialistic research adventures established the positional superiority of European knowledge, and defined the Indigenous problem through Eurocentric research. According to Smith (1999, p21), "European imperialism is used in at least four ways: first as economic expansion, second as the subjugation of "other" colonized peoples, third, as an idea or spirit with many forms of realization, and fourth as a discursive field of knowledge." The chronology of events in imperialism is related to discovery, conquest, exploitation, distribution and appropriation. Smith emphasizes that colonialism is one expression of imperialism, and refers to colonial efforts to assimilate Maori intellectuals through dominant education system. Similarly, as colonized Asian Indians and intellectuals of the British Empire, Neel and I had to struggle against dehumanizing representation and assimilation, as well as positional superiority of European knowledge.

Smith also shares experiences of local and global social movements to develop and reclaim indigenous research methodologies and ethical research proposals. According to Smith (1999, p142), "the act of reclaiming, reformulating and reconstituting indigenous cultures and languages have required the mounting of an ambitious research program, one that is very strategic in its purpose and activities in its pursuit of social justice." Smith's recommendation of research for social justice is embedded in Neel's motivation and goal to research meaningful community-based mathematics pedagogy for Indigenous students so that they could participate actively in the learning

process and improve their performances in the high school mathematics. In his doctoral thesis, Neel (2008, p66) refers to Smith in relation to her recommendation for a researcher reciprocating or giving back to the community: “Before beginning the study, I grappled with a couple of questions regarding how I would be “Giving back” to the community. What will interview participants get in return for sharing their time and insights? How will the community benefit in some way from the results of the study?” Neel reciprocated to the Haida Gwaii community by sharing his experience and expertise in presenting workshops on the mathematics curriculum and pedagogy to teachers over a period of three months.

In the following sections, I will describe Smith’s alternative indigenous Kaupapa Maori research methodologies and ethical research proposals for social justice. I will also describe Neel’s research experiences working with Indigenous Indians and how he incorporated some of the Smith’s community-based Kaupapa Maori research methodologies. According to Smith (1999), Kaupapa Maori research connects to Maori philosophy and principles, is culturally safe, and involves the mentorship of elders (p184). The Kaupapa Maori research challenges prevailing ideologies of cultural superiority, which dominates New Zealand social, economic, and political institutions (p184). Smith emphasizes that Kaupapa Maori research incorporates themes such as cultural survival, self-determination, healing, restoration and social justice, which engage Indigenous researchers and Indigenous communities in a diverse array of projects. These projects have multiple goals and involve different Indigenous communities of interest. Smith (1999, p143) also emphasizes that “within an Indigenous framework, methodological debates are concerned with the broader politics and strategic goals of Indigenous research. Indigenous methodologies are often a mix of existing methodological approaches and Indigenous practices”. Smith, like most Maori researchers, welcomes the participation of non-Indigenous researchers who support the cause of Maori people and discuss their research proposal and intentions. Smith’s book, as the title indicates, is about decolonizing methodologies and is relevant for people involved in humanizing research agenda.

In the following sections I will show how Neel, as a non-Indigenous decolonizing researcher, involved Indigenous Elders and educators to define community-based Indigenous research agenda and concerns within the framework of Indigenous ethics and practices. I will also describe Neel’s challenges and limitations as an outsider to do research with Indigenous communities. In his doctoral thesis, Neel (2008, p55) describes his obligation and sensitivity as an outsider researcher in the statement: “Being a non-Heida, I made every attempt to practice an Indigenous methodology which was culturally appropriate, and followed the ethical practices of respect, relationship and reciprocity as part of my research.” Neel (2008) used Indigenous methodology for his ethnographic qualitative research and involved elders, role models, and others in the community as his mentors. Neel (2008, p67), who lived with the community of Haida Gwaii for six weeks, illustrates his ethical practices of respect and relationship with elders and community members in the following statement: “When I participated in the community events and activities, I made sure that I learned from members of the community about cultural traditions and expectations. I would continually interact formally and informally with the elders and community members to learn about the expertise of the local cultural language.” In the thesis, Neel mentions that he learnt from his own Sikh religious elders that Indigenous Indians are “keepers of the land, knowledge, and local traditions” (2008, p3). Acknowledging this reality may have contributed to the development of Neel’s relationship of mutual respect with Indigenous Indian Elders and other community members.

The key person who facilitated Neel to learn and connect with the community of Haida Gwaii was Vonnie Hutchinson, the Director of Haida Education, School District #50 (Haida Gwaii/Queen Charlotte). She knew most of the members of the Haida Gwaii community including the Elders, teachers, and other professionals and artists (referred as role models in the thesis). Director Hutchinson, who became one of the members of the Neels’ doctoral thesis supervisor’s committee, shared her knowledge of ethics, culture and traditions of Haida Gwaii community. Neel discussed his research proposal and intentions with Haida Education Council to get their approval and support to learn with the members of the community. Neel’s dialogue with Haida Education Council is consistent with what Smith recommends for non-Indigenous researchers. After getting approval from Haida Education council, Neel had two focus groups with six Haida Elders in each group. The Elders were recognized by their communities for their knowledge and willing to talk about their experiences. Neel wanted each elder, sitting in a circle, to talk about how they use mathematics in their daily life, how these practices can be integrated in the school curriculum, and how schools can assist students to improve their performances in mathematics. However, Neel acknowledges in his thesis that the meeting with the Elders was not successful because he had not established “open and sharing relationship” with them. Also the Elders did not have positive experience in schools during their childhood, and did not see the connection between mathematics and their daily lives.

In addition to meeting with Elders, Neel interviewed 33 members of the Haida Role Model Program consisting of Elders, professionals, and community members who normally go to school and assist teachers in integrating Haida knowledge and perspectives with the school curriculum. Haida Role Model Program consists of

people with wide range of experiences including fishermen, weavers, traditional medicine practitioners, and accountants. Neel met and interviewed all the mathematics teachers in secondary and middle schools located in Haida Gwaii community. Neel also interviewed ten teachers, who taught subject other than mathematics, and were involved in leadership roles, union issues, or outdoor education. With the approval of the participants, Neel photographed most of the interviewees, and used some of the photographs for his thesis. The analysis of the interviews surprised Neel, because the Haida Gwaii Elders and members of the Haida Role Model Program wanted the children in school to learn both the Indigenous and the Eurocentric (so called western) world views and recognize their functional interconnectedness in an economically sustainable society (p255). The Elders and the Role Models wanted their children to learn culturally-sensitive community-based mathematics, improve their performances, and succeed in the modern world. To confirm and quote the research knowledge (findings), Neel gave all the interview participants their respective sections of the transcript for correction and approval for use as quotes in the thesis.

Vonnie Hutchinson, the Director of Haida Education also shared significant parts of the Neel's doctoral thesis with the Haida Education Council for approval and blessing. Neel's involvement of the interview participants and Haida Education Council to reflect and approve what he was writing about his research with Haida Gwaii community is consistent with what Smith recommends for non-Indigenous researchers. Neel also got approval from Simon Fraser University (SFU) research ethics committee and reviewed his culturally appropriate Indigenous research methodology, including the interview questions, with his thesis supervisors on a regular basis. He also followed the Canadian Tri-Council Policy statement: *Ethical Conduct for Research Involving Humans (2005)* on research involving Aboriginal Peoples. The Tri-Council is made of Social Sciences and Humanities Research Council of Canada, Canadian Institutes of Health Research, and Natural Research and Engineering Research Council of Canada. The "good practices" researchers are asked by the Tri-Council to consider include the following:

- To respect the culture, traditions, and knowledge of the Aboriginal group;
- To conceptualize and conduct research with Aboriginal group as a partnership;
- To consult members of the group who have relevant expertise;
- To involve the group in the design of the project;
- To examine how the research may be shaped to address the needs and concerns of the group;
- To make best efforts to ensure that the emphasis of the research, and the ways chosen to conduct it, respect the many viewpoints of different segments of the group in question;
- To acknowledge in the publication of the research the various viewpoints of the community on the topic researched; and
- To afford the community an opportunity to react and respond to the research findings before the completion of the final report. (p56).

According to my reading of Neel's thesis, he succeeded to fulfill all the ethical research requirements of Smith, SFU, Canadian Tri-Council as well as the Haida Gwaii community and Haida Education Council

2.0 CONCLUSION

Neel's doctoral research with Canadian Indigenous population for social justice with culturally inclusive mathematics pedagogy was a success because of his sincere interest in working for social justice of his Indigenous students. His research methodologies involved working in partnership with Indigenous Indians, including the Elders and the Educators. Neel respected, related, and reciprocated to the Haida Gwaii community by sharing his experience and expertise in presenting workshops on the mathematics curriculum and pedagogy to teachers over a period of three months. That is research for social justice.

References

Guno, K'amyuuwa'a Marcia. (2001). *In the spirit of sharing: Honoring First nations educational experiences*. Unpublished master's thesis, Department of Sociology and Anthropology, Simon Fraser University, Vancouver.

Kajander, Ann. (2003, Spring). Mathematics education reform and disadvantaged preservice teachers: A case study of a First Nations student. *Educational Forum* 67, 258-264

Keewatin, Alice Rose. (2008). *Balanced Research: Understanding an Indigenous paradigm*. Unpublished doctoral dissertation, University of Alberta, Canada.

- Kirkness, Verna J. (1992). Giving voice to our ancestors. *Canadian Journal of Native Education*, 19 (2), 145-149
- Kirkness, Verna J. & Barnhardt, Ray. (1991). First Nations and higher education: The four Rs—Respect, Relevance, Reciprocity, Responsibility. *Journal of American Indian Education*, 30(3), 10-
- Martin, Jane Vera. (2008). *Voices from the heart of the circle: Eight Aboriginal women reflect on their experiences at university*. Unpublished doctoral dissertation, University of Alberta, Canada.
- Neel, K. I. S. (2008). *Numeracy in Haida Gwaii BC: connecting community, pedagogy and epistemology* Unpublished doctoral dissertation, Faculty of Education, Simon Fraser University, British Columbia, Canada.
- Norton-Smith, Thomas N. (2004). Indigenous numerical thought in two American tribes. In Anne Waters *American Indian thought: philosophical essays*. Malden, MA: Blackwell Publishing
- Peacock, Robert Murray. (2002). *First Nations student: what some teachers do that make them successful*. Unpublished doctoral dissertation, University of San Diego, California.
- Schroder, Barbara. (2006, September). Native Science, intercultural education and place-conscious education: an Ecuadorian example. *Educational Studies* 32, (3), 307-317
- Smith, L.T. (1999). *Decolonizing methodologies: Research and indigenous peoples*. New York: Zed books
- Taylor, L. (1997). Integrating mathematics and American Indian cultures. In J Tentacosta and M.J. Kenney (Eds.), *Multicultural and gender equity in the mathematics classroom: the gift of diversity* (pp. 169-176) Reston, VA: National Council of Teachers of Mathematics.

