



REVIEW

Imagining the Intra-connections in Geography Education through the Notion of Place

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ABSTRACT

One of the challenges facing geography educators at higher education institutions in South Africa is to prepare students by providing them with an integrated conceptual and pedagogical toolkit that would adequately equip them to teach a type of geography that is current and relevant to local (but also global) environmental and social phenomena. As an intra-disciplinary science, Geography offers multiple avenues for fostering this type of integration, yet as argued elsewhere, [1] because of a fragmented school Geography curriculum, teacher educators struggle to foster holistic and integrated learning among novice student teachers. In fact, academic geographers most often privilege their own field of specialisation rather than work towards integration [2]. Ultimately, this perpetuates a fragmented teaching practice and conceptual understanding of geographical phenomena. This paper provides a theoretical exploration to demonstrate how Geography Education could retain its holistic nature and advance integration by (re)turning to its own intra-disciplinarity. It was found that the notion of “place” (one of Geography’s big ideas) could serve as a potential point of departure for fostering integrated thinking in the discipline. The argument is made that place-based approaches offer fertile avenues to pursue in Geography Education programmes for equipping student teachers with a holistic conceptual and pedagogical toolkit.

1. Introduction

Although various reasons could be offered to explain the fragmented nature of teaching and learning in Geography, one of these could be Geography lecturers’ over-emphasis on their own area of specialisation, which manifests in their teaching and research. This tendency might exacerbate fragmented thinking among student teachers who chose Geography as one of their majors. Another reason could be the inclination among geographers to look beyond their own discipline

for opportunities to strengthen the discipline^[3] without realising the potential of Geography’s own intradisciplinary nature. This paper argues that integrated teaching, learning and thinking should already start at the levels of primary and secondary education. Thus, the paper evinces a strong focus on education at school level.

In a paper on the advancement of Geography Education (GE) in Southern Africa, some of the key challenges facing GE in South Africa, ranging from the state of school Geography and teacher education to the strength of its scholarly voice in academia is outlined^[4]. The author fur-

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ther points out that GE in South Africa is defined by large discrepancies in terms of performance levels of learners in relation to national curriculum standards, the teaching and learning methods implemented by teachers, and teacher knowledge, among others^[4]. Furthermore, analyses of the NSC Examination Diagnostic Report for Geography¹ 2015/6 showed that the same problems recurred. Some of these entailed the candidates' lack of conceptual understanding of geographical terminology and basic relational thinking about geographical phenomena^[5]. Although various causes for this can be offered – for example, the outmoded views of knowledge according to which educational institutions including schools still operate – some scholars^[1] trace part of the problem back to the two separate Geography papers that are written at the end of Grade 12; they argue this is a direct outcome of the segmented representation of content in the current Curriculum Assessment and Policy Statement (CAPS).² For example at the end of grade 12 learners are expected to write Paper 1 comprising of the human and physical sciences and Paper 2 which contains the map work and GIS (geographical skills). The separation of Papers 1 and 2 not only influences the type of pedagogies and their implementation, but also perpetuates a kind of “fragmented” thinking among students^[1].

This paper expands on and explores this narrative of fragmentation in an attempt to return to Geography's intra-disciplinarity through focusing on the notion of place, which can strengthen integration in geographical topics as set out in the CAPS for Grades 10-12. The paper is divided into three main sections: (1) methodological approaches; (2) results and discussion and (3) implications. The results and discussion section is comprised of six sub-sections; first results from a document analysis of the Geography CAPS for the Further Education and Training (FET) phase are presented to demonstrate how topics could be more closely aligned (integrated); secondly observations gathered from teaching Geography on a BEd programme³ will be discussed; thirdly the purpose of academic geography and geography education is presented to determine whether the content contained in the CAPS corresponds to Geography's broader purpose; and fourthly the notion of fragmentation is explored. This is followed by a discussion on the notions of intra-disciplinarity and place⁴ as potential avenues for addressing the issue of fragmenta-

tion. The last sub-section presents the conceptual links or intra-actionality between *geography, place and education*. In conclusion, some implications for geography educators are discussed.

2. Methodological Approaches

The research methodology underpinning this paper is a qualitative theoretical exploration. Qualitative research is a unique way of conducting a study that requires specific ways of asking questions and thinking through a problem^[6]. According to qualitative researchers,^[7] method implies the manner and tools for data collection ranging from asking questions, reading documents or observing particular situations. Document analysis and observations from my own experience and position as a Geography educator are used as qualitative research methods and points of reference. The document that has been analysed qualitatively in this study is the Geography Curriculum Assessment Policy Statement (CAPS) for the Further Education and Training Phase (FET) for Grades 10-12, which is currently being used in South African public schools^[8]. A qualitative content analysis was conducted on the content of the geographical themes presented from Grades 10 to 12 in order to identify whether and how any of them could be integrated more profoundly by means of the concept of place. Furthermore, inferences from observations from a group of first year teacher students are also discussed. The qualitative analyses consisted of the following steps:

- (1) Identifying related topics which could have been integrated as one topic in the CAPS document;
- (2) Exploring these topics in relation to different understandings/dimensions of place as a means to foster integration in Geography (Education).
- (3) Observations from first year BEd students in the Geography classroom.

3. Results and Discussions

3.1 Document Analysis: Segmented Themes in the Geography CAPS (FET Phase)

This sub-section will discuss the manner how key geographical concepts feature as isolated entities in the CAPS for the FET phase (Grades 10-12), which could be considered as a possible cause for fragmented teaching and un-

¹ This is a summary and analysis of learner performance for each question in both papers written at the end of Grade 12.

² The acronym CAPS stands for Curriculum Assessment Policy Statements. The document is a national policy set out by the Department of Education which states what should be included in the curricula of schools for each grade in South Africa as well as how it is to be tested or assessed.

³ BEd programme refers to the four year degree: Bachelor in Education.

⁴ For the purpose of this article the notions of place theory, place-based education and a pedagogy of place are used interchangeably.

derstanding of geographical phenomena. The fundamental concepts of *sustainability*, *environment* and *place* feature widely in academic as well as in school Geography^[9]. However, through a document analysis it was found that these concepts are represented as isolated, disconnected and discrete entities in the Geography CAPS. Examples from the Grade 11 CAPS document will be provided to substantiate this finding.

The Grade 11 Geography CAPS document lists five main themes: 1) *geographical skills and techniques*, 2) *the atmosphere*, 3) *geomorphology*, 4) *development geography*, and 5) *resources and sustainability*^[8].

The theme *geographical skills and techniques* deals with the subtopics of map skills, GIS, and topographical and aerial maps. The second theme, namely the *atmosphere*, deals with subtopics such as the earth's energy balance, global air circulation, Africa's weather and climate, and drought and desertification^[8]. The theme *geomorphology* addresses topics such as mass movements and human responses, the topography associated with horizontal and inclined strata and massive igneous rocks, and slopes. The fourth theme, *development geography*, emphasises the concept of development and related issues, frameworks and challenges. In the last theme, namely *resources and sustainability*, reference is made to the use of resources, soil and soil erosion, and energy sources and management in South Africa^[8]. Although these feature as key topics in the CAPS document, they are presented in a compartmentalised way. It is not made clear how these themes connect to one another. Ultimately, teachers teach according to this form of content representation in the CAPS, which contributes to fragmented understanding and learning among students.

It is evident that, in each of the themes mentioned above, reference is made to the environment, place (although primarily in terms of a physical location) and (sustainable) development, but not in an integrated fashion. Links between certain themes could have featured more explicitly in the CAPS in order to enhance teaching and learning. For example Africa's climate and weather could have been integrated with the earth's energy balance (the atmosphere), mass movements and human responses (geomorphology), development issues and challenges (development geography), and map skills (geographical skills and techniques). Morgan^[9] asserts that *sustainability*, *environment* and *place* are the key integrated elements that lie at the core of the discipline of geography, and should therefore be treated as such. However, the lack of connection and interrelatedness is evident in the way that geographical themes have been outlined in the CAPS^[8].

As mentioned earlier fragmented and mechanistic

approaches to geographical teaching, learning and understanding, ultimately hinders the type of holistic, integrated and systemic understanding that is needed to develop a "sustainable, environmental and place consciousness" among students^[1, 10]. Consequently, teachings and pedagogies of this nature not only deliver the type of student who perceives the world and its systems as disconnected, but they also disregard two of the core principles of Geography teaching, namely holism and integrated learning^[11]. Ultimately, students end up studying "place" in terms only of location (coordinates on a map), the environment only in terms of its biophysical dimension, and (sustainable) development only in terms of economic growth. This subverts and undermines the goal of Geography Education, which is to enable students to think holistically and to see the connections between concepts, spatial patterns, people, nature and place.

The issue of fragmentation in Geography Education was also mentioned as a point of reference in a study conducted by Pretorius^[2]. He investigated the composition of undergraduate Geography curricula in an attempt to reposition and strengthen the position of EfS (Education for Sustainability) in the Geography curriculum at the undergraduate level in South Africa. The study found that, even though Geography is presented in academia as an integrated science, this remains nothing more than a "theoretical ideal", since most undergraduate students are introduced to a fragmented discipline that lacks an integrative disciplinary narrative^[2]. However, most studies which refer to the notion of fragmentation excluded from their discussion the role that education at school level can play. Therefore, this article attempts to address the issue of fragmentation from the level of school geography, as in my experience first-year students view geographical phenomena within an established "fragmented" frame of mind developed at school.

I concur with Pretorius^[2] that Geography requires a reconfiguration of its main identity, away from existing binaries and towards more integration. This will remain a challenging task, as many South African geographers and educators either disregard integration or are completely unaware of the need for integration^[2].

3.2 Observations of First-year BED Students

Writing from my own position as a Geography Education lecturer, it has come to my attention that even though first-year BEd students do possess a satisfactory amount of knowledge about the notions of (*sustainable*) *development*, *environment* and *place*, they nevertheless find it challenging to make conceptual links between them and struggle to understand how the notions are interrelated and

operate within a real-life, authentic system. For example, when they are asked: “How can the social environment in Khayelitsha (an informal settlement in the Western Cape, South Africa) develop sustainably over a period of 10 years without causing the other dimensions of the environment (economic, biophysical and political) to deteriorate?” they tend to struggle to unpack the question. There could be various reasons for this, such as students’ lack of conceptual and procedural understanding,^[4] or the inability to interpret, analyse and articulate their thoughts in a coherent way. However, when the question is asked differently, and the terms, “environment” and “sustainably” are excluded from the question – for example: “What should be done for the social dimension of Khayelitsha to develop substantially (having the least negative impact on the other dimensions) over the next 10 years?” – students are more prone to respond and engage.

This leaning among students continued even though most of the themes related to the questions as reflected in the course outline were already covered. The students struggle to synchronise the theoretical themes (such as settlements and population) with geographical skills (map work and GIS) in order to formulate a substantial answer. They do however, possess the necessary skills required to find South Africa, the Western Cape Province and Khayelitsha on a map, and also to perform basic map work calculations. In other words, students do have the technical knowledge and skills to find the physical location of a place. Yet they lack the relevant knowledge and reasoning skills to deal with notions such as “sustainable development” and how this relates to the social dimension of a place. In cases where students are asked to do an environmental impact assessment of a place, they are required to provide an in-depth analysis of quantitative and qualitative data. This implies that they would also have to understand and investigate the *sense of place* of the people living in Khayelitsha in this specific instance. This too is challenging for them, as *sense of place* is absent from the Geography CAPS document, although it is an integral concept of Geography and Geography Education. Perhaps this could be one possible reason for why students struggle in unpacking nuanced and integrated questions such as the one mentioned above.

The narrow and limited understanding of key concepts among first-year BEd students is also evident in their perceptions of the term *environment*. It was found that they still view the environment in terms of the natural environment only. The moment terms such as social, political or economic are added – for example, “political environment” – students tend to get confused. Although students are capable of making minimal connections to themes

such as minerals, resources and tourism as stipulated in the CAPS,^[8] they struggle to relate these to the term development and their understanding of the latter is primarily in terms of economic development.

As a lecturer, one has to bear in mind that this fragmented perspective among students did not develop in a vacuum and many factors contributed to this problem. As mentioned earlier, one obvious factor to consider is the representation of content and assessments in the Geography (CAPS) document (Grades 10 to 12). The CAPS has a direct influence on how teachers teach as well as on the development of students’ thinking, learning and understanding throughout and after their school career.

The content in the CAPS was further analysed against a literature review on the purpose of Geography and Geography Education in order to determine whether it corresponds with the broader purpose of Geography and Geography Education (relevance).

3.3 The Purpose of Geography and Geography Education

In his book “*What is geography?*” Alistair Bonnett defines the discipline of geography within a wider set of economic, social and cultural processes. According to Bonnett,^[12] “geography attempts to describe and explain the world and its peoples”. He adds that geography is concerned with the relationship between humans and the world. According to Matthews and Herbert^[13], geography as a discipline is rooted in three core concepts: *space*, *place* and *environment*. They argue that the “essence” of geography is the area where the three concepts overlap as “an integration of spatial variation over the Earth’s surface with the distinctiveness of places and interactions between people and their environments”^[13]. The authors further assert that the nexus where the three concepts overlap is indefinable and suggest that the term “landscape” comes closest to capturing its meaning. They state that the nexus of space, place and environment is unstable and has changed over time as academic geography developed. The authors identify five developmental phases: 1) exploration, 2) the establishment of the discipline, 3) the dominance of regional geography, 4) the emergence of physical and human geography, as well as systematic approaches, and 5) the current phases of divergent sub-disciplines in geography characterised by increasing specialisation and fragmentation^[13]. This article is especially focused on the latter phase.

Starting with school Geography, Lambert^[14] claims that there are three big ideas underpinning the subject: *place*, *space* and *scale*. From this it can be inferred that *place* and *space* are key concepts in both the academy

and in school Geography. It is therefore argued that geography educators could revive these concepts through implementing a pedagogy of place. Lambert and Morgan^[15] remind us that the responsibility for the quality of the educational experience in Geography lies mainly with school teachers. The authors state that this is because *they* – the teachers – are in a position to design and create appropriate curriculum and pedagogic experiences. It is *they* who use the subject resources to create productive teacher-learner relationships. Rawding^[16] takes up this debate by emphasising the increased need for teachers to remain up to date with current developments and to engage intellectually with the fluid and complex conceptual territory of geography as a discipline. However, for Stradling^[17] the need for geography educators to remain up to date is not that simple, as he claims that “the more contemporary the issue, the greater the problems for the [educator]”. Based on the pivotal role that Geography teachers and educators (should) play, the researcher concurs with Butt and Collins,^[18] who appealed to school and university geographers to engage seriously in dialogue, redefine school Geography and promote currency of knowledge.

It is at the intersection of academic and school Geography that the prominent role of the Geography educator and/or lecturer becomes most evident. It often becomes a daunting challenge for lecturers to operate at this interface and deal with issues of super-complexity which defy clear “proof” and do not provide definite “clear-cut” answers^[14, 15]. Morgan^[9] argues that, unlike any other non-humanities subject, Geography raises complex ethical and moral questions. Such questions are evident in the land reform issues that currently prevail in South Africa, as well as in the recent drought and fire catastrophes that hit the Western Cape province. Such phenomena are cognitively challenging as they inevitably call for new understandings of human-environment relationships that often do not resonate with many prevailing beliefs and world-views^[19]. It is in the light of this complexity that O’Brien^[20] calls for a new Geography or new “science” (as she refers to it) as a response to the challenges of the 21st century.

It is argued that for Geography to be relevant, in order to address the urgent challenges faced by society, a revolution is required in the system of education^[21]. This would entail challenging underlying assumptions and beliefs in order to transform the system and also the way in which the system is perceived. O’Brien^[20] further claims that environmental problems such as climate change are manifestations of modernity, symptoms of dominant patterns of development, outcomes of social relations, and products of short-sighted perspectives which are closely linked to beliefs, values and world-views^[19, 20]. It there-

fore becomes important for the Geography educator to develop a type of “ethical knowledge” among students to tackle many “geo-ethical” issues (such as environmental decay, terrorism, conflict and poverty).

The researcher contends that this new geography and deeper understanding that O’Brien^[20] advocates could be found in the reconceptualization of the field in terms of its intra-disciplinarity. The notion of place (a pedagogy of place) as a potential conceptual framework for advancing a new world-view in the field of Geography Education is therefore proposed. However, the community of geography teachers often overlook the intra-disciplinarity of their field and rather search for inter-subject collaboration outside of their discipline that relates to their area of specialisation. Although taking the latter route is not inappropriate or “wrong”, it is argued here that a turn to Geography’s intra-disciplinarity is much needed in the light of the current challenges. Pretorius^[2] makes the point clearly: “Geography needs to come to grips with its own “intradisciplinarity” [first] for the discipline to be able to take its place in interdisciplinary collaborations with other disciplines/fields”.

A turn to Geography’s intra-disciplinarity would require a fresh understanding of its key concepts, such as *place*, which is considered as one of Geography’s “big ideas” according to the 2009 manifesto of the Geographical Association (GA)^[22] and the CAPS document^[8, 23].

According to Hurry^[11] holism and integrated learning should be the two core principles of Geography teaching. The researcher argues that these two principles could be understood from within the discipline itself. Using a concept such as “place” to demonstrate this is not far-fetched as the term encapsulates both the Physical and Human Sciences as well as map work and GIS. The following section addresses the notions of fragmentation and integration before turning the discussion to the concept of place.

3.4 Fragmented Thinking and the Ideal of Integration

According to Skole,^[23] global environmental crises have signalled a growing need for a fully integrated approach to human-environment interactions, thus presenting an appropriate opportunity for Geography to respond as an integrative discipline. Hurry^[11] claims that geography practitioners must be encouraged to think about and teach their material in an integrated way. According to him, the holistic thinker is one who has an overview of his or her subject and does not see topics as isolated and discrete entities. He further emphasises that such holistic thinking must be nurtured in the Geography student, be-

cause the subject of Geography is concerned with systems and processes. As he puts it: “one cannot fully understand the one component without a proper appreciation of the other”^[11]. Although I concur with Hurry, I argue that authentic holistic thinking in Geography will only be possible once the divide between the four branches of school Geography (Physical Sciences, Human Sciences, Map work, GIS) is properly addressed.

Hawley^[24] states that there is a dominant divide between human and physical geography in schools, even though the aim is to bolster integration. According to Matthews and Herbert^[25], the two decades prior to 2004 witnessed significant debates among academic geographers regarding the nature of this gap and how it can be narrowed in profound ways that would unify geography as a discipline. However, the authors claim that this issue has been addressed very simplistically at school level, often by providing “applied problem-solving” tasks rather than highlighting the complexities of a holistic approach that would also take into account people’s perspectives on the physical environment^[26, 27]. These debates underlined the need for geography educators themselves to discover the possibilities and potential embedded in the discipline itself.

Furthermore, it is argued that if Geography is to survive, a new perspective is required on the implications of the discipline’s own “intra-disciplinarity”^[2] – “the presence of physical science and humanities in one discipline”, as Evans and Randalls^[28] put it. It is therefore important that opportunities for narrowing the gap between these two branches as a means to foster integration should be attended to first, before Geography can claim its rightful place in interdisciplinary collaborations^[2].

3.5 Potential Avenues to Consider for Integration

3.5.1 Exploring Geography’s Intra-disciplinary Nature

The notion of intra-disciplinarity can be closely linked to the concepts of intra-actionality and agential relationalism, as explored by Karen Barad^[29]. The neologism “intra-action” underlines the mutual constitution of subject and object, that is, that they are only relationally or analytically distinct and do not exist as separate individual elements^[29]. Barad further argues that scientific knowledge and reality in itself are not “built by things-in-themselves” or “things-behind-phenomena”, but of “things-in-phenomena”^[29]. Barad’s agential realism the universe comprises phenomena, which are “the ontological inseparability of intra-acting agencies”^[29]. This notion refers to a form of constructivism that is not relativist, but relationalist, that

is, building on the idea of an intra-active interdependence between elements, that makes both parties contribute to the “construction” of the other.

In the case of Geography, this implies that educators should not treat the physical sciences or human sciences as separate from map work and GIS, but should in fact start to acknowledge the intra-active mutual dependency among these branches and realise that each one contributes equally to the construction of the other. Treat these branches as distinct from one another would result in reproducing segmented geographical pedagogies, theories and solutions to ever-changing environmental concerns. In fact, it would be an injustice to the discipline of geography. Realising the mutual constitution of the discipline – in other words, the intra-dependency among the different branches and treating the constituents equally at the level of pedagogy – could be a starting point for geography educators seeking an integrative pedagogy.

The following sub-section presents a discussion on how place-based pedagogies can offer a renewed perspective on geography education; the intra-actionality between place-based education and geography education will be demonstrated.

3.5.2 Utilising Place as a Key Concept in Geography Education

According to Argawal^[30] the ambiguity of some geographical concepts often causes problems in the specification of a geo-ontology. However, although defining “place” remains a challenging task, a number of theoretical frameworks can be useful to clarify the term. For example, Gruenewald’s^[31] *multidisciplinary analysis* of the term “place”, Creswell’s^[32] tripartite distinction of *place as area, location and sense of place*, and Ardoin’s^[33] and Resor’s^[34] *sense of place* could assist the geographer and Geography lecturer to expand their views on the concept of place. Elsewhere it has been argued that in order to practise a place-based pedagogy as a means to bridge geographical themes, it is imperative to understand the notion of “place” in broader terms^[10,35,36].

The concept of place-based education was first articulated in the academic literature by education scholars such as Smith^[37] and Gruenewald^[31]. Hence, it is a fairly new educational response to promote integrated teaching and learning. These scholars relied primarily on two intellectual sources – Orr’s^[38] ecological education and Theobold’s^[39] and Theobold and Curtis’s^[40] community-oriented rural education. According to Israel^[41], place-based education (PBE) calls for a thorough reorientation of pedagogic practice, challenging the isolation of schools and tertiary institutions from their social and ecological

contexts, as well as the isolation of topics from one another. It is argued that the use of place as a starting point in teaching geography will enable students to understand the localness of environment (systems, problems, issues), even those aspects that transcend national boundaries^[35,36].

Place-based education might help students to comprehend how the livelihoods of people living in rural areas depend on the land and could also serve as a basis for integrating indigenous cultural practices and philosophies such as *ubuntu* (humanness) into Geography education processes^[36]. Through connecting with places, students could develop a greater awareness of how the local and global are intertwined^[36].

If one applies a place-based approach to the example of Khayelitsha mentioned earlier, this would entail integrating the frameworks of Cresswell^[32], Ardoin^[33] and Gruenewald^[31]. For example, students could study the exact location of Khayelitsha on a map – in absolute and relative terms (place as area – coordinates on a map) and connect the data gathered from the map work to physical and human geography. This could be done by asking key geographical questions such as: What does the location of Khayelitsha imply about the climate (Africa, South Africa, Western Cape climate and weather patterns) settlement and economic activities prominent in Khayelitsha? GIS and remote sensing could be used to provide more information on sanitation and hygiene facilities in Khayelitsha. Students could study the common environmental problems prevalent in the informal settlement and look at the effects they have on the human-nature relationship, climate and the economy.

Last, but not least, students will have to look at the sense of place of the inhabitants of Khayelitsha, in other words, the emotional and affective bonds that people have with the place. This means they will have to listen to the narratives of the people of Khayelitsha and investigate what exactly it is that makes them feel attached to the place; how they sustain the place and how the place sustains them; and how they connect to the physical features of the place (natural environment/the land) and to the community with whom they share the place. The affective and ethical dimensions (sense of place) are seldom theorised about or integrated with geographical content or coursework.

By applying this example, the robust relations between PBE and Geography become evident. For example, the out-of-the-classroom teaching and experiential learning of a place-based approach, as in the Khayelitsha example, is related to Geography's strong fieldwork component. Fieldwork in Geography is concerned with knowledge and skill acquisition, and with the purpose of "going

and finding out" about the place visited^[41]. In this sense, the experience and expertise that Geography educators have developed in fieldwork can enable place-based programmes to connect more fully and effectively with the places in question. The next sub-section will elaborate on how PBE and GE share certain commonalities which can mutually contribute to the theoretical "gaps" in each field respectively.

3.6 The Intra-actionality between Place-based Education and Geography Education

The conflict in teaching styles among lecturers is becoming more prominent in contemporary geography teaching. Place-based approaches in Geography promise a more comprehensive avenue towards engaging pedagogy and content. This is based on the fact that place is considered a key and integral part of Geography^[8,22].

From a South African perspective, the researcher concurs with Israel^[41] who claims that, despite clear affinities of topic and purpose, geography educators have not adopted the pedagogic framework of PBE, nor contributed to scholarship in this field. Israel^[41] further argues that PBE can enrich the theory and practice of Geography Education (GE), providing both an articulation of the social significance of learning about place as well as practical ways to make that significance a reality. It is argued that GE could also contribute significantly to the field of PBE in expanding its theoretical foundations. In this sense, both PBE and GE are mutually supportive strands. Equally, geography educators can enrich place-based education theory and practice by applying Geography's expertise in understanding and analysing how places work. This dual support can be enhanced by including Gruenewald's^[31] multidisciplinary analysis, Cresswell's^[32] distinctions regarding the concept "place" and Ardoin's^[33] sense of place frameworks.

Furthermore, Israel^[41] asserts that the interconnections between nature and society, the importance of scale and spatial dynamics, and the ways places are constructed and modified through cultural processes are all areas in which geographers have produced rich insights, yet these aspects of place are often inadequately addressed in theories on place and PBE. Conversely, PBE uses field-based experiences to enable students to situate themselves as members of social-ecological communities and to cultivate a sense of ethical responsibility. Thus, the use of field experiences in PBE provides a framework from which Geography educators can connect the practice of field education with the growing interest in "teaching geography for social transformation"^[42] by connecting field experiences with ethical purposes^[40]. This once again emphasises the intra-action-

ality among PBE and GE. Conceiving of the two fields in this way not only offers new pedagogical and conceptual pathways, but also aims to 1) overcome the compartmentalisation of the four branches of school Geography, and 2) transcend the dichotomy between PBE and GE.

Based on the above arguments, one can infer that PBE employs an explicitly geographical take on social concerns (environmental social justice), aiming to transform both students and the places they inhabit through pedagogic engagement with places. Israel^[41] asserts that, in this way, PBE provides a vision of how approaches common in GE can respond directly to the ethical and political concerns of critical Human Geography. In the same way, Geography Education's field-based inquiry into how places work can expand the theoretical and practical frameworks of PBE and contribute to its pedagogic potential.

4. Implications

It is clear that Geography's synthesising and spatial approaches could provide a uniquely valuable perspective for the study of a place and a conceptual depth often lacking in PBE. It is therefore up to the Geography teaching community as a whole to return to Geography's intra-disciplinarity, that is, utilising its key concepts such as place.

However, in order to realise the potential of a place-based approach in Geography and GE implies that Geography educators should expand their understanding of "place" beyond its technical dimension by embracing the multidimensionality of the concept, as proposed by Gruenewald^[31]. Furthermore, the three distinctions of place identified by Cresswell^[32], in conjunction with Ardoin's^[33] and Resor's^[34] sense of place frameworks, should be integrated when theoretical topics, map work skills and GIS are taught. This implies that these theories should be seriously considered in Geography programmes and curriculum designs, and more so in pedagogical frameworks – both at school and tertiary level.

Therefore, both the place-based educator and the Geography educator should collaborate and exchange valuable knowledge by reflecting on the potentiality of the existing intra-actions which transcend the "flawed" dichotomy between the two. This suggests that Geography educators and education researchers who seek to respond to pressing social and ecological concerns should develop connections, both in theory and in practice, with place-based educators and place-based education scholarship. In this sense, the interrelatedness of geographical phenomena will gain renewed emphasis.

Israel^[41] further claims that the Geography educator can use the local scale to point out the degree of heterogeneity within a community, for example, by highlighting

differences between neighbourhoods within a town, or to the discourses that marginalise or stigmatise certain areas (such as slums). Within PBE, the educator can counter the notion that place be studied as static, homogeneous and isolated by drawing attention to the ways in which a place is situated within broader-scale political, cultural or ecological landscapes, and also by studying the spatial distribution of resources, communities and activities on the local scale. This is also a useful example to consider when teaching those "segmented" themes in Grade 11 (as mentioned earlier).

Adopting a geographically informed place-based pedagogy would require of educators to pay careful attention to the ways in which the places involved are represented in discourses and are experienced by students in field-based activities. In that sense, the students' sense of place becomes an important aspect to take into account. This might result in educators seeking out the stories of minority groups within the community, or visiting marginalised neighbourhoods in the local area, rather than limiting the focus to majority representations of the place^[42].

5. Concluding Thoughts

This paper has argued that a (re)turn to Geography's intra-disciplinarity by means of a place-based approach offers a potentially valuable avenue for transitioning from fragmented to integrated teaching and learning in Geography and Geography Education. It has been demonstrated that profound interactional connections between concepts such as place, space and environment may be identified and that these connections can enhance pedagogy if geography educators be aware of their potential. The researcher contends that place-based pedagogies present an opportunity for Geography educators to expand their expertise beyond the spatial and scalar characteristics of the discipline in order to foster integration and thus support them to adequately prepare student teachers. Establishing such connections with place-based pedagogies will be a crucial step in bringing about "what geography ought to be" - a source of pedagogical inspiration and a force in creating a better world^[43]. This article will be followed up with another article where the focus will be on a more practical application, as this one has served only as an introduction to the potential of a place-based approach for exploring the intra-connections in geography.

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