

Chapter 3

A Cultural Border Crossing Pedagogy for Geographic Information Systems in Higher Education

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ABSTRACT

This chapter responds to the call to decolonise the curriculum by exploring ways to prepare student teachers to translate theory into practice by proposing a cultural border crossing pedagogy, incorporating African Indigenous Knowledge (AIK) to teach Geographic Information Systems (GIS) in a rural context. This study employed a critical paradigm, using the narrative inquiry methodology within a qualitative approach to explore a teacher educator's experiences of teaching GIS in a rural context previously with the aim of improving her current practice. Narrative interviews were conducted to generate field texts and narrative analysis was employed to analyse data. The study's findings show that incorporating a cultural border crossing, AIK to teach GIS in a rural context enhances understanding and fosters cultural appreciation because it bridges the gap between home academic and academic culture. The study advocates for decolonised GIS curricula in higher education that reflects Africa's diverse knowledge systems.

INTRODUCTION AND BACKGROUND OF THE STUDY

Research in Geography teaching and learning in South Africa has demonstrated tensions in the teaching and understanding of the subject, attributable to competing knowledges (Long et al, 2019; Thornton, 2007). This suggests that the conflict relates to contestation between diverse groups in society, fighting for the recognition and acceptance of their epistemologies. In South African education, western Science has been uplifted as the only standard, the benchmark of knowledge and the knowledge of black groups

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(Africans, Khoisans, Coloureds and Indians) have been pushed to the periphery of official knowledge construction and treated as irrational.

Since the formation of South Africa as a union in 1910, the colonialists fought to establish a nation built on the notion of white supremacy. Thus, race became central to knowledge construction, with whites in a position of privilege and custodians of the dominant epistemology. As such, this practice affects the academic performance of Black students because the knowledge and languages used in the lecture halls are those of colonisers and other epistemologies have been silenced (Ndlovu-Gatsheni, 2021; Kaschula & Wolff 2020; Raab, 2013; Hameso, 1997). This is part of linguistic and epistemic violence that decolonisation agenda is fighting against (Zembylas, 2018).

Geography, like any other discipline, is affected by the current changes in education as we delve into debates pertaining to the decolonisation of the curriculum and the Fourth Industrial Revolution. GIS is abstract to many student teachers as it requires them to learn GIS terms and perform processes that have had little relevance in their lives. As a result, student teachers struggle to connect their academic culture and home culture since both these worlds do not align linguistically, epistemologically and ontologically. Therefore, learning GIS and being in a Geography lecture is a cross-cultural event for many student teachers. The concept of border crossing may also shed light on the anthropological ideas Maddock (1981) proposed for non-Western, indigenous and minority students. The author argues that:

“It is easy to assert that, to be effective, teaching must take full account of the multi-dimensional cultural world of the learner, to apply this principle in a particular situation, and to express it in terms of curriculum materials and classroom methods, is a formidable task” (p. 40).

The idea of cultural border crossing is not new in education. For instance, Aikenhead (1996) focused on how students from different backgrounds, predominantly rural communities, encounter challenges when learning Science. The author pointed out that there is a cultural divide that students experience between home and school, which he refers to as a border. Hence, students engage in cultural border crossing. In this chapter, we define cultural border crossing pedagogy as an educational approach that acknowledges and navigates the cultural differences student teachers bring into the classroom. We argue that pedagogy helps student teachers transition between different cultural contexts, such as home and university, by making learning more contextual. In so doing, they would be empowered and know how they can better teach the curriculum.

Since South Africa is now in a democratic dispensation, it is pivotal to help student teachers border cross by using their personal assets to learn and teach GIS and create more equitable and inclusive learning spaces. As put by Van Manen (1977), curriculum apprehensions are practical concerns and require practical decisions from teachers and in South Africa, teachers and student teachers must ensure that they fight for recognition of other knowledges as practical decisions that would bring forth quality learning. This strategy will assist our classrooms in eradicating competition of knowledges, which leads to missing links in understanding subjects as teachers, student teachers and learners grapple with what is acceptable and unacceptable within the curriculum, which indicates that there is a pivotal connection between knowledges, which has a bearing upon learners and teachers. Official knowledge (written in textbooks) is accepted as authentic and reliable, but the unofficial knowledge (in the media, community and family conversations) is not recognised, consequently bringing a contradiction to learners and teachers.

This chapter proposes that the teaching of GIS in this era of decolonisation needs to also embrace African Indigenous Knowledge (AIK). By AIK, we mean African reality from the perspective of the African and not with the African on the periphery (Owusu-Ansa & Mji, 2013). In this chapter, the concept of African indigenous people refers to indigenous people of South Africa such as the amaZulu, amaX-

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