CHARACTERIZATION OF CURRICULUM LEADERSHIP BY SOUTH AFRICAN SCHOOL LEADERS AND TEACHERS IN ENVIRONMENTAL EDUCATION

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Abstract

Integrating environmental education into the school curriculum in South Africa remains a concern. Various curriculum and instructional design factors affecting environmental education have been explored. However, the role of curriculum leadership in environmental education is not well understood despite research that shows that curriculum leadership is a critical challenge facing the education system in general. Poor curriculum leadership has been shown to contribute to ineffective curriculum implementation and poor quality of education. In the current research, we used qualitative research methods to determine the characterization of curriculum leadership by teachers and school leaders involved in environmental education as a preliminary effort to understand the challenges facing environmental education. We used distributed leadership as a theoretical framework for the research. The findings show that some environmental education teachers, school managers, and environmental education subject advisors do not understand the concept of curriculum leadership. Participants' understanding of curriculum leadership was associated with socio-political dynamics rather than educational principles. We conclude that the poor understanding of curriculum leadership and its role may lead to ineffective integration of environmental education in the South African school curriculum.
Keywords: *Curriculum leadership; distributed leadership; environmental education; school leaders and teachers*

Introduction

Strategies for effective integration of environmental education have been extensively researched worldwide. In South Africa, researchers have raised concerns about the poor integration of environmental education and its insignificant impact on the everyday lives of communities and the environment (Zwelibanzi, 2016). Previous research identified several curriculum design, development, and implementation challenges affecting environmental education. For example, Le Roux and Maila (2004) suggested that teachers' and communities' generally poor understanding of environmental issues hampers environmental education efforts. This is because some teachers and communities do not understand the relevance of environmental education and therefore view it as an "add-on" rather than a core component of the curriculum. The government has also been accused of providing inadequate teaching and learning resources to support effective environmental education. Furthermore, there is a

402

lack of monitoring and evaluation of the curriculum, including the extent to which schools adopt effective instructional strategies, such as a whole-school development approach to environmental education (Zwelibanzi, 2016). There are also reports of poor teacher training, curriculum coordination, and assessment of environmental education content.

Curriculum Leadership

While curriculum implementation issues have been identified, less effort has been made to understand the role of curriculum leadership in environmental education and how this may impact the curriculum's aspirations. Sorenson et al. (2011) defined curriculum leadership as integrating curriculum, instruction, assessment, and evaluation to improve learning and understanding to enhance the curriculum's quality, efficiency, and effectiveness. However, Harris and Jones (2020, p. 1) have cautioned that because the concept of curriculum leadership is not well developed, it is essential to ensure that curriculum leadership is not confused with other forms of educational leadership, such as "teacher leadership, instructional leadership, pedagogical leadership," "subject/disciplinary leadership" and "system/structural leadership." To this end, Henderson and Gornik (2007) argued that curriculum leadership ought to be transformative. In transformative curriculum leadership, curriculum leaders could be involved in the reconceptualization of educational standards, enacting systematic deliberations concerning instructional design and pedagogy, building communities of practice, and exercising public intellectual leadership (Kesson & Henderson, 2010).

In countries such as South Africa, curriculum leadership is vital to bring about social transformation envisioned in the constitution that seeks to redress the inequalities of the colonial and apartheid governments. As such, transformative curriculum leadership could play a crucial role in ensuring that education becomes a tool to foster transformation. Ylimaki (2011, p. 55) has suggested that such transformation may require critical curriculum leaders who are "concerned with dialectical relationships among suffering and oppression, curriculum content, cultural politics, and social inequities." This implied intersection between the curriculum, school, and society could empower learners to become change agents for social transformation.

Given the various leadership roles within the education system, one wonders about whose responsibility it is to "lead the curriculum." According to Ylimaki (2012, p. 305), some scholars have argued that curriculum leadership is the role of the school principal "as the top pedagogical decision maker in a school" (e.g., Harris & Jones, 2020). However, Ylimaki (2012) noted that a school principal could not be the sole curriculum leader because a curriculum is broader than teaching practice within the school environment. A curriculum includes other functions and factors that affect education, including sociocultural and political aspects of educational content decisions (Ylimaki, 2012). As a result, the role of curriculum leadership may be collaborative to include various stakeholders other than those involved in the day-to-day implementation of the curriculum. Thus, curriculum leadership should seek to promote and maintain quality curriculum design, development, and implementation encompassing learning, teaching, and the environment in which education takes place.

While quality education is often considered within the parameters of the schooling environment, Hallak (1996) argued that factors such as the changing ideological and socio-political landscape could significantly impact the quality of education. Hallak (1996) suggested that globalization and rapid scientific and technological developments impact how curricula are designed, developed, and implemented (Hallak, 1996). As a result, curriculum leadership ought to extend beyond school leadership to include these facets (Harris & Jones, 2020).

While the literature does not prescribe the role of curriculum leadership to any one individual, we posit that curriculum leadership should be a well-defined role within schools for effective curriculum implementation. Ideally, teachers and other stakeholders should adopt

Nonkanyiso Pamella SHABALALA, Headman HEBE, Lindelani MNGUNI. Characterization of curriculum leadership by South African
school leaders and teachers in environmental education

PROBLEMS
OF EDUCATION
IN THE 21ˢᵗ CENTURY
Vol. 81, No. 3, 2023

403

such a definition from literature and use it to develop school policy and delegate roles and responsibilities. However, the extent to which teachers and school leaders share a common understanding of curriculum leadership remains to be thoroughly investigated.

Distributed Curriculum Leadership

To address the question of responsibility, curriculum leadership may adopt a "distributed model of leadership where a key teacher may assume a role in the leading curriculum" (Harris & Jones, 2020, p. 1). In a distributed leadership model, curriculum leadership may be a responsibility of a group of individuals who work collaboratively to fulfil various functions leading to the design, development, and implementation of a high-quality curriculum. Leithwood (2005, p. 1) suggested that distributed curriculum leadership might involve "district administrators, teachers, parents, school board members, and state officials." In this context, curriculum leadership would require a strategic balance between pedagogical and administrative responsibilities in a multi-faceted and complex educational system.

Research has shown that distributed curriculum leadership is a significant driver in improving academic achievement. For example, in a distributed leadership model, curriculum leaders would be involved in the curriculum's design, development, and implementation. Their knowledge of student learning abilities and preferences would be used in curriculum design, development, and implementation. Additionally, curriculum leadership which involves researchers would ensure that decision-making in the curriculum is informed by relevant research (Coplan & Knapp, 2006).

King (2002) argued that distributed curriculum leadership, which focused on monitoring and evaluating learning and teaching, could help improve teaching methods and enhance student performance. This is because such leadership could provide supportive decisions about pedagogy, coursework, and instructional materials (King, 2002). Furthermore, research has shown that involving teachers in broader curriculum leadership is positively associated with enhanced engagement in continuous professional development for those teachers involved in curriculum leadership (Law & Wan, 2008). While the literature has shown a positive correlation between curriculum leadership and student performance, some scholars have argued that in a distributed leadership model, the impact of curriculum leadership may be too indirect and complex to be linked to student performance (Leithwood, 2005). As a result, further research may be required to understand the impact of curriculum leadership.

Curriculum Leadership in Practice

Various context-specific complexities could affect curriculum leadership in society and schools (Harris & Jones, 2020). For example, the devolution of curriculum leadership within the school to meet the context-specific demands of the school may be a strategic decision that aligns with the school's vision to harness the strengths of the staff (and possibly students) (Harris & Jones, 2020). However, in some instances, the socio-political dynamics of society could affect the viability of such curriculum leadership. Themane (2019) reported that some schools adopted a patriarchal approach to school and curriculum leadership in South Africa, partly due to the apartheid system and the colonial cultural practices, which regarded women as inferior to men. In such contexts, while the vision of distributed leadership may be ideal, it may not be viable or effective in practice.

Furthermore, research has shown significant knowledge gaps in teachers' understanding of curriculum leadership, which affects curriculum leadership in practice (e.g., Hsieh et al., 2021; Wang & Ho, 2020; Yang, 2019). A poor understanding of curriculum leadership and its relation to other governance and operational systems may also create confusion about the role of

404

curriculum leaders. For example, in most communities, leadership and management have been associated with managerial positions (Harris & Jones, 2020). Anyone in a managerial position is often assumed to be a leader (Lunenburg, 2011). In distinguishing between management and leadership, Connolly et al. (2019) suggested that management may follow a hierarchical structure, where higher positions are perceived as having more power and authority. As such, curriculum leadership is often reserved for those in higher positions of authority (Connolly et al., 2019; Kaiser & Hogan, 2010). This is observed when curriculum leadership is associated with curriculum management (Ngobeni, 2011). In these cases, the curriculum is managed by 'managing teachers' and learners (Mngomezulu, 2015). The principals, deputy principals, departmental heads, and subject advisors all 'manage' the work teachers do in the classroom with learners as a perceived form of curriculum leadership. Such practices go against the basic definition of curriculum leadership.

Theoretical Framework

In the current research, distributed leadership theory was adopted as a theoretical framework to guide the research as we sought to understand how curriculum leadership is characterized in selected South African schools. Proponents of distributed curriculum leadership suggest that leadership is a social process that is not centralized in one individual. Instead, it is distributed among different stakeholders across the organization. Spillane (2005) argued that leadership involves broader organizational activities influencing motivation and strategic and operational practices. Thus, a leader should not be fixated purely on their position but on organizational objectives. Therefore, curriculum leadership should be decentralized in the same way that strategic and operational thinking is also decentralized. In this context, curriculum leadership requires collaboration and coordination from those involved.

A definition of distributive curriculum leadership includes curriculum activities tied to an organization's core functions that organization members design to influence and impact other organizational members' commitment, attitudes, and perceptions (Cooper, 2012). Therefore, Grenda (2011) suggests that the distributed leadership theory emerges from a reconceptualization of leadership, allowing for the integrated and collaborative approach to operations that benefit the curriculum. This also creates an environment where members of the organization work towards a common goal, such that the outcome is greater than the sum of their actions (Spillane, 2005).

In the school context, distributed curriculum leadership suggests that the principal should not be viewed as the absolute leader. Instead, various stakeholders should be viewed as collaborators in the curriculum leadership endeavour where each brings expertise to benefit the curriculum (Harris, 2005; Spillane, 2005). The principal, therefore, works in a team and retains his overall school oversight role (Grenda, 2011). However, the principal should acknowledge the synergistic relationships between stakeholders and structures that affect the curriculum for effective curriculum leadership. Team members in a distributed curriculum leadership context jointly recognize and enhance the skills and knowledge of all role players and create an environment that enriches human capacity (Connolly et al., 2019; Harris, 2005; Spillane, 2005). They also cultivate a system that cohesively integrates various aspects of the organization in a mutually interdependent and productive relationship (Harris, 2005).

Research Problem

The research gap explored in the current research concerns the characterization and role of curriculum leadership in environmental education. In particular, we noted in the literature that while factors affecting environmental education have been explored, the role of curriculum

Nonkanyiso Pamella SHABALALA, Headman HEBE, Lindelani MNGUNI. Characterization of curriculum leadership by South African school leaders and teachers in environmental education

PROBLEMS
OF EDUCATION
IN THE 21st CENTURY
Vol. 81, No. 3, 2023

405

leadership has received little attention. For example, in South Africa, no formal school subject teaches environmental education exclusively. Instead, content is integrated into other subjects, such as Natural Sciences and Life Sciences. However, this means no one is accountable for the quality of environmental education teaching. Within the context of transformative curriculum leadership as defined by (Henderson & Gornik, 2007; Kesson & Henderson, 2010) and critical curriculum leadership (Ylimaki, 2011), we posit that it is unlikely that aspirations of environmental education will be achieved. In light of these challenges, the current research sought to explore the role of curriculum leadership in environmental education.

Research Aim

Given the broader research gap, the current study aimed to determine the characterization of curriculum leadership by environmental education teachers and school administrators in South Africa. This aim is a preliminary effort to understand the relationship between curriculum leadership and the effective integration of environmental education. The research question was, "*What is the characterization of curriculum leadership by environmental education teachers and school administrators in South Africa?*" Findings in this regard could help enhance the integration of environmental education in the curriculum, including curriculum design, development, implementation, and management.

Rationale

This research contributes to the international discourse on curriculum leadership by exploring how it is perceived in the South African context. The findings of the study can be useful for international scholars and policymakers to understand the challenges and opportunities of curriculum leadership in South Africa and potentially in other contexts. The research findings can also inform the development of training and professional development programs for curriculum leaders and policymakers in South Africa and other countries, particularly in the context of ongoing efforts to improve educational outcomes and enhance the quality of education.

This research is unique in the international context because it focuses on exploring the perceptions of curriculum leadership in South African schools. While there is a significant body of literature on curriculum leadership, most of it has been conducted in Western contexts, particularly in the United States and the United Kingdom. Therefore, this research provides a unique perspective on curriculum leadership in a developing country context, which has its own unique challenges and opportunities. Additionally, the research also highlights the need for a better understanding of curriculum leadership in South Africa, particularly in light of the country's ongoing curriculum reform efforts. By exploring the perceptions of curriculum leadership among South African educators, this research can contribute to the development of more effective curriculum leadership practices that are contextually relevant and responsive to the needs of South African schools.

Research Methodology

Background

The interpretivist research paradigm as defined by Guba and Lincoln (1989) to guide the research methods was adopted in the current study. Given its preliminary nature as an explorative study, the interpretivist paradigm allowed us to construct the meaning of underlying phenomena by interpreting reality as expressed through the participants (Kivunja & Kuyini, 2017; Morgan, 2007). As a critical inquiry, we relied on qualitative methods to interview participants. Data were collected and analysed over two years between 2021–2022.

Data Sources

Participants comprised three school principals, three teaches who were members of the school management team, three teachers who were not members of the school management team, two subject advisors, and three parents who were members of the school governing body. These participants were selected using non-random purposeful sampling criteria. In particular, we sought participants who were involved, in some capacity, in school management. Per regulations in South Africa, each public school ought to have a school management team and a school governing body. The school management team, which comprises mainly teachers, is responsible for the professional management of the school, which includes all activities that support teaching and learning (Heystek, 2004). The school governing body is an elected structure comprising mainly of parents. It is responsible for developing the school's strategic plan and related policies, including admissions and financial management policies.

Therefore, to understand strategies adopted for curriculum leadership to enable efficient environmental education in schools, we believed that members of the school management team and a school governing body should be selected as participants. The three teachers who were not members of the school management team, and two subject advisors, were identified for their roles in teaching content related to environmental education. The teachers taught Life Sciences, a subject in which most environmental education content is taught. The subject advisors are field specialists the government employs to oversee curriculum implementation, monitoring and evaluating the performance of teachers and learners in schools through quality assurance practices. We believe that understanding strategies adopted for distributed leadership to enable efficient environmental education curriculum management in secondary schools would require input from these participants as subject specialists and teachers, as well as those responsible for the overall governance of teaching and learning in the schools.

Data Collection

Data were collected using interviews through a Delphi method. As Barrett and Heale (2020, p. 68) described, "the overarching approach is based on a series of 'rounds,' where a set of experts are asked their opinions on a particular issue. The questions for each round are based in part on the findings of the previous one, allowing the study to evolve in response to earlier findings." These rounds are repeated until no new insights emerge, suggesting that respondents have thoroughly expressed their views. Through member checking, researchers also ensure that they have captured the respondents' views and meanings as best as possible. In the current research, the first round used pre-determined open-ended items (Table 1). The subsequent rounds were focused in confirming and exploring themes that emerged from the first round. Data saturation was reached in the third round, and no further data were collected.

Table 1.
A Summary of the Interview Protocols Used for Data Collection.

Theme	The focus of interview items
Description of curriculum leadership	Participants' description of curriculum leadership
Styles of curriculum leadership	Participants' knowledge of different styles of curriculum leadership
Roles of a curriculum leader	Participants' knowledge of the different roles of curriculum leaders
Understanding of distributed and transformational leadership	Participants' understanding of distributed and transformational leadership in curriculum management

Data Analysis

At the core of our data analysis was to verify themes with which we could respond to the research questions. To this end, a deductive approach was adopted where themes were identified from the literature. Subsequently, we collected and analysed data to determine whether the themes identified in the literature would be confirmed through our data. The data from the interviews were analysed through content analysis. As Holsti (1968) suggested, content analysis can be defined as a technique for making inferences by systematically identifying specific words, themes, or concepts within a given qualitative data set. Once these words, themes, or concepts have been identified, their meaning and relationship are determined through an interpretivist approach. In the current research, content analysis was preferred because it "provides a systematic and objective means to make valid inferences from verbal, visual, or written data to describe and quantify phenomena" (Downe-Wamboldt, 1992, p. 314). Downe-Wamboldt (1992, p. 314) suggested that content analysis "is more than a counting game; it is concerned with meaning, intentions, consequences, and context." It also allows the researcher to make inferences concerning the context from which data were produced.

In the current research, one researcher was responsible for interviewing the participants. This researcher was also responsible for data analysis. This ensured that the researcher as an "instrument for data collection and analysis" remained consistent. The other two researchers were responsible for quality assurance by determining the credibility of the data and the analyses. In particular, we used researcher triangulation, where multiple researchers reviewed the findings to check selective perception and illuminate blind spots in an interpretive analysis (Noble & Heale, 2019). As Carter et al. (2014, p. 545) suggested, "This type of triangulation can bring both confirmation of findings and different perspectives, adding breadth to the phenomenon of interest."

Research Results

Understanding the Roles of a Curriculum Leader

The participants were asked to describe a curriculum leader, including his/her roles. Data showed that none of the participants could provide a succinct definition of a curriculum leader. Instead, the participants used the role of the leader to describe what a curriculum leader was. As shown in Table 2, the participants suggested that a curriculum leader should understand the people and the environment in which they function. The leader must also guide and support his/her subordinates. Leaders are expected to listen to those they lead and lead by example. The

participants described the curriculum leader's significant responsibilities as providing guidance, communicating reliable information, working collaboratively, and providing support.

Table 2

Participants' Description of a Leader

Participant	Current role in school	Participants' description of a curriculum leader
Mr. Mofolo	Subject advisor	A curriculum leader is "*someone who is able to guide, tell the truth, and listen to other people.*" A curriculum leader must be someone "*who is able to work with other people. If there is a need for the truth to be told, it has to be told even if sometimes it hurts*".
Ms. Nkosi	Subject advisor	A curriculum leader is "*someone who will be able to guide and support subordinates.*" A curriculum leader must provide guidance towards *a particular organizational goal*".
Mr. Mthunzi	School principal	A curriculum leader is someone *who* "*works with people, sets an example, understands people and the environment.*" Such a leader would be expected to *"show people the way and show people what you expect by being exemplary."*
Mrs. Chetty	Teacher	*"Even though I am not in a leadership position, but I take leadership as someone that has to lead."* *"A (*curriculum*) leader is someone who is at the front then there are people who depend on you who are at the back."* As a curriculum leader, *"you should lead by example. The things that you say or do need to reflect what you say you are; that is my understanding".*

Leadership Styles

Participants were also asked to list the different curriculum leadership styles they were familiar with. In response to this question, participants listed different leadership styles (see Table 3) that they were familiar with, those they had experienced, and those they preferred. In some instances, the participants could define their leadership styles; in others, they were not.

Table 3
Leadership Styles and their Definitions Provided by Participants

Leadership style identified	Source	Current role in school	Definition provided
Democratic leadership	Ms. Nkosi	Subject advisor	This is where people listen to each other and come to an agreement.
	Mr. Mofolo	Subject advisor	Not provided
	Mr. Kim	Head of Department	I like the department to come up with ideas of how we can do things, guided by the department or school.
	Mr. Mkhungo	Teacher	Not provided
Autocratic leadership	Ms. Nkosi	Subject advisor	Not provided
	Mr. Mofolo	Subject advisor	Not provided
	Mr. Mkhungo	Teacher	The leader is taking all decisions that do not allow others to share their views. Like here in our school, there are so many things that they do that we are not happy with.
	Ms. Khumalo		There is no platform to share ideas because there is no need to suggest anyway because whatever the principal and SMT have decided will be done.
Authoritative	Mr. Mofolo	Subject advisor	Not provided
Coaching	Mr. Mofolo	Subject advisor	Not provided
Lase-fare	Mr. Mofolo	Subject advisor	Not provided
Collegial	Mr. Mofolo	Subject advisor	Allows everyone to be treated as a colleague. Collegial leadership can be applied through sharing power and ideas and by giving responsibilities and guidance when things are not going right. There are decisions that we cannot take because of our work situation. For example, if there is a curriculum outline, we cannot deviate from the curriculum.
	Ms. Khumalo	Teacher	I do not think there is anyone who would like to remain in a PL1 position.
	Mr. Mofolo	Subject advisor	Not provided
Instructional leadership	Mrs. Sydney	School principal	a leadership style whereby you aim to do the law of the institution to come up with strategies.
Instructional leadership	Mr. Mthunzi	School principal	Instructional leadership says what you promote at school is not only effective teaching and learning but the maximum "productive" teaching and learning. Instructional leadership informs that teachers have to be given opportunities to perform.
Batho pele leadership	Mr. Kim	Head of Department	It must be the learner first, parents, and visitors. I believe that when you are coming to the school, you come because you need assistance, and you might need to hurry somewhere else while I can still see the learners.
Distributed leadership	Mr. Kim	Head of Department	Not provided

Leadership Strategies for Managing School Curricula

Participants were further asked to describe strategies they use to manage the school curriculum. In response, Ms. Nkosi, a subject advisor, suggested that one of the strategies to manage curriculum is to *"allow teachers to participate in decision making, which gives you*

410

opportunities to get to know them better when you give them a role to play." She indicated that she had applied this strategy when she *"called two teachers to the office and asked them to go and coordinate the workshop, and I gave them the materials I was going to use*." This way, teachers have the "freedom" to decide how the workshops will be run. These workshops would form part of teacher professional development activities. Regarding Ms. Nkosi's strategy, Mr. Mofolo, a subject advisor, suggested that he prefers to "*adopt a buy-in strategy where he would sell an idea to teachers and seek their buy-in."* He argued that *"if you come up with strategies to manage the curriculum and the teachers do not buy it, they will not do it. First, I show them how it can work for them"*.

Mrs. Sydney, a principal, suggested that she rely on specific curriculum management tools. She stated, *"There are resources that we use, such as the one called a management or mentoring tool*." These tools include technology-integrated curriculum management tools and other leadership structures available in the school. One such tool was reported by Mr. Mkhungo, who is a teacher. He indicated that "*the way they manage curriculum, they focus mainly on the ATP* (Annual Teaching Plan)*, so the ATP is what we use. In terms of work, we know the amount of work we need to cover"*. Mr. Mkhungo further mentioned that they *"submit files to the HODs* (Heads of Departments) *so that they assess how far we have gone with work, comparing learner's books and ATPs."* The role of Heads of Departments was also mentioned by Mrs. Sydney, who indicated that "*we have HODs (we call them departmental heads) those are the ones managing the curriculum, and then a deputy principal manages the departmental heads work, then the principal manages a deputy principals work."* The existence of these stakeholders was confirmed by Mrs. Kubheka, who is a Head of Department. She indicated that the strategies to manage curriculum involve checking, *"teachers and learners work, every week, we have a circle of three days, one day is for submissions and that how we also submit to the principal."* Mrs. Kubheka, further indicated that as part of curriculum management, they *"sit down and plan, lessons and activities have to be the same, even if we are five, but our work does not have to differ, it has to be the same."*

Another Head of the Department, Mr. Kim, stated that "the only way to manage the curriculum is through what we are given by the department, then it depends on how we amend it because you have to check, the lesson plans, curriculum coverage, written work of learners to see if they have written enough work for a week, then it depends on what we have agreed on as a department." He further indicated that "teachers submit lesson plans every Tuesday, then we check curriculum coverage monthly."

Based on the data, curriculum management is distributed amongst different stakeholders. In this process, the Head of the Department seems to take the most responsibility for curriculum management. Ms. Nkosi, a subject advisor, suggested that her "role in managing curriculum would be to ask and invite teachers to come with ideas or give them different suggestions to manage" the curriculum. Mr. Kim argued that as a HOD, his "role in managing environmental education curriculum is that of an overseer."

Discussion

One of the significant findings of the current research is that the participants could not provide a succinct definition of a curriculum leader. Given the significance of curriculum leadership as discussed in the literature (e.g., Hallak, 1996; Jorgensen, 2016; Ylimaki, 2012), this finding is noteworthy as it may have significant implications concerning the role of curriculum leaders. The apparent lack of understanding of curriculum leadership supports Harris and Jones's (Harris & Jones, 2020) assertion that curriculum leadership is not well developed and generally not considered in teacher training. Perhaps, for this reason, participants could not define curriculum leadership. Instead, they described some functions of curriculum leadership

using a generic definition of a leader. This confirms previous reports that curriculum leadership is often confused with general educational leadership (Jorgensen, 2016; Ylimaki, 2012).

It was also noteworthy that in defining the roles of the curriculum leader, none of the participants referred to the curriculum or instructional roles. Instead, the participants referred to providing guidance, collaboration, and supporting colleagues without explaining how these might be linked to the curriculum. The responses suggested that they may not be familiar with curriculum leadership, particularly concerning curriculum design, development, and implementation. These observations echo Tapala et al. (2021), who also found that heads of departments and other school managers perceived their roles as monitoring, motivating, role modelling, commitment, communication, goal setting, accountability, and personnel management. However, they could not identify with curriculum leadership concerning curriculum design, development, and implementation.

The current research also found that participants are aware of different leadership styles. However, we could not identify any related curriculum leadership. We also found that the leadership styles identified by the participants are related to social complexities, particularly socio-political dynamics, rather than the curriculum. For example, democratic, autocratic, authoritative, and *batho pele* leadership are concepts generally associated with socio-political dynamics. In South Africa, *batho pele* (which means *people first*) is an initiative introduced in South Africa by the Nelson Mandela administration to foster better service delivery. It also attempts to enhance the accessibility of government services, efficiency, and accountability. To our knowledge, this initiative has not been translated into the curriculum context. Therefore, we postulate that the socio-political dynamics inform this leadership view and may not be well defined within the educational context. Similarly, the other forms of leadership defined by the participants seem to reflect the socio-political dynamics and may not reflect curriculum leadership.

While the current research did not use transformative curriculum leadership as its framework, none of the participants in the current research see their roles within the context of transformative curriculum leadership (Kesson & Henderson, 2010). Our findings also confirm Themane's (2019) argument that curriculum leadership may be confused with general school management and leadership. Literature shows that school leadership and management are often associated with hierarchical managerial positions (Harris & Jones, 2020). Anyone in a managerial position is often assumed to be a leader (Connolly et al., 2019; Lunenburg, 2011). Our research noted that the participants do not see teachers as curriculum leaders or even leaders in general. Participants sometimes suggested that teachers can participate in curriculum and instructional design and development decision-making. However, as suggested by one participant, curriculum leadership is seen as the responsibility of the head of the department, who reports to the school principal.

It was also found that school governing bodies are not seen as part of curriculum leadership. In this regard, none of the participants mentioned the school governing body's (i.e., parents in particular) involvement in curriculum leadership. It is noteworthy that literature (e.g., Noble & Heale, 2019) argued that the role of the school governing body includes monitoring and overseeing the implementation of the curriculum in the school and ensuring that it is not disconnected from the school's goals. The school governing body represents the interests of ordinary community members, parents, teachers, and learners. Mahlangu (2008) also argued that the School Governing Body could decide on the instructional approach (curriculum implementation). Nevertheless, these responsibilities are not reflected in the South African Schools Act, No. 84 of 1996, as cited in the Guidelines for Capacity Building of School Governing Body Members 2018 (Department of Basic Education, 2018). Instead, the role of the school governing body is limited only to "supporting curriculum delivery" (Department of Basic Education, 2018, p. 15). The extent to which supporting curriculum delivery is a part of curriculum leadership was unclear.

Conclusion and Implications

The current research has demonstrated that curriculum leadership is poorly understood based on research findings. Given the benefits of curriculum leadership, we argue that a lack of understanding of curriculum leadership could lead to ineffective curriculum implementation, a phenomenon well documented in environmental education in South Africa. In this regard, we argue that environmental education will unlikely lead to significant societal transformation, such as adopting environmentally friendly practices. Based on the findings, it is argued that the roles of different stakeholders within the distributed curriculum leadership context require clarity. If the benefits of distributed curriculum leadership are realized, various stakeholders must understand what curriculum leadership is and how it should be implemented. It is argued that a lack of understanding of curriculum leadership within environmental education may be responsible for the poor integration of environmental education in the South African curriculum. Therefore, we recommend further research to explore the relationship between curriculum leadership and the effective integration of environmental education in school curricula.

The findings of this study have important implications for education policy and practice globally. Firstly, providing professional development opportunities for school leaders and teachers on curriculum leadership is necessary. School leaders and teachers need to understand the importance of their role in shaping the curriculum and how their leadership can affect its implementation. Secondly, school leaders and teachers must be equipped with the knowledge and skills necessary to effectively lead curriculum development and implementation. They need to be able to engage in collaborative decision-making with teachers and other stakeholders in the school community, including the school governing body, to ensure that the curriculum meets the needs of all learners. Thirdly, policymakers need to clarify the roles and responsibilities of the school governing body in curriculum leadership. The school governing body represents the interests of the school community, including parents, teachers, and learners, and should be involved in decision-making around the curriculum. Finally, future research should investigate how curriculum leadership can be more effectively integrated into education policy and practice. This could include exploring the relationship between curriculum leadership and student achievement and how curriculum leadership can contribute to more equitable and inclusive education for all learners.

Limitations of the Study

There are some limitations to the current research that should be acknowledged. In this regard, the sample size does not represent all teachers' perspectives on curriculum leadership in South Africa. Therefore, caution should be exercised in generalizing the findings to a larger population. Additionally, the research was conducted in only one province of South Africa. Therefore, the results may not apply to other regions of the country where different socio-economic, cultural, and political factors may come into play. Furthermore, the research only explored school leaders' and teachers' perspectives. Therefore, future research should consider including multiple stakeholders to provide a more comprehensive understanding of curriculum leadership.

Declaration of Interest

The authors declare no competing interest.

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414

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