

Geography teachers' interpretation of a curriculum reform initiative: the case of the Lesotho Environmental Education Support Project (LEESP)

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This article addresses how teachers in a specific developing world context interpreted a curriculum reform initiative. It is located within a broader interpretive study that investigated the integration of Environmental Education into the formal education system of Lesotho with particular reference to secondary school geography. More specifically the focus was on a Danish donor-funded project, known as the Lesotho Environmental Education Support Project (LEESP). Driven by a sustainable development imperative, the project was intended to assist Lesotho with the implementation of local action for Agenda 21 by introducing environmental education into the formal education system. It is widely accepted that teachers play an important role in implementing curriculum change. Using a previous framework, we generate insights for understanding how teachers' epistemologies interact with contextual factors to impede the process of curriculum sense-making. Furthermore, guided by the notion of curriculum as a contextualised social process, we present the findings on the contextual/structural factors enabling or constraining implementation of the LEESP curriculum policy intentions as perceived by the teachers.

Keywords: action-competency, curriculum reform, donor-funded projects, environmental education, learner-centred pedagogy, school geography

Introduction

This article describes how geography teachers in Lesotho secondary schools interpreted a curriculum reform process that sought to integrate Environmental Education (EE) into the formal education system in Lesotho. Drawing on O'Donoghue (1993), EE is seen as an educational process promoting knowledge, skills, attitudes and values necessary for understanding the complex interactions between the human, biophysical, social, economic and political dimensions of the environment. The article discusses contextual/structural factors enabling or constraining implementation of the Lesotho Environmental Education Support Project's (LEESP) curriculum policy intentions as perceived by the teachers. It forms part of a broader study which investigated the interface between environmental education and school geography with a view to understanding a process of curriculum reform in the context of Lesotho. The article starts with an overview of the LEESP curriculum reform project. This is followed by

a discussion on the theoretical lenses we use to generate insights on how teachers make sense of and interpret curriculum reform. The research method and participants are described. The focus then shifts to an analysis and discussion of what emerged in the data generated through interviews with geography teachers in terms of how they interpreted a curriculum reform process seeking to integrate Environmental Education into school geography. The article concludes with a discussion on the contextual factors that may be constraining or enabling the intended change in school geography, as perceived by the teachers. The article may make a modest contribution to understanding how teachers interpret a curriculum change process initiated and driven by external funders.

The LEESP curriculum reform project

LEESP was a Danish-donor funded project, which was intended to assist Lesotho in the implementation of local action for *Agenda 21* by introducing environmental education into the formal education system, as a response to environmental problems relating to land degradation (LEESP, 2004). It was a three-year project, which operated from 2001 to 2004. The project was initiated within the Ministry of Education and Training (MOET) as a follow-up to early environmental curriculum initiatives in Lesotho (LEESP, 2000). LEESP (2000:7) aimed to introduce fundamental changes targeting all school subjects and classroom instructional practices at all levels of formal education. It endeavoured to achieve these aims by "... building the capacity of all the stakeholders involved in curriculum development, and by suggesting curriculum amendments for all subjects". In the context of junior secondary school geography, the project advocated the introduction of new concepts such as biodiversity and the adoption of an issues-based approach (LEESP, 2003).

After its implementation in 2001, a series of stakeholders' workshops were held with the aim of conceptualising environmental education in the context of Lesotho. These workshops involved representatives from the major stakeholder institutions involved in curriculum development in Lesotho. The major outcome of these workshops was a draft *Reference Note for Environmental Education in Lesotho* (hereafter referred to as *Reference Note*), which was revised in 2004. One other outcome of the later phases of the project was the Environmental Education Handbook for Teachers. This teachers' handbook was produced to provide guidelines for the integration of environmental education into specific subjects (LEESP, 2003). It proposed attachments to the syllabuses that had been introduced in 1999 as part of the 1995 *Localisation Reform*.

The *Reference Note* was considered to be a key policy text defining environmental education in terms of content and pedagogy. As described in that document, the LEESP environmental education programme is built on a sustainable development imperative with the intention to "... alleviate the causes to the present environmental problems such as overgrazing, soil erosion, water pollution, handling of solid waste,

poverty, HIV/AIDS etc.” (LEESP, 2004:1). It envisaged an integrated curriculum, which was to be achieved through a democratic, social constructivist, learner-centred pedagogy underpinned by the notion of an action competence philosophy which was, interestingly, a dominant educational concept in Denmark and other Scandinavian countries.

Action competence is an educational concept originating from the German Tradition of *Bildung*, which is a particular form of liberal education common in Eastern Europe (Jensen & Schnack, 2006; Mogensen & Schnack, 2010). By pursuing the visions of action competence, LEESP envisaged a democratic teaching and learning process in which learners would be encouraged to act on their own values in resolving environmental problems, which are seen to be arising in communities with conflicting interests at different levels. Thus, the adoption of the learner-centred pedagogy reflects an assumption that by becoming democratic, formal education can be used to consolidate democracy and transform society in Lesotho. It also implies a particular view of knowledge and new roles for teachers and learners in the context of the Lesotho education system, which has been characterised historically by teacher-dominated methods (Mokuku, Jobo, Raselimo, Mathafeng & Stark, 2005; Nketekete & Motebang, 2008).

The LEESP curriculum policy intentions, as outlined in this section, seem to introduce the necessary innovations that can bring about change in Lesotho formal education system in general and junior secondary geography in particular. However, this depends on how well teachers interpret and translate the new curriculum ideas into practice.

Previous research reports some paradigmatic tensions and contradictions experienced during the initial stakeholders’ workshops, which were intended to conceptualise environmental education in the context of Lesotho (Mokuku et al., 2005). Mokuku and his team report that, although the workshops’ participants, which include subject panels with a large representation of classroom teachers, were generally optimistic about the integration of environmental education into school subjects, there were concerns about the clarity of the concept. Some stakeholders felt that the current national syllabuses, which are organised on a narrow interpretation of the principles of Bloom’s Taxonomy, would most likely undermine the transformational vision of action competence. In her study focusing on the implementation of donor-funded projects in Lesotho, Monaheng (2007) reports similar concerns and challenges associated with the implementation of LEESP at the national curriculum development level.

Apart from the problems associated with LEESP, a wider perspective on the history of curriculum reform in Lesotho suggests that innovations are either partially implemented or not institutionalised at all in the school system (Ministry of Education, 1995; Raselimo, 1996; Ansell, 2002; Muzvidziwa & Seotsanyana, 2002; Mpeti, Nketekete & Feiter, 2003). This seems to suggest that there is a culture of

resistance to change in the Lesotho education system, possibly the result of a mismatch between the innovations and the local contexts which shape teachers' beliefs about teaching and learning (Prawat, 1992; Spillane et al., 2002).

It is in the light of the tensions experienced during the early phase of LEESP, and the history of curriculum reform in Lesotho, as explained above, that we sought to understand how geography teachers made sense of, interpreted, and implemented environmental education in their specific school contexts. Here we present the findings of interviews conducted with geography teachers for the purpose of understanding how they interpreted environmental education as conceptualised in LEESP. More specifically the article responds to the following research questions: What are the perceptions of geography teachers about environmental education in relation to their subject? How do geography teachers' views (epistemological beliefs) about teaching and learning compare with LEESP's intended pedagogy? What are the contextual/structural factors enabling or constraining implementation of environmental education as conceived in LEESP?

Theoretical framework

It is widely acknowledged in the literature that teachers' ability to interpret and enact a new curriculum policy is influenced by their epistemologies (Prawat, 1992; Schraw & Olafson, 2002; Handel & Herrington, 2003; Blignaut, 2008; Alexandre, 2009). The term teachers epistemologies is used here, after Blignaut (2008), to refer to teachers' beliefs about content, pedagogy, and specific contexts which may enhance or interfere with their ability to interpret and enact a new curriculum policy. Spillane et al. (2002) developed a framework that could assist curriculum researchers in understanding how teacher epistemologies interact with contextual factors to impede the processes of curriculum sense-making and implementation. This framework comprises three elements, namely, individual cognition, situated cognition, and policy representation.

The individual cognition recognises that the development of new knowledge occurs through existing structures, such as teachers' prior knowledge and beliefs about teaching and learning. If those structures are not supportive, little may be achieved in terms of realising change. The following quotation clarifies the challenge that may be posed by teachers' prior beliefs and practices in the enactment of a new curriculum policy:

Teachers' prior beliefs and practices can pose challenges not only because teachers are unwilling to change in the direction of the policy but also because their extant understandings may interfere with their ability to interpret and implement the reform in ways consistent with the designers' intent (Spillane et al., 2002:393).

Since the acquisition of new knowledge is influenced by existing structures, more often than not there is a natural tendency among implementing agents to associate new curriculum ideas with familiar practices – especially when the innovations are

introduced via a top-down approach (Spillane et al., 2002; Blignaut, 2008). Prawat (1992) contends that while teachers are on the one hand viewed as important change agents, they are on the other hand obstacles to change because of their adherence to outmoded forms of instruction. This observation suggests that those introducing curriculum changes should allow teachers enough time to conceptualise change and reflect on its implications for their practice.

The second element of the framework, situated cognition, recognises the important role played by the specific contexts in which teachers' interpret and enact the new curriculum policy. Spillane et al. (2002) identify school contexts such as organisational structures, the social environment and the historical context as important factors shaping teachers' sense-making of new curriculum policy. Thus changing curriculum requires creating supportive structures (Cornbleth, 1990) such as favourable examination systems and school organisational structures.

The policy representation is concerned with the policy signal, which refers to expected outcomes as expressed in policy messages and design. The extent to which policy intentions are clear will influence teachers' interpretation of such policies. However, Spillane et al. (2002), in line with Cuban (1992), argue that policies that require fundamental changes in implementing agents' knowledge structures are more likely to encounter implementation problems than those which require incremental changes. Although they acknowledge that policies are subject to multiple interpretations in the context of practice (Bowe, Ball & Gold, 1992), Spillane et al. (2002) take a technical view of policy analysis. They suggest that, because policy texts represent ideas about reforming practice, curriculum policy research needs to establish whether or not a policy was *understood as intended*.

Notwithstanding the limitations of this framework, notably that it is grounded in national education systems with good facilities and efficient teachers' networks, this study benefited from the work of Blignaut (2008), who used the framework to investigate curriculum change in some South African schools. We draw on this model to generate theoretical insights for understanding geography teachers' interpretation of environmental education as it relates to their subject. We explore *inter alia* the contextual factors operating from within the schools and beyond that may have an influence on geography teachers' interpretation and implementation of LEESP curriculum policy guidelines.

For further analysis of teachers' views about teaching and learning we draw on Habermas' theory of *cognitive knowledge interests*. In this theory, Habermas (1972) identifies three knowledge paradigms that can be used to analyse teachers' epistemologies as they relate to curriculum knowledge, pedagogy and assessment. These are technical paradigm, practical paradigm and emancipatory paradigm associated with empirical-analytic, historical-hermeneutic and critical sciences, respectively, (Grundy, 1987). The technical paradigm is oriented towards control, with an emphasis on the instrumental goals of education (Grundy, 1987). Within this paradigm knowledge is viewed as objective, existing independently of teachers and learners with the former

assuming the role of transmitters and the latter being viewed as recipients of other people's knowledge (Young, 1998).

The practical paradigm is oriented towards mutual understanding of the world, achieved through a consensual meaning-making process in which knowledge is socially-constructed (Cornbleth, 1990; Grundy, 1987). Within this paradigm teaching/learning is seen as a learner-centred process involving "careful observation of students and diagnoses of their individual needs and interests" (Schiro, 2008:109). The critical paradigm, also known as emancipatory knowledge paradigm, as described by Grundy (1987), has a transformative agenda. In this paradigm knowledge is seen as integrated into learners' real life experiences, value-laden and socially constructed in interaction between the teacher and the learner (Cornbleth, 1990). As a social construction knowledge is "deeply rooted in a nexus of power relations ... and is heavily dependent on culture, context, customs and historical specificity" (McLaren, 2007:196-197). Moreover, knowledge is challengeable and negotiable in order to serve practical and emancipatory knowledge interests (Grundy, 1987). We note, however, that teachers may not be aware of the worldview underpinning their professional work. Nevertheless, we found this theory of *cognitive knowledge interests* useful in analysing geography teachers' views about teaching and learning.

Research method

The broader study, on which this article is based, followed an interpretive qualitative research approach using document analysis, interviews and classroom observations as data sources. However, in this article we report only the research findings generated from interviews with 11 geography teachers teaching the subject at junior secondary level. Table 1 presents the profiles of the teachers who participated in this study. For ethical considerations we use alphabetical letters (i.e. Teacher A, Teacher B, Teacher C, etc.) to represent individual teachers.

This table shows that seven teachers received training in environmental education, through their participation in at least two LEESP workshops. The other four teachers did not receive any LEESP training. We decided to include these four teachers to establish a control case for a deeper analysis of how teachers made sense of and interpreted environmental education as introduced by LEESP. Although we were interested in comparing teachers' views, the teachers who did not participate in LEESP workshops were asked slightly different questions, especially with regard to the theory of environmental education. Nonetheless, their perception of environmental education in relation to geography would help to enable an understanding of any possible change in the model schools following the LEESP intervention. The table shows further that out of the 11 teachers, three were not qualified teachers with training in education, even though geography was one of the subjects they studied at university level. Their teaching experience ranged from 5 to 15 years of geography teaching.

Table 1 Teachers' profile

Teacher	Gender	School	Qualification	Teaching experience	Participation in LEESP workshops
A	Male	Menkhoaneng High	B.A.ED	8 years	10 workshops
B	Female	school	B.ED	5 years	10 workshops
C	Female	Menkhoaneng High	B.ED	10 years	10 workshops
D	Female	school	B.Sc	5 years	2 workshops
E	Female	Menkhoaneng High	B.ED	15 years	2 workshops
F	Male	school	B.Sc.ED	6 years	2 workshops
G	Male	Mohokare High school	B.ED + MDS	13 years	10 workshops
H	Female	Mohokare High School	B.ED	10 years	None
I	Female	Qiloane Secondary School	B.ED	5 years	None
J	Male	Lepoqo High School	B.A. + M.A. (Geography)	8 years	None
K	Female	Lepoqo High School	B.A.	7 years	None
		Lepoqo High School			
		Letlama High School			
		Letlama High School			

All the 11 teachers were interviewed with the purpose of understanding their perceptions of environmental education as it relates to school geography, to explore their views about teaching and learning and to understand the possible influence of contextual/structural factors on implementation of environmental education as perceived by the teachers. On average each interview took about 45 minutes. All the interviews, but two, were audio-recorded and later transcribed by one of the authors.

The interview data were analysed by reading all the transcriptions and listening to the tapes again in order to identify and correct possible discrepancies. The transcripts were then coded to highlight patterns within the responses to each main interview question. The coded data were further interpreted according to the research questions, drawing theoretical insights from the curriculum sense-making framework advanced by Spillane et al. (2002), and the three knowledge interests as conceptualised by (Habermas, 1972). Since qualitative data analysis is an interpretive exercise (Cohen, Manion & Morrison, 2007), we engaged in an iterative reflexive process which involved a dialectical interaction among the data, theory and context (Alvesson & Sköldbberg, 2000). We then reported the data in a narrative form, according to the issues derived from the interview questions and emerging from the data. Where appropriate verbatim responses from the transcripts are used as evidence for the claims made.

Data analysis and discussion

In this section, we first present findings on teachers' perceptions of environmental education in relation to geography. This is followed by analysis of data and presentation of the findings on teachers' views about teaching and learning. Finally the data on contextual factors are analysed.

Teachers' perceptions of environmental education in relation to geography

The findings of the analysis of the interviews show that geography teachers in the research schools interpreted environmental education in a narrow sense, equating it to environmental management. This was illustrated by the fact that most teachers mentioned activities such as keeping surroundings clean, planting trees and flowers as indicators of the existence of environmental education in their schools. It is also illustrated by the high frequency of soil erosion and vegetation as common topics where teachers integrate environmental education. This suggests that their understanding of environmental education is skewed towards natural resources management situated more in the biophysical dimension of the environment. Such a narrow interpretation of environmental education is likely to militate against the holistic teaching of geography as an interdisciplinary subject drawing content from both natural and social sciences (Tilbury, 1997; Huckle, 2002).

The teachers' interpretation of environmental education in terms of environmental management may be explained in two ways. First, it could be a reflection of their prior knowledge of geography as a subject concerned with natural resources management.

Second, it could be an influence of nature conservation movements in the country. As Spillane et al. (2002) argue, teachers interpret new curriculum ideas within the context of their prior knowledge and existing practices. The same could be said about the geography teachers who participated in this study.

Teachers' views on teaching and learning

Description of good teaching

Analysis of the interview data shows that teachers' views about pedagogy generally support a learner-centred approach. The following are examples of how they described good teaching:

Good teaching is one that involves children, where as teacher I would give instruction and guiding them, where my role would be to facilitate... . Actually, in geography, for students to understand there is need for them to be fully involved and participate (Teacher A).

I think there should be a two-way communication. There should be a teacher talking and the learners as well... . [So] when I introduce a new topic I first ask probing questions to find out whether the students know something about what I am going to teach (Teacher B).

Although these views may be seen as supporting a learner-centred pedagogy, they are leaning more towards the practical knowledge paradigm and less towards the critical paradigm supporting the notion of emancipation envisaged in the LEESP programme. There is no clear indication of espousing teaching strategies that encourage learners' voluntary participation. Even though the word *participation* is mentioned by Teacher A, learners are expected to participate in compliance with the teacher's instruction. Moreover, in the case of Teacher B, while her description of good teaching as "two-way communication" indicates an intention to encourage dialogue, it becomes evident in her elaboration that learners' involvement is construed in terms of responding to the teacher's questions.

A different view, reflecting the respondents' interest in transformative learning, was unexpectedly expressed by a teacher with no background in pedagogy. This teacher described good teaching as follows:

Good teaching is characterised by a situation when students can draw their own conclusions at the end [of the lesson], not that they should be told to plant trees here because there is soil erosion (Teacher D).

Does this view, coming from a teacher without a formal background in the science of teaching and learning, illustrate a response learned from experience, or from interaction with teachers from the LEESP model school?

When asked whether their views about good teaching were the result of their involvement in LEESP dissemination workshops, two teachers at the model school indicated that they had held similar views before the LEESP intervention. Another teacher at the same model school also felt that LEESP introduced only minor varia-

tions to the ways in which she had already been applying learner-centred methods. These responses illustrate that teachers have a natural tendency to associate new curriculum ideas with what they have been practising before (Spillane et al., 2002; Blignaut, 2008). In view of this finding, it could be argued that little will be achieved at classroom level in terms of realising the democratic visions of the learner-centred pedagogy espoused in LEESP.

The role of the teacher and the learner

Generally, the teachers – including those who did not receive training in environmental education – described their role as that of a facilitator, with most of them using the word “facilitate” in their description. This was the standard response from teachers with a professional teaching certificate. When asked what she actually meant by assuming a facilitatory role, a teacher from a control case school said:

My role is to facilitate teaching. I facilitate in the sense that I don't always give learners information. I am expecting them also to contribute, say what they know or even work together to find information. For instance, when building a concept of soil, I will not give learners a definition. I am expecting them to tell me what they know. Then thereafter we can consolidate that information to come up with a common definition. In that way I am facilitating not spoon-feeding (Teacher G).

This extract, consonant with commonly expressed views about good teaching, can be described as a practical view of teaching and learning because of the teacher's interest in encouraging learners to contribute and find information. A different view, supporting a technical knowledge interest, was expressed by another teacher from the model school: “*there is a good teaching if students can remember what they have been taught*” (Teacher C). We noted a similar technical view, though reflecting some aspects of a practical knowledge interest, from a control case school teacher:

My role is ... I teach by telling them. After telling them, I encourage them to go and observe on their own what I told them. I expect them to observe geographical features [referring to river landforms] on their way home... (Teacher J).

With regard to the role of the learner, it was evident from the interviews that most teachers are in favour of the active involvement of learners. They mentioned learner-centred activities such as participating in class discussions, finding information on their own, and solving environmental problems, which could be associated with enquiry learning. When elaborating on how they implemented learner-centred methods in their teaching, they generally said that they used group discussions, outdoor learning activities and other inquiry-oriented methods such as finding information from the internet. In supporting the use of learner-centred methods a model school teacher stressed the following point:

In actual fact, in geography for students to do well they should participate, manipulate things ... It's [geography] all about environment, we are not teaching abstract things, although there are certain topics which are abstract (Teacher A).

This extract revealed the teacher's epistemological belief about school geography, which appeared to be shaping his pedagogical practice.

Interestingly, none of the teachers described the role of the learners in terms of an emancipatory knowledge interest, wherein learners would be encouraged to embark on action to resolve environmental problems or to sensitise other people to environmental issues. We would have expected that teachers who participated in the LEESP workshops would have noticed the opportunities offered by the textbooks, and indeed by the syllabus as a whole, and espoused teaching approaches consistent with emancipatory knowledge interests.

The influence of structural/contextual factors

Following Cornbleth (1990), we acknowledge that curriculum, as a contextualised social process exists within practice and is shaped by contextual factors operating from within and beyond the school and classrooms. As such, teachers interpret and implement a new curriculum policy within the specific contexts of a school organisational structure, school environment and history (Spillane et al., 2002). In order to understand the context in which geography teachers were attempting to implement environmental education within the geography curriculum, we explored relevant contextual factors. The analysis of the interviews revealed that while the teachers recognised the opportunities offered by certain aspects of their school contexts, such as the rich physical environment for the direct observation of environmental concepts and issues, and facilities such as the internet, they identified more constraining than enabling factors. The teachers mentioned the following as major constraining factors: the pressure to cover the examination syllabus, learner factors, the absence of a general understanding of and commitment to environmental education, and an unsupportive school administration. Given space restriction, in this article we elaborate only on the first two factors.

Time pressure to cover examination syllabus

The pressure to cover what some teachers described as a highly overloaded syllabus was reported by most teachers to have imposed a serious constraint on their efforts to try out the learner-centred teaching methods recommended by LEESP. In expressing her frustration regarding learner-centred methods, a teacher at the model school said:

...you know in geography the syllabus is too broad so we have to hurry through it rather than teaching. Learner-centred methods require a lot of time (Teacher C).

Another teacher at a different school also expressed a concern with time pressure to cover the syllabus:

I felt there would be more demands ... especially when I had to finish the syllabus ... If on the one hand, I have to take learners out for environmental activities, and I have to finish the syllabus, on the other hand. Taking them out of the classroom, would be more time-consuming than when I confine my teaching to the

classroom. That would change my ways of teaching (Teacher D).

There is therefore a clear tension between the requirements of learner-centred pedagogy and the need to cover the examination syllabus within a specified period. The only way to resolve it appeared to be compromise: the teacher said she thought it would be best to try out what could work out for her, but otherwise continue with her usual teaching approaches. She added: “*I felt I could still be flexible and make my own decisions [on how to implement environmental education ideas]*” (Teacher D). This perspective, while implying some resistance to change, also suggests that the teacher regards herself as a curriculum re-contextualiser capable of making autonomous decisions based on specific contexts.

Learner-related factors

Cotton (2006:78) cautions “... pupils’ responses to the teachers’ strategies ... may constrain teachers’ ability to make radical changes”. In the case of this study, factors such as difficulty with the use of the English language, which is the medium of instruction in secondary schools in Lesotho, and cognitive learning problems, were reported to inhibit the effective use of learner-centred methods identifiable with the constructivist approach espoused by LEESP. In responding to the question on the challenges faced, a teacher at the model school said:

Students have a problem of expression. So in grouping them I mix them so that they can benefit from the discussions (Teacher C).

This reflects an assumption that learners learn best in heterogeneous groups, which have the potential to promote cooperative learning. Another teacher from a different school said that her students enjoyed listening rather than thinking. In responding to this situation she said she involves them in interesting activities. She gave an example of E-box game (a game used by LEESP as a strategy to encourage an awareness of environmental issues) introduced to her by the model school during dissemination workshops. However, despite activities of this sort, language problems are such that some students prefer to keep quiet. Another teacher said that in responding to the problem of difficulties encountered with the use of English, she sometimes reduces the lesson to an informal discussion by allowing learners to code-switch from English to Sesotho.

Similarly, a teacher from a school that did not participate in LEESP’s workshops, also reported facing learner-related challenges with the use of learner-centred methods. He expressed a concern that some learners are reluctant to engage in discussion, probably because of shyness. He further said that he employs counselling techniques in responding to the problems of learners who won’t join in:

Some learners are left out. There are also those learners who can’t talk. You end up getting confused as a teacher (Teacher H).

The assertion that “there are some learners who can’t talk” in the extract above resonates with a response given by another teacher, who said that some students are shy

to talk while others enjoy listening rather than thinking. This problem was recurrent in the responses. Why are some students reluctant to talk in class? Why do they prefer listening?

This silence could be explained in many different ways. First, as is the case in many other African countries (Tabulawa, 1997), child-rearing practices in Lesotho encourage children to be passive, especially in their interaction with adults. Thus the need to encourage learners to engage in conversation with teachers seems to be in conflict with the local culture. Second, it could also be that many children come to school with an expectation of it being a place where they are going to learn new knowledge from the teacher, rather than finding themselves at the centre of instruction. Reflecting on the social context of curriculum change in Botswana, Tabulawa (1997) argues that the authoritarian Tswana culture, reinforced by authoritarian colonial education, is orientated against progressive new ideas of learner-centred pedagogy. He also reports research findings suggesting that learners generally come to school with utilitarian expectations of education. They see their "primary task as receiving teachers' knowledge" (Tabulawa, 1997:200).

Conclusion

This article addressed the issue of how geography teachers' interpreted environmental education policy intentions as laid out in the LEESP documents. The findings generally point to a tension between the LEESP policy intentions and teachers' interpretation of the key messages of the curriculum reform process. There is evidence suggesting that the geography teachers who participated in this study interpreted environmental education in a narrow sense equating it to environmental management. The findings also provide evidence which suggests that, contrary to the transformational visions of action competence underpinning the learner-centred pedagogy espoused in LEESP, the teachers' epistemological beliefs generally show little support for emancipatory knowledge interests. Finally, the findings of this study support the assertion that the process of curriculum sense-making occurs in the context of structural factors operating within and beyond, thus suggesting that changing the curriculum requires creating supportive structures in schools, national education system and society (Cornbleth, 1990).

This article, in reporting as it does on one component of a broader study, is narrow in scope. While the sample size used is small, we argue that the findings of the data analysis presented in this article have generated insights for understanding how teachers' interpret change. It may inform further research on how other teachers, not only in school geography but also in other subjects, make sense of and interpret curriculum change. This would enhance our understanding of the impact of donor-funded curriculum reforms in the context of developing countries.

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