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Loyiso C. Jita[a] & Matseliso L. Mokhele[b]
[a] Department of Mathematics, Natural Sciences and Technology Education, University of the Free State (UFS)
[b] Department of Curriculum and Instructional Studies, University of South Africa
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# The role of lead teachers in instructional leadership: A case study of environmental learning in South Africa

**Loyiso C. Jita**
Department of Mathematics, Natural Sciences and Technology Education, University of the Free State (UFS)
**Matseliso L. Mokhele**
Department of Curriculum and Instructional Studies, University of South Africa



***Abstract***

*South Africa has a fairly centralised education system with a national curriculum. To expect that its instructional guidance system will be formal and centralised is thus not far-fetched. For the most part, that is indeed the case with most curriculum leadership vested formally in the various education specialists located at the national, provincial and district levels. Environmental Education (EE), however, is one area of learning that bucks the trend, where instructional guidance seems to be mostly decentralised to the schools and teachers. This article presents two qualitative case studies that illustrate the role of lead teachers in curriculum leadership for EE in primary schools. The cases suggest that instructional leadership is first and foremost a distributed practice that involves not only leaders in formal positions. Second, that in spite of the centralized education system in South Africa, instructional leadership may be decentralised to the schools in some of the subjects such as EE. Third, that the role of teachers in instructional leadership is understated and/or ignored especially in the marginalised subjects such as EE. We conclude the paper by exploring the opportunities and challenges for a teacher-level curriculum leadership within an otherwise centralised system of education.*

**Keywords:** instructional leadership, curriculum leadership, teacher leaders, environmental education (EE), policy implementation

## Introduction

The difficulty of changing what teachers do in their classrooms is well documented in South Africa and abroad (Ball and Cohen 1999; Jita and Mokhele 2012). Accordingly, a lot of effort has gone into the development of policies and materials designed to instigate changes in what teachers (and learners) do in the classroom. This is what is generally termed 'Instructional Guidance' (Cohen and Spillane 1992). Unfortunately, though, the results of these new policies and materials (or instructional guidance tools) in effecting lasting changes to teaching and learning are mixed at best, with some research suggesting that traditional teaching practices continue to dominate many classrooms especially in the South Africa context (Kriek and Grayson 2009).

The question of what it will take to influence and guide the classroom practices of the many teachers whose classrooms have hitherto remained impervious to the leadership of policies, materials and professional development efforts frames our overall investigation on EE.

While we know a lot more about the processes of teaching and learning, we know much less about the decision-making processes of teachers on what to teach, how and with what resources in any given

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subject and with a particular group of learners. Part of the challenge of the curriculum reforms in South Africa is about trying to influence teachers on what to teach, how to teach it, what resources to deploy towards some desirable educational outcomes. It is this attempt to influence and the consequences thereof in each subject that constitute the major focus of Instructional Leadership. Leadership, *per se*, is about 'influence' to achieve certain 'desirable outcomes' (Yukl 2002).

So, instructional leadership is about marshalling such influence towards instructional decisions for better learning outcomes. It is our contention that the question of how such influence on teachers' practices is exercised in a particular school subjects is not as well understood. This is even more so for the marginalized subjects, such as EE.

Unlike the other subjects, such as the languages or mathematics, EE is mostly an integrated subject often with no clearly defined curriculum statement to guide the teachers on what to teach, how, and with what resources (Mokhele 2011). How then do teachers know what to do, how and to what level of performance in EE? Put differently, the key question for the present study was to understand the kinds of influence and guidance provided to teachers of EE regarding what content to teach and how to teach it within the South African primary school context. That is, we seek to understand the practice of subject specific instructional leadership for EE in this setting.

We describe two case studies of primary school environmental learning. The cases help us begin to understand aspects of the practice of instructional leadership for environmental learning in South Africa – a subject on which there is currently no research available as far as we can establish.



## Review of relevant literature

The literature on leadership, and particularly the distribution of instructional leadership (Spillane 2006; Spillane, Halverson and Diamond 2004; Harris 2004) frames our analysis of instructional leadership for EE in this study. We draw, particularly, on three key constructs, viz. leadership, instructional leadership and distributed leadership.

### *Leadership*

Yukl (2002) argues that as with all constructs in the social sciences, there is no consensus about the definition of leadership. Definitions of leadership are often 'arbitrary' and 'subjective', and some are 'more useful than others' (Yukl 2002:4–5).

We therefore anchor this work on Yukl's definition of leadership as a 'social influence process whereby intentional influence is exerted by one person (or group) over other people (or groups) to structure activities and relationships in a group or organization' (Yukl 2002:3). The utility of this definition lies not only in its attention to the issue of influence or guidance provided but also to the issues of who exerts the influence, how it is exerted and to what ends. In a further elaboration of the concept of leadership, Spillane (2005) defines it to include all 'activities tied to the core work of the organization that are designed by organizational members to influence the motivation, knowledge, affects, and practices of other organizational members or that are understood by organizational members as intended to influence their motivations, knowledge, affects, and practices' (Spillane 2005:11). This extension by Spillane provides for three additional key features of leadership that are important for our work on instructional leadership: first, the idea that leadership excludes 'influence relations that are not tied to the core work of the organization' means that it is only those influences that relate to the 'core technology' of schooling that we prioritize in our analysis. Second, the point that it is not necessary to have 'evidence of someone having influenced someone else … in order to denote leadership' (Spillane 2005:384), but that the very attempt to influence someone is enough to speak about leadership. Third, is

the idea that this attempt to influence others does not only focus on their practices, but may include an influence on their motivations, knowledge, and affects.

### *Instructional Leadership*

In a recent review of research on instructional leadership, Neumerski (2012) traces the concept 'instructional leadership' to the original work by Ronald Edmonds where he studied the links between leadership and effective schools in urban settings in America. In the review, Neumerski illustrates how the conceptualisation of instructional leadership has been dominated largerly by the view of principals as instructional leaders. Southwood (2002) concurs that the trend has been to examine instructional leadership as a practice of mainly the superintendents, the principals, and others in formal positions with very little work focusing on 'other leaders' within the school system, even though there has been some movement to include the Heads of Department (HoDs) and other formally appointed teacher leaders. The importance of strong instructional leadership from principals has been discussed and established for many years (Blasé and Blasé 2000a). Several of these studies have sought to identify and/or define how principals become instructional leaders, and more specifically what it is that principals who are instructional leaders do, which other principals do not do and how their behaviours or actions are associated with improvements in teachers' classroom practice and/or student performance (Quinn 2002; Blasé and Blasé 2000b). Although we now know more about principals as instructional leaders from these studies, their obvious limitation lies in their conceptualisation of school leadership only in terms of the principal's behaviours and actions. Hallinger and Heck (1996) had already drawn attention to the fact that such influence and guidance by the principals were often indirect and produced results through other intermediary factors at best.

Increasingly, the view of principals as the primary instructional leaders in a school has been challenged with some research demonstrating the distributed nature of instructional leadership to include the teachers. The earlier work by Spillane, Diamond and Jita (2003) and more recently by Lee, Hallinger and Walker (2012) provide examples of the various contributions to instructional improvement by 'other leaders' within a school. It is this latter view of instructional leadership as distributed practice (Spillane, Diamond and Jita 2003) that informs the present research on instructional leadership for EE.

Accordingly, we adopt the definition by Leithwood and Duke (1999:46) that Instructional Leadership 'typically focuses on the behavior of teachers as they engage in activities directly affecting the growth of students'. The focus on the core activities of influence that are designed to affect student growth, in one way or another, is relevant for our research. This focus on the 'activities of teachers' in defining instructional leadership, as discussed by Neumerski's review (2012), is still relatively rare in the literature.

We take cognizance of the fact that the focus on 'activities of teachers' to influence student learning, although useful for us in the present research, represents a rather narrow view of instructional leadership. A much broader view would also involve attempts to influence the organizational culture (Sheppard 1996) or the culture of teaching and learning (Kruger 2003).

The failure to account for other leadership influences on teachers, emanating from both inside and outside schools, makes the work on teacher leadership all the more relevant for instructional leadership research. The concept of teacher leadership itself describes a rather less studied phenomenon whereby teachers receive guidance and influence not from the principal but from other teachers formally and/or informally, individually and/or collectively (Grant *et al*. 2010; Leithwood and Jantzie 2008). In Katzenmeyer and Moller's (2009:6) formulation, teacher leaders are those who 'lead within and beyond the classroom, influence others toward improved educational practice and identify with and contribute to a community of teacher leaders,. Indeed, the one major characteristic of teacher leaders is the fact

that they continue to have classroom responsibilities in addition to their contribution to the professional development of their colleagues. This form of instructional leadership is less studied primarily because much research has tended to focus on formal and/or positional leadership roles where the leaders have non-teaching responsibilities. In our study, we seek to close this gap by contributing to the emerging literature on the non-positional instructional leaders who carry a full load of classroom teaching responsibilities. While there has been some work on teacher leadership in South Africa recently (e.g. research by Grant 2010; Grant *et al*. 2010), none of this work focuses on subject specific instructional leadership.

### *Distributed leadership and instructional leadership*

To give a comprehensive account of how the 'other leaders' construct and carry out their mandate of instructional leadership, we further extend our work on instructional leadership by drawing on Spillane's framework of distributed leadership. Spillane, Halverson and Diamond (2004) argue for a view of school leadership that takes into account the fact that such leadership often involves multiple players performing similar or different tasks to accomplish the goal of instructional improvement. In his elaboration of the concept of distributed leadership, Spillane (2005:385) in fact argues that the 'multiple leaders – both formally designated and informal leaders – (may) not necessarily always pull in the same direction'. This is a view of instructional leadership as socially distributed (Dimmock and Walker 2005). Examining the social distribution of instructional leadership implies paying attention to how different leaders may/may not collaborate and/or cooperate on specific leadership tasks to achieve their goal of instructional improvement. The different leaders may all be at one level (e.g. a school) or at different levels (e.g. one at district and another at school level) and may all engage in the same task (e.g. developing curriculum materials to be used by teachers) or may engage in different tasks (e.g. district leaders developing the materials and the local school leaders 'workshopping' the teachers on the new curriculum materials).

Investigating instructional leadership as a socially distributed task also allows us to pay attention to variations of context as an important factor in how the practice of leadership is constructed and implemented. Subject matter is one such important context we considered in our research. Spillane, Diamond and Jita (2003) have argued that school leadership is further distributed by subject area. That is, the quantity and quality of instructional leadership designed and offered for the improvement of science will be different from that of mathematics and/or other subject areas. The complexity and demands of the subject area, its structure, and how it is valued within the broader curriculum (Spillane, 2005) will all factor in on the kind of instructional leadership provided to teachers.

In describing the case of environmental learning in South Africa, we seek to understand how the perceptions and characterization of this subject (EE) may have shaped the instructional leadership practices in particular directions as exemplified in our case studies.

## Methodology

This article employs data from a multiple case study, qualitative research project that involved a total of six primary schools drawn from two separate provinces in South Africa. As Denzin and Lincoln (2003) argue, qualitative approaches enable researchers to capture the verbal descriptions, analysis and interpretations of the particpants. Within the framework of qualitative research, case study designs are useful to explore complex social phenomena in real-life contexts where the boundaries between the phenomenon and its context are not clearly defined (Yin 2011). We opted for a combination of the exploratory and descriptive case study designs (Yin 2011), where we provide details on the how and why of the less studied phenomenon of subject-specific instructional leadership within the subject EE. In the

one province, the Mpumalanga province, we conveniently sampled two schools each from two of the four districts in the province, while in the second, the Gauteng province, we only worked with two schools from one district that was located closest to the university. The schools were identified through nomination by head office staff and the district-based subject advisers as the most advanced in terms of the 'implementation' of environmental learning. We sought permission from each of the district offices and schools and then approached the schools and teachers, each time taking care to introduce the study and request informed consent from all the participants. The small number of schools allowed for in-depth and detailed examination of each of the cases relating to the teaching of environmental learning.

We visited each of the schools for a period of three to five days each over a three-year period and collected data through observation of lessons, semi-structured interviews with teachers and their principals and document analysis, employing all three data collection strategies to triangulate and strengthen the validity and reliability of our data. We also interviewed central office staff such as the provincial coordinators and subject advisers. The focus of our interviews and observations was on the teaching and learning of EE in each of the schools (and provinces).

Our data analysis commenced during the data collection phase and was done continuously until we exited the field. This reduced the problem of data overload, as we were able to target specific issues and themes as the study progressed. All interviews were tape recorded, and transcribed to provide written texts of the interviews. We coded the data into units of analysis, which we then categorised into themes following the data analysis processes suggested by Tesch (1990). We re-coded the data and created our cases based on the theoretical framework for this article that highlights instruction, instructional leadership and subject matter. We focus our discussion only on the one province – the Mpumalanga province – and present cases of two primary schools that help us to understand how instructional leadership for environmental learning is structured in the province and some of the schools in South Africa.



## Findings and discussion

Before describing the two cases of instructional leadership for EE in two primary schools of South Africa, we first examine the context of environmental learning in the country with a view to understanding how EE acquires the label of a marginalized subject. After a short description of the context, we provide a snapshot of how each of the profiled lead teachers provided an influence that sustained the teaching of EE in their schools – in the absence of a coherent and centralized instructional leadership drive in the province. We conclude with a discussion of how the cases illustrate some of the major features of instructional leadership, especially in EE.

## Environmental education as a marginalized subject in the South African curriculum

The teaching of Environmental Learning in the primary school curriculum of South Africa is largely a post-apartheid development, as there was no national focus on environmental learning in the curriculum prior to 1994. In the post-apartheid curriculum, EE is featured not as a separate subject but was to be integrated thematically within the various subjects. However, even the post-apartheid focus on environmental learning has not been as sustained, especially after the National Environmental Education Project for General Education and Training (NEEP-GET) folded. The NEEP-GET was a large-scale donor-funded initiative aimed at providing professional development to subject advisers as well as the teachers, in order to enable the integration of the environmental learning in schools. The NEEP-GET project contributed to the current prominence of environmental education and helped pilot approaches to support its implementation in the classrooms. The contribution of the NEEP-GET in South Africa, according to Sguazzin (2002), include helping the teachers to implement EE learning at

school level, and improving Guideline Documents and Learning Resource Materials to support the integration of environmental learning. The instructional leadership role of the NEEP-GET in providing guidance to the teachers on what to teach and how to teach was supposed to be taken over by the central office staff such as the provincial EE co-ordinators and subject advisers once the project folded around 2001.

## Instructional Leadership for EE at the provincial level

Accordingly, in the Mpumalanga province, Mr Jones was officially appointed the provincial coordinator for EE and is based at the Head Office of the Mpumalanga Department of Education (MDE)[1]. Mr. Jones, who has a senior degree in EE and is one of the highly qualified officials in EE within the MDE, however, spends a major part of his job coordinating and providing assistance to the subject advisers of Agricultural Sciences, a subject offered as part of the high school curriculum package (and not EE, which is a 'theme' and not a separate subject *per se* and is only offered at the primary school level).

To understand the kind of instructional guidance that Jones provides to teachers of EE, we explored the questions of how teachers know what to teach, how to teach and with what resources. In the province, EE is approached 'as a principle', Jones explained, meaning that every teacher is expected to teach with 'an environmental focus', whether one is teaching Mathematics or English in the classroom. Here is how he elaborated on the selection of content themes to teach:

> The curriculum is drawn from the Constitution and the Constitution is very strong on the fact that everyone needs to have a healthy environment. We are looking not only at plants and animals, but we are also looking at the classroom situation itself. We are looking at safety in the schools, so we define our environment very broadly. We are looking at the political, the social, the economical, we are looking as well at the biophysical aspects.

Clearly Jones correctly conceptualises the focus of environmental learning as broader than just talking about nature, the plants and the animals as it were, but integrates the social, political and economic aspects that shape life on earth. Furthermore, in line with the national curriculum policy, he argues that environmental learning needs to be integrated into all the various subjects in school:

> Actually, the way we teach it as I said it is not the issue that we say we are now teaching environmental education because it is the core of each and every subject area. We integrate it and learn it in each and every learning area because if there is no content on environment then you don't have normal teaching …. It's not taught in isolation. In the past it was like the subject on its own and it was discovered that it couldn't be a subject because it is part of everything. Let each and every learning area make sure that they integrate it.

In addition to the integrated focus, there is also no specific time that is allocated to EE, as it is not considered a subject on its own but a theme to be integrated in all the other subject areas. As Jones explains:

> We don't have time to say now this is period number four for environment; we are saying whether it is period one we must teach something about the environment, whether it's period number ten we must teach something about the environment … there must always be something about the environment.

In addition to other more generalised documents used to provide some instructional guidance to the teachers of EE, such as the White Paper on environmental management, which sets out the vision, principles, strategic goals, objectives and regulatory approaches that government will use for environmental management in South Africa, the *School Environmental Education Policy* is perhaps

the most influential. This is, however, a document that each school is expected to develop on its own to guide its practice. As Jones explains:

> We actually do not have the environmental education policy per se, but it is expected that every school [has its]own environmental education policy, one that will respond to their own environmental needs.

From this quote, it was rather surprising to think how the schools are expected to develop their own EE policies while the province itself does not have one. However, Mr. Jones noted that they conduct workshops where they 'give teachers hints on how to develop their own school environmental policy as well as why it is important to have one at school'.

In summary, a picture emerges of a provincial instructional guidance system that is essentially thin and provides very little structure on how environmental learning is to be incorporated into the school curriculum. To its credit though, the province provided teachers with the space and support to attend a variety of externally provided professional development courses with the view to empowering themselves on how to integrate EE in their teaching. As suggested by our earlier discussion on subject matter research, it may be that the nature of the subject (EE) and how it is conceptualized in the province tends to militate against structure and rigidity in both the instruction and instructional leadership systems. Coupled to these considerations is the relative place of EE in the national curriculum. For while it is considered important in principle, in practice it has always been supported as just a 'project' through donor funding. Having outlined the rather weak instructional guidance system provided at the central level, we now turn our attention to the school level leadership for EE. How then did teachers respond to this form of instructional leadership from the central office?

## Instructional leadership for EE at the school level: The role of lead teachers

### *The case of Hillside Primary*

At a first glance, Hillside operates like any normal public school in the sense that the official government policy on the integration of EE seems to be in place and well communicated to all the teachers at the school. Informally, the school has identified and assigned Mrs. Mafolofolo, a 25-year veteran teacher, to take on the responsibility for leading the development and implementation of EE programmes and policies at the school. Mafolofolo has been teaching the subject Natural Sciences to the grade 7 class for the past 25 years.

#### *Teaching Environmental Education*

When asked about her experiences of teaching EE at the school, Mafolofolo noted that she had started including EE in her teaching of the Natural Sciences even before the changes to include it in the curriculum were drafted. For her, it was the love of nature and the attempt to teach in such a way that the children are 'able to see, touch and feel the real life specimen' that prompted her to include EE in her teaching:

> I used to make sure that in my class whatever I teach the children they should see the model. They should touch it. They should feel it. We should not talk about a frog out of the blue.

For example, in teaching about pollution in the Natural Sciences, she would often take the learners to the nearby rivers and would talk about the animals living in the water, what makes the water dirty and the effects of polluted water on people and animals. For her, teaching EE in this manner helped the learners to make better sense of what was being taught, much more than they would if they were just seated in the classroom.

*Environmental Education curriculum and content topics*

Flowing out of her teaching approach, Mafolofolo and her colleagues identify topics that seem to have some relevance to the learners and the local environment for their school EE curriculum. During our conversation, she identified several topics focused on: first, she identified the topic of pollution where they usually look at their school (and surroundings) to try and solve the problem of littering. Littering therefore becomes a key subtopic she deals with under the broader theme of pollution. To further illustrate this approach to the identification of important content topics at her school, she gave an example of how she had approached the teaching of energy and forces to the learners. While other teachers would usually be satisfied with discussing energy in the abstract sense of the 'ability to do work', her approach to the topic went a step further, to a consideration of the burning of things (heat energy). She required the learners to consider the effects of such burning on the environment. This allowed her to bring in the issue of air pollution and all other types of pollution such as water, land and noise pollution into the lesson on energy. To conclude the lesson on pollution, she would then take the learners all around the school to do a clean-up campaign as a way of solving the problem of pollution within the school surroundings.

For Mafolofolo therefore, the basis for selecting EE content revolves around 'identifying and solving a real life problem'. Content selection for the curriculum is guided more by practical problems to which the school (and particularly Mafolofolo) would like to guide her learners in finding solutions. Furthermore, our discussions with Mafolofolo and other teachers at Hillside suggest that Mafolofolo is always instrumental in identifying and distributing these content topics to her colleagues for inclusion in their own lessons:

> I am trying by all means to show them (other teachers) that they can make their own activities using the materials that I provide to them (teachers) in our meetings.

*School level Environmental Education policy guidance*

As highlighted by the provincial coordinator, each school is expected to develop a school EE policy to guide all its EE activities. This was confirmed by Mafolofolo when she argued that:

> You know when you don't have the policies you don't know where are you coming from and where are you going. You won't have your goals. You won't know why you are teaching this. You know you cannot just go into the class and say "children today let us look at the littering". What prompts you to talk about littering? You know the policy is guiding you.

Another important set of documents that seem to guide Environmental Learning at Hillside are the Learning Area Programme documents provided by some of the non-governmental organisations (NGOs) that operate in the province. These Learning Area Programme documents have also been designed carefully to provide useful information to the teachers on how to integrate EE in each learning area. For example, in one of these documents, specifically the Natural Sciences document, teachers are given an explicit example of how to integrate the teaching of water into the Natural Sciences topic on Natural Resources.

*Time allocation*

While at Hillside, as in other schools in the province and nationally, there is no specific time period on the school's timetable that is specifically allocated for the teaching and learning of EE, Mafolofolo always creates additional time in the afternoons and on weekends specifically to work with the learners on their EE projects. Mafolofolo arranges additional environmental learning opportunities by involving the

learners in the environment competitions and 'science Expos'. The school has managed to place at least one learner's project in the top 10 nationally each year for the past five years. A case in point was a learner's project of developing a large soap block after cooking several smaller discarded pieces of soaps that she had collected from her fellow students that was awarded a gold medal at the provincial science expo for the work on recycling soap.

Our discussion so far has painted a picture of a school that has tried hard to structure rich opportunities for the learners to engage with EE through a number of initiatives, including careful selection of content material based on, among others, a well-developed school environmental policy, knowledgeable teachers who display a lot of agency with respect to their work, well-structured learning tasks and activities, and additional time for such learning both in class and outside. While the discussion has largely been positive in tone, it is important to note though that the school does face a number of real challenges in integrating Environmental learning.



One of the challenges, for example, is that of limited time for the teaching of EE within the context of the present school timetable. Mafolofolo believes that part of the problem of lack of time arises because EE is not a subject on its own and thus has to fit within the content and time frames of other subject areas. Learners' projects in EE always have to be scheduled for the afternoons and weekends – something that is not ideal both for the teachers and learners. This speaks to the marginalization of the subject.

The second major challenge arises from the fact that not all teachers at the school see themselves as teachers of EE. Some teachers see EE as something that should be done by the natural sciences teachers only. Others are therefore happy to defer to Mafolofolo as the natural sciences teacher and thus potentially deprive learners of enhanced opportunities to integrate the subject into all the learning areas:

> "Rome was never built in a day", so it's not everybody who is doing exactly what you want him or her to do, from teachers to learners, because we are a team here. If we are doing an activity or project at school, huh, it's not … we are thirty-seven in a class, it's not all the pupils or teachers who say, "it's a good thing". Some will say, "heish le nto ya Rose" (loosely translated as "this is Ms. Rose Mafolofolo's thing").… I just tell the staff in the morning that, I would like to introduce this … just when I say that some start saying, "here she goes again".

While Mafolofolo, as the school's EE leader, perceives the real challenge of getting everyone on board, she is not discouraged by the sometimes less than positive reactions she gets from the teachers and learners. She acknowledges the point that learning (for both teachers and learners) takes time and needs to be nurtured gradually when she retorted that: "Rome was never built in a day."

## The case of Sea Point Primary

Sea Point primary, just like Hillside, also works within the official government policy of integration. This school has also identified and assigned one of the teachers (Ms. Tieho) to take the responsibility in leading the development and implementation of EE programmes and policies at the school. Tieho has been a teacher for 34 years, being responsible for all the subjects in grade 4 for the first 20 years, and then shifting to mathematics and science in the remaining years.

To illustrate how she integrates EE in her natural science teaching and learning, Tieho gave an example of when she taught learners about living and non-living things. She explained that she would take learners out to the gardens that they made at school, walk around the gardens and show the learners the different plants (weeds) and small living animals in the garden. The learners would see the locusts,

the birds on the trees, and all types of plants as part of their environmental or natural science lesson. For Tieho, teaching natural science in this way makes her feel like she has integrated the EE in her teaching, especially when she takes the learners for walks in the gardens that they have made themselves.

*Environmental education curriculum and content topics*

Tieho noted that there are no specific topics because EE is not a subject on its own. She explained that all they have to do as teachers is to integrate it into the other learning areas such as natural science:

> We don't teach this EE as an independent learning area, we incorporate what we do on our environment to our teaching and learning work because we don't have a special time-table for the environmental education.

It seems that Tieho and her colleagues at Sea Point do not identify specific EE topics, instead they teach it within the context of their specific learning areas. As illustrated in the previous conversation about the topic on living and non-living things, there is no special EE topic that she focused on. As part of the integration, she took the learners out to the garden where they could see the plants and animals she was referring to in her teaching. The topic remained the same for the natural science lesson. It was rather difficult to figure out how then would Tieho and her colleagues at Sea Point be able to know when they were integrating environmental learning in their teaching given that they identify no specific EE topics. When we posed this question to her, Tieho noted that she and her colleagues rely more on the environmental calendar that had been provided by the Department of Environmental Affairs.

> I don't find it stressing as I have an environmental calendar which indicates what should be done every week, say for example it's water week. We would incorporate the topic of water into our lessons the whole week, e.g. the mathematics teachers will be doing measurements of water, science teachers will be doing water purification and the junior phase will do water conservation.

It seems that Tieho and her colleagues draw their EE content mostly from the environmental calendar and follow the special weeks or days identified throughout the year. Furthermore, we learned that Tieho takes the responsibility to always distribute the content topics to her colleagues for them to include in their own learning areas. Tieho also noted that all the teachers were actively involved and she believed that all the teachers were engaged in the teaching of EE, given that she always made sure that they were provided with the topic that should be treated every week or every month.

> I usually bring in the topic with the entire staff and I tell them, guys, this month we are observing this, please incorporate this in your teaching in your classes. The maths teachers will be involved too, they do measurement of the water, the science teachers as well, they do water purification, and the lower groups, that is the junior phases learn about how to conserve water and the English teachers also asks the learners to write creative writing on how they can save water at school or at home.

From the above quote, it would appear that the teaching of EE at Sea Point is further decentralised to the classroom level. Teachers responsible for the different learning areas are left to their own devices in terms of determining what specific content to teach within a theme and how to do it. However, our data also suggests that much of this integration of EE at the Sea Point school happened because of the efforts of the lead teacher in the school – Ms. Tieho, who explains her role as follows:

> Yes, we have the meetings more often to help the teachers to design the lesson plans that include the environmental education. Sometimes they come to me individually and I am always eager to help and to listen to what they have to say.

*School level Environmental Education policy guidance*

In addition to the calendar and other material from the Department of Environmental Affairs, teachers at Sea Point are also guided by documents and guides from the Department of Agriculture that also describe ways of integrating EE in different learning areas.

Furthermore, the natural sciences teachers at the school have developed the School EE Policy that is also used to guide teaching of EE:

> We wanted something that would be relevant to our situation in this school. However, before we draw our policy we always consider first the policies from the Department of Environmental Affairs and from the Department of Education; we compare and contrast so that our own school policy does not read so different.

As with Hillside, the school's EE policy is one important document that guides the provision of environmental learning at the school.

*Time allocation*

While at this school, as in the other schools in the province and nationally, there is no specific time period on the school's timetable that is specifically allocated for the teaching and learning of EE, Tieho mentioned how she always found it difficult to create additional time for EE. This should not be surprising, however, as she and her colleagues' approach to Environmental learning is that it should be within the learning areas, something that comes from the national and provincial policy frameworks. At Sea Point, there are not as many tasks assigned to learners for integrating EE as was the case at Hillside. A few of the tasks include colouring of pictures and drawings. However, the most visible task at this school is the assignment of garden plots where each learner plants and cultivates vegetables as a way of fundraising and providing for the school's nutritional needs in their feeding scheme programme.

## Conclusion

This paper tells the story of instructional leadership for EE in one province of South Africa. Our discussion suggests that although there was an expectation that the schools would begin to integrate Environmental Learning in their teaching of other subjects, there were no substantive plans and guidelines on how this would happen in the schools. That is, the province and/or districts provided no locally adapted curriculum frameworks, no teaching and learning guidelines, no assessment standards and no timeframes or guides for schools to use in teaching about the environment. Decisions about what to teach, when, and how, and about what to assess are for the most part left to classroom or subject teacher, or at best in some few instances reserved for school level instructional leadership.

The implication of this finding with respect to the lack of a coherent instructional guidance system in the province is that there are bound to be variations in the curriculum offerings for EE. The province or district is thus in no position to determine and know for sure which schools and/or learners are getting the kinds of exposure to EE that is desired by the national frameworks and policies, which is the major purpose of instructional leadership in general.

Our data further suggests that some schools in the Mpumalanga province have managed to create significant opportunities to learn EE through their own local initiatives and inventiveness. Most of these schools have designated informal EE coordinators to facilitate and assist all other teachers in the school with the integration of Environmental Learning in other subjects. The coordinators were the lead teachers in the teaching of EE in their schools. Without adequate co-ordination, there is a danger that certain topics and issues covered by more than one teacher will not be complementary. Against this

background therefore, the implication of our finding with respect to variations in school capacity is that the nature and quality of the Opportunities to Learn (OTL) EE in Mpumalanga are likely to vary by school, and by classroom with some providing better opportunities than others depending on local inventiveness and resources. In schools with stronger EE coordinators, the exercise of instructional leadership will be better with the consequence that the opportunities for teaching and learning of the subject may also be better.

Three major conclusions arise from our discussion of instructional leadership for EE: First, that instructional leadership is distributed across the education system and the schools. That is, it is not only the people who are in formal hierarchical positions that provide all the leadership on what is taught, how and with what resources in the various school subjects. Leadership resides and is practised at different levels of the hierarchy, including by teachers who sometimes occupy no formal positions in the school organizational hierarchy. Second, that even as the South African education system is essentially centralized, decisions about what to teach and how are still within the purview of each classroom teacher. What this means is that teachers are not just mere implementers of the curriculum (policies), but are challenged to make sense of the national curriculum guidelines for action in their classrooms. Third, and most important, that the role of lead teachers in instructional leadership has been understated and/or largely ignored by most researchers who tend to focus on the more centralized levers of instructional leadership such as the central office based leaders (e.g. subject advisers, district managers).



## Note

1 The names of people and schools have been changed to protect their identities.

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## Corresponding author

Loyiso C. Jita
Email: jitalc@ufs.ac.za