

Life Sciences Teacher's Perspectives on Instructional Leadership: A Case of Two South African Schools

Thobile Madonsela, Loyiso Jita, Olalekan Badmus

University of the Free State South Africa
205 Nelson Mandela Drive, Bloemfontein, 9301, Free State, South Africa
Correspondence: perseverancemadonsela@gmail.com

Article received: February 2025, Revision: March 2025, Approval: March 2025

DOI: 10.17977/um025v9i22025p185

Abstract: Student performance and achievement have always been at the centre of school reform efforts around the world. This led to Instructional Leadership being regarded as being key for improving teaching and learning processes. Although there is an inextricable connection between instruction and learning, it does not directly address subject-specific Instructional Leadership. Hence, this study investigated teachers' perspectives on Instructional Leadership for the subject of Life Sciences. By applying a qualitative case study approach, we interviewed high school principals, departmental heads, and teachers in two South African schools from the Gert Sibande District in the Mpumalanga Province. Thematic analysis was employed to analyse the collected data. Findings revealed differences in the conception and understanding of Instructional Leadership among teachers, departmental heads, and principals regarding the Life Sciences. Teachers only understood Instructional Leadership based on their job-descriptions. We recommend that based on the findings of this study, it is important that the knowledge of teachers, departmental heads and principals be extensively upgraded on subject-specific Instructional Leadership.

Keywords: Academic achievement, Instructional Leadership, Life Sciences, supervision, transition

The history of Instructional Leadership (IL) includes the principal's transition from manager and school administrator to Instructional Leader. To improve academic achievement and boost school effectiveness, Instructional Leadership evolved to accommodate the principal's 'new' role since the 1970s (Bambi, 2013). According to Hamad, Demissie and Darge (2021), Instructional Leadership is critical in also advancing sound educational administration. Thus, secondary school principals are responsible for overseeing the curricula, ensuring that the entire school day is managed effectively, and creating an environment that is conducive to teaching and learning. Instructional Leadership focuses on prioritising learner-achievement and academic performance (Glickman et al., 2017). Moreover, Instructional Leadership has been associated with numerous positive school outcomes, including better teaching practices and increased learner-success (Shatzer, Caldarella & Hallam, 2014; Hallinger, Wang & Hallinger, 2015; Day, Gu & Sammons, 2016; Hou, Gui & Zhang, 2019). In other words, Instructional Leadership may be viewed as a powerful function involving supervision, evaluation, and monitoring of teaching resources in the promotion of quality teaching.

Being closely aligned to classroom management functions coupled with instructionally-focused leadership skills, results in quality teaching-learning processes through the creation of organised and supportive learning environments (Alig-Mielcarek, 2003; Cruickshank, 2017; Le Fevre et al., 2019). Although Instructional Leadership can improve teachers' didactic techniques and learners' learning, it has been found that in African countries (Tanzania in particular) its adoption is seldom enacted (Lwaitama & Galabawa, 2008; World Bank, 2010). School leaders, including administrators are not being adequately trained for the fundamental responsibility of leading schools to advance best practice (Bambi, 2013). This implies that sub-standard Instructional Leadership may emanate from inadequate training. Although school administrators cannot be experts in all aspects of content-area teaching, a deficit understanding of what best practice entails in a particular content area may contribute to school leaders' obliviousness to the magnitude of instructional problems; thus school leaders may be ill-equipped to provide effective support to teachers where and when the need arises (Fuentes & Jimerson, 2020). Specifically, many school leaders do not have expertise in science teaching (Spillane & Hopkins, 2013) as the subject presents a unique challenge to school leaders concerning the guidance and supervision of teachers (Sandholtz & Ringstaff, 2014). Additionally, there is a particular gap in subject-specific research especially relating to Instructional Leadership in the Life Sciences. To bridge this gap, this study explored how high school principals, departmental heads, and teachers define and understand Instructional Leadership, particularly in the Life Sciences.

Although school leaders play a critical role in reform efforts, yet their scientific knowledge is insufficient to support teachers (Fuentes & Jimerson, 2020; Klein et al., 2018; Lochmiller & Cunningham, 2019; McNeill et al., 2018). Instructional leaders often lack sufficient content knowledge in the sciences to be effective in their role of supervisors, mentors, and purveyors of subject content. School leaders' primary task involves Instructional Leadership, but this may be challenging when leaders and teachers do not share common grades or content areas (Steele et al., 2015). As a result, they fail to monitor organisational routines regarding science teaching and learning (Hayton & Spillane, 2008).

Further, teaching and learning in science poses a unique challenge to the elementary curriculum landscape because traditionally Elementary Phase teachers display low levels of self-efficacy in this subject. In the United States of America, Instructional Leadership in elementary science has become important for the successful integration of the new science education agenda (Winn, 2016). However, despite calls highlighting the importance of Science, Technology, Engineering and Mathematics (STEM) education, research indicates that science is not prioritised in most elementary schools internationally (Spillane, 2005; Buczynski & Hansen, 2010; Ravitch, 2011). Hence, this impacts negatively on Instructional Leadership in the science teaching areas (Burch & Spillane, 2003).

In the South African public school context, there are several challenges encountered in the teaching of the sciences. From empirical evidence, it was exposed that some science teachers are teaching different science subjects but are qualified only in one particular area. For example, a Natural Sciences (NS) specialist teacher in the Senior Phase may teach elementary science in the Foundation Phase (Ng et al.,

2015). The NS lays the foundation for at least four high school subjects; namely, Life Sciences (LS), Physical Sciences (PS), Geography, and Agricultural Sciences in South African schools (Malinga, Jita & Bada, 2022). Research by Malinga and Jita (2020) indicates that departmental heads (DHs) as instructional leaders of NS not only experience difficulties in their normal day-to-day tasks, but also struggle to lead as they lack the necessary experience, qualifications, and competence to do so. Additionally, DHs assign underqualified teachers to teach NS but do not provide them with training and opportunities for professional growth. Consequently, teachers struggle to convey content material and subject skills to their learners (Ngema, 2016).

Scholars in science instruction contend that the quality of school leaders' Instructional Leadership determines a school's capacity to promote high-quality instructional practices for learners, supervision of teachers, and support for teachers' professional development (McNeill, Lowenhaupt & Cherbow, 2022; Yow et al., 2021; Yow & Letter, 2016). However, instructional leaders need to develop greater expertise in science subjects before they can support science teachers. Diamond and Spillane (2016) note that the knowledge and skills involving the delivery of subject content as leadership essentials empower leaders to better mentor teachers to enhance teaching-learning. The authors advanced that if leaders are knowledgeable about aspects of practice including pedagogies, content, and teaching-learning challenges, then Instructional Leadership trajectories for mathematics and science are likely to be positively influenced by subject-context factors.

Additionally, Instructional Leadership is vital in planning and creating resources that meet quality curriculum-delivery demands. Moreover, it is the instructional leaders' responsibility to encourage teachers to use instructional supervision to enhance teaching and learning (Kadir & Nimota, 2019). For instance, science DHs are responsible for planning and implementing science-related activities in their classes and schools. Since scientific education attempts to improve learners' intellect, character, talent, skills and potential, better preparation of future citizens is advanced (Makhubele, 2016). The management, administration, and supervision of science education must be conducted with vision, care, dedication, and effectiveness. For instructional leaders to achieve this, they should possess the following interrelated capabilities: ability to apply deep leadership content knowledge (LCK), solve complex problems, and build rapport and trust with teachers, learners, and parents (Robinson, 2010). Further, Instructional Leadership functions such as providing timely and meaningful feedback about learners' class assessments will more likely improve learner-performance, as well as teachers' teaching skills as they (teachers) will be aware of weaknesses in their teaching styles (Manaseh, 2016). Instructional Leadership's primary focus is classroom practice and managing teachers to promote and support best practice (Fuentes & Jimerson, 2020). Many classroom teachers are less confident in their ability to teach science; hence, the level of their efficacy exhibited in science classrooms necessitates Instructional Leaders' provision of high-quality supervision and support. Thus, it is expected of instructional leaders to be well-informed and well-organised to focus on enhancing classroom practices that engender all-round school improvement (Lochmiller & Cunningham, 2019).

Although there is an abundance of research on science Instructional Leadership in general, but much less is known about Instructional Leadership in the Life Sciences. More needs to be known, understood, and documented about the role subject-specific Instructional Leadership plays in efforts to function as successful leaders who respond to teachers' challenges, specifically in the Life Sciences. Therefore, this study aimed to explore how Instructional Leadership for the Life Sciences is constructed in the two South African schools.

METHOD

This study pursued a qualitative case study design to investigate the phenomenon under study within its real-life context; in this case, Instructional Leadership in schools. We chose this design because it allows for the provision of in-depth descriptions and explanations of how Instructional Leadership for the Life Sciences is constructed and enacted in schools. Moreover, individuals have different perspectives on Instructional Leadership depending on their experience, training, and professional background. Therefore, based on these aspects, Instructional Leadership is viewed from various perspectives. This qualitative case study design enabled us to expand our knowledge about participants' thoughts, feelings, and practices regarding Instructional Leadership (Busetto, Wick & Gumbinger, 2020).

The type of sampling selected entailed multi-stage non-probability sampling which considers quota and purpose. Quota sampling was employed because each school must have an equal representation of participants (principal, DH, & Life Sciences teachers). Eight participants in the study were purposively selected from the province of Mpumalanga; the sample included two principals, two department heads, and four Life Sciences teachers. The eight individuals were chosen using purposive sampling which was considered appropriate because of the relevant individuals from the different schools. The principals and departmental heads were chosen because they regularly engage in Instructional Leadership as members of the School Management Team (SMT) who are aware of how IL is practised in schools. In addition, the teachers were appropriately selected because they teach Life Sciences; therefore, they are knowledgeable about the enactment of Instructional Leadership regarding the subject. Moreover, it was the goal of the study to select information-rich cases that would allow for in-depth collection and analysis of data to provide incisive insight into the phenomenon (Polit & Beck, 2019).

Semi-structured interviews, being the main instrument of data collection, consisted of open-ended questions. We asked the same set of pre-planned questions to each participant. The open-ended questions were adopted to get descriptive answers, using a language that participants could easily understand, and asking questions that were clear, positive, sensitive, and being as brief as possible. The credibility of the interviews was ensured by not asking suggestive or leading questions, and by being impartial.

Data was collected through semi-structured interviews which were suitable for gathering qualitative data primarily because they offer opportunities for conversation which helps to unravel complexities to expose new revelations (Marshall et al., 2015). Similarly, Katz (2015) asserts that employing semi-structured interviews as a strategy enables the interviewer to gather in-depth information on the issue

through continuous probing. We chose this approach with the intention of better comprehending Instructional Leadership for the Life Sciences in high schools. The interviews were conducted in English with some of the participants, while others preferred IsiZulu. This was accommodated to avoid communication barriers that might occur when using only one language. Furthermore, when new ideas surfaced during the interviews, the semi-structured format gave us the freedom to ‘stray’ from the list of prepared questions. None of the participants were coerced to provide the information. To ensure transparency and to strengthen triangulation, we instituted member-checks to authenticate the data and verify the findings before compiling the final report. In this way, the credibility of the collected data was ensured.

The six steps of thematic analysis developed by Braun and Clarke (2006) were applied to analyse the collected data through semi-structured interviews. These six phases included familiarisation and generating codes, searching for themes, defining and labelling themes, and concluding the study (Braun & Clarke, 2006:77). Firstly, we started with familiarising ourselves with the data collected before transcribing. Secondly, we identified initial codes which are data aspects that seemed intriguing and significant. At this stage, codes were generated to describe how participants perceived Instructional Leadership for the Life Sciences. Thirdly, after coding the data, we searched for themes. In the fourth stage, we reviewed and confirmed the themes. We proceeded to name or label the themes together with a practical explanation that conveyed each theme's message. Lastly, to structure the analysis into a coherent whole, we presented vivid and persuasive extract instances connected to the themes, research questions, and relevant literature. As a result, thematic analysis was deemed relevant to the study because it enabled the researchers to classify the data in line with the study's aim, objectives, and research questions to provide appropriate interpretations of the results (Omodan, 2022:36).

RESULTS AND DISCUSSION

RESULTS

In the final data analysis process, Instructional Leadership was presented thematically. The thematic comparison, therefore, provided an aggregated summary of the principals’, departmental heads’, and teachers’ responses. The Instructional Leadership comparison began with the principals, followed by the departmental heads, and then the teachers.

Definition of Instructional Leadership: Comparison of Perspectives

Mrs De La Ray, the principal of school A perceived Instructional Leadership as a process that guarantees practices of effective teaching-learning methods in schools. Importantly, she viewed the elements of Instructional Leadership to include the leader acting as a model of knowledge, integrity, honesty, and fairness.

In contrast, Mr Shembe the principal of school B viewed Instructional Leadership as a way of giving instructions or guidance, but at the same time being a role model in education.

This is in line with Sibomama's (2022) findings which indicate that Instructional Leadership focuses on the actions of principals and other school administrators who should have a positive impact on the work of teachers and learner-achievement. Thaba-Nkadimene and Nkadimeng (2020) maintain that the principal holds a position of authority and is responsible for providing quality Instructional Leadership to ensure that teaching-learning is conducted as effectively as possible.

The departmental heads' understanding of Instructional Leadership provided insight into the characteristics and knowledge needed to be an instructional leader. Their definitions are discussed below:

Mr Daniel, the departmental head of school A mentioned:

“Instructional Leadership is leadership that gives direction to the school to make the school operational. It is the kind of leadership that focuses on teaching which means prioritising instructional practices over managerial duties. Instructional Leadership for Life Sciences promotes the mission of the department by focusing on learners' academic progress.”

Mrs Khathi, the departmental head of school B, mentioned:

“Instructional Leadership is concerned with DHs' monitoring of how teachers teach”

As Harris et al. (2017) point out, the crucial responsibility of instructional leaders is to articulate the school's vision, mission, and purpose. Similarly, Taole (2013) asserts that instructional leaders' responsibilities include goal-setting, curriculum management, teacher- evaluation, monitoring, and resource allocation. Additionally, instructional leaders must possess the necessary knowledge, abilities, and training in instructional leadership to execute these tasks. Moreover, Instructional Leadership facilitates the establishment and communication of a clear vision and goals for both teachers and learners, and it assists teachers through professional development, coaching, and mentoring (Robinson, Lloyd, & Rowe, 2008). Since the primary activities of education, teaching, and learning, are the priorities (Gawlik, 2018), sound Instructional Leadership is critical in schools. In other words, supporting teachers to improve learner-outcomes by focusing on the quality of teaching and learning is imperative. In defining Instructional Leadership teachers from the two schools articulated the following:

Ms Adele, a Life Sciences teacher in school A stated:

“Instructional Leadership is solely based on DHs' responsibilities as they are the immediate support base on the ground.”

In support, **Ms Lola** a Life Sciences teacher in school A indicated:

“The principal of the school oversees curriculum and instruction which is Instructional Leadership. Under this style of school leadership, the principal collaborates with DHs and teachers to help develop best practice in the classroom.”

Likewise, **Ms Sofia**, a Life Sciences teacher from school B mentioned:

“Instructional Leadership is the type of leadership where leaders of the school support and monitor teachers ensuring that everyone in the school fulfils their role so that teaching and learning takes place effectively.”

Mr Angel, a Life Sciences teacher from school B expressed the following opinion:

“An Instructional Leader is when someone gives instructions and sees to it that these instructions are followed. I do not think there is any other definition because the only time I see Instructional Leadership in action is when we are given orders by the DH to do certain duties.”

This speaks to the kind of leadership that principals demonstrate or delegate to promote learners' learning (Mestry, 2013). To effectively cooperate with other school leaders and foster a learning

environment that enhances and supports learner-achievement, instructional leaders must adopt a functional and collaborative Instructional Leadership stance (Edmonton Public School, 2018). The notion held by educationalists that Instructional Leaders enhance teaching and learning by fostering better curriculum management is well-established (Kiat, Tan, Heng & Lim-Ratnam, 2017). Developing a supportive learning environment for learners, inspiring teachers, and judiciously allocating resources to improve teaching methodologies are all under the purview of instructional leaders. Thus, academic standards which encourage information-transference and abilities that learners should acquire in a subject at appropriate grade levels, are developed and maintained largely by Instructional Leaders (Shelton, 2010). However, to accomplish this, they need a thorough understanding of teaching, learning, and assessment, especially in the Life Sciences. Lastly, they should also actively encourage constructive interactions and behaviours between educators and learners (Hoy, Hoy & Davis, 2009).

Instructional Leadership practices

Fullan (2014) states that highlighting Instructional Leadership processes is the best thing a principal can do to guarantee the success of a school; for example, effective communication is necessary for quality Instructional Leadership (Whitaker, 1997).

Each participant stated that the instructional practices form part of Instructional Leadership in their school. They indicated the following:

Mrs De La Ray, the principal of school A mentioned:

“Effective Instructional Leadership monitors teachers’ programmes to guarantee the attainment of desired outcomes which leads to higher levels of learners’ academic performance. Accordingly, Life Sciences teachers are motivated to provide the necessary tools for instruction, being flexible regarding instructional time, and giving timely feedback to teachers.”

Mr Shembe, the principal of school B added:

“As an instructional leader, I ensure that during meetings I emphasise the enhancement of teaching and learning at the school.”

According to Boyce and Bower (2018), Instructional Leadership involves the principal and teachers enabling a healthy connection and developing a supportive school environment that foster fairness, communication, trust, transparency, dependability, honesty, and competency. Whitaker (1997) contends that a principal's duties require that they be carried out in the classroom, not in an office. It is impossible for a principal to truly understand the school unless he/she steps outside the office.

Mr Daniel, the departmental head of school A indicated:

“As an instructional leader, one must monitor and evaluate the teaching and learning in one's department which leads to better classroom instruction and higher learner-performance.”

Mrs Khathi, the departmental head of school B stated:

“Instructional Leadership is concerned with DHs’ monitoring of how teachers teach. Also, DHs ensure that time is sacred, and instructional practices must be adhered to.”

According to Goddard, Goddard, Kim and Miller (2015), Instructional Leadership practices of leaders and teachers in schools increase learner-achievement by improving the quality of teaching and learning in the school. The active presence of Instructional Leadership in a school leads to structures of

support which contribute to creating a strong teaching-learning culture with a shared focus on learners' learning goals.

Moreover, developing and regularly communicating a clear vision and mission of the school to all role-players are important tasks of an Instructional Leader. Du Plessis (2013) states that principals are required to build a visionary plan for improving learner-achievement, and teachers are expected to apply it consistently in their classrooms.

In this regard, the Life Sciences teacher **Ms Lola** from school A stated:

"This kind of leadership involves articulating a clear vision for teachers and learners to set goals."

Ms Adele, a Life Sciences teacher from school A explained:

"The DHs' responsibilities are to assist with planning, motivating, and supporting teachers to achieve instructional goals. In addition, Instructional Leadership facilitates a two-way communication that allows for improvement in teaching and learning in the Life Sciences."

Ms Sofia, a Life Sciences teacher from school B indicated:

"Leaders of the school support and monitor teachers ensuring that teaching and learning take place effectively."

However, **Mr Angel** a Life Sciences teacher from school B disagreed:

"The only time I see Instructional Leadership in action is when we are given orders by the DH to do certain duties."

According to Timperley Ell, Le Fevre, and Twyford (2020), effective instructional leaders monitor and respond to learners' progress, evaluate curriculum, and ensure a supportive learning environment. Similarly, Bush and Glover (2013) agree that instructional leaders are supposed to supervise the curriculum throughout the entire school and assess learner- achievement by examining the outcomes of exams and internal continuous assessments. Additionally, Yuki (2010) maintains that Instructional Leaders can forge a common vision, set the tone for the school, interact with stakeholders, resolve disagreements, and circumvent problems or obstacles that obstruct their ability to lead educationally. The importance of the Instructional Leader's duty is more than just management and administration as emphasised by Hallinger and Murphy (1985); it is expected of principals to be instrumental in the creation of quality educational standards to enhance the learner success rate because school leaders should be astute monitors and evaluators of the curriculum and instruction (Jenkins & Pfeifer, 2012). Mestry (2017) elaborates that instructional leaders are in charge of creating a supportive learning environment, motivating staff and learners, and judiciously allocating resources to advance optimal instructional methods.

Explanation of teachers' perspectives on Instructional Leadership

This section addresses teachers' perspectives on Instructional Leadership regarding the Life Sciences in two South African schools.

Mrs De La Ray, the school principal of school A responded:

"I view Instructional Leadership as a process that guarantees that there are effective teaching methods in schools. Furthermore, it monitors teachers' programmes."

Le Fevre, Timperley, Twyford, and Ell (2019) highlight the close relationship between Instructional Leadership and enhancing learners' learning. The motivation and core function of Instructional Leadership is the improvement of instruction to enhance academic performance to create a functional school.

Mr Shembe, the principal of school B stated:

"I understand Instructional Leadership as a way of giving orders."

Mr Shembe displayed traditional methods of being the principal and Instructional Leader as he only gave orders. According to Tuitoek, Yambo and Adhanja (2015), such school principals do not allow for collaborative participation in decision-making. They expect others to follow their instructions without questioning, and they make task-oriented decisions on their own. This leadership style hinders group participation and disregards the knowledge, skills, and creativity of teachers. Consequently, teachers have less faith in their institution when principals exhibit authoritarian behaviours (Kars & Inandi, 2018). This can also be detrimental since it stifles originality and creativity because leaders believe they are always correct, while teachers become demotivated and feel unworthy (Rahbi, Khalid & Khan, 2017).

Mr. Daniel, the departmental head of school A mentioned

“Instructional Leadership in the Life Sciences department means prioritising instructional time over managerial duties. I also monitor and evaluate teaching-learning which helps promote learners' success.”

Mrs Khathi, the departmental head of school B articulated:

“I perceive Instructional Leadership as Leadership that focuses on monitoring teaching and learning solely.”

Further, Hao (2016) maintains that Instructional Leadership deals with the activities that influence teaching and learning such as assessment, teaching practices, and curriculum supervision. This is in line with the findings of Murphy et al. (2016) which suggest that Instructional Leadership entails primarily focusing on classroom practice over managerial duties; this involves interacting with teachers in a way that encourages and supports quality teaching and learning. Moreover, Instructional Leaders should oversee the school's curriculum, establish a healthy school climate, and follow the mission and vision of the institution. According to Heck and Hallinger (2014), principals have the power to enhance teaching and learning in classrooms. In other words, the principal's role as an Instructional Leader is to ensure that teachers receive the relevant support they need to ensure effective teaching and learning in the classrooms to attain best practice standards. Lee, Walker and Chui (2012) confirm that Instructional Leadership is a multifaceted function that centres on providing teachers with assistance to ensure that they are teaching qualitatively. Ms Adele and Ms Lola, Life Sciences teachers of school A, and Ms Sofia a Life Sciences teacher at school B indicated:

“We perceive Instructional Leadership to be based on the support and monitoring we receive from the instructional leaders.”

Initiating and contributing to the planning, designing, administering, and analysing of the effectiveness of the curriculum are critical roles for Instructional Leaders (Weber, 1996). Also, examining the instructional programme on an ongoing basis motivates teachers to meet the needs of the learners (Hallinger & Heck, 2010).

Contrary to what was perceived by other participants, Mr Angel, a Life Sciences teacher from school B indicated:

“I have never witnessed Instructional Leadership in my school as mostly we are ordered to do certain things. That's not how Instructional Leadership works.”

DISCUSSION

Sisman (2016) states that school principals' Instructional Leadership is recognised as the skills they (leaders) possess to motivate others to support better learner-achievement in the classroom. These skills encompass the following five areas: articulating and conveying the goals of the school; overseeing the teaching process and instructional programmes; evaluating the teaching process; providing assistance to teachers; and ensuring a safe and secure learning environment. Mestry (2017) adds that principals are vital in guaranteeing the maintenance of academic standards, including the knowledge and abilities that learners must acquire for each topic and grade. In other words, as an educational leader, the principal is in charge of overseeing the delivery of the curriculum; this implies that Instructional Leaders must be au fait with all aspects of curricula.

Instructional Leadership of school principals has been acknowledged as the abilities that principals demonstrate or enable others to demonstrate to promote high-levels of learner- accomplishment in schools. These abilities include defining and communicating school objectives and managing instructional programmes. As such, principals of schools must prioritise the use of effective teaching methods for sound curriculum delivery which are at the forefront of a school's daily operation (Mestry, 2017). Robinson (2011) maintains that astute Instructional Leadership enhances learner-achievement by encouraging innovative teaching-learning strategies that are geared to meet international benchmarks. As a result, teachers view principals as effective Instructional Leaders when they provide the necessary resources and motivation required to uplift the quality of teaching-learning processes (Sibomama, 2022).

The results indicated that participants generally understood that Instructional Leadership involved guiding teachers to achieve better teaching and learning outcomes. However, the findings of this study demonstrated that participants from school A understood the concept of Instructional Leadership better than participants from school B. This was due to teachers from school B not knowing much about Instructional Leadership as they did not have a common understanding of the concept of Instructional Leadership. This led to teachers understanding the concept based on what their instructional leaders portrayed at school.

Regarding curriculum and instructional practices, Instructional Leadership is often understood to be a strong, directive style of leadership. The institution's effectiveness (or ineffectiveness), particularly in teaching and learning, is a result of its instructional leaders' influence (Hallinger & Murphy, 1985). However, the lack of knowledge and the skill gaps make the implementation of Instructional Leadership challenging. Being an Instructional Leader involves engaging with teachers on issues of pedagogy by analysing *what*, *when*, and *how* it is enacted, and how learning is assessed (Brazer & Bauer, 2013; Leithwood et al., 2010). Moreover, it implies the acquisition of thorough understanding of instructional practices that apply to all grade levels including knowledge of content areas and coaching skills to facilitate instructionally-focused conversations (Carraway & Young, 2015; Desimone & Park, 2017; Hattie, 2012). Therefore, this study sought to investigate teachers' perspectives on Instructional Leadership for the Life

Sciences in two South African schools, which focused on the perceptions of school principals, departmental heads (Life Sciences), and teachers.

CONCLUSION AND SUGGESTION

CONCLUSION

The findings of this study revealed that only one school principal understood clearly that Instructional Leadership promotes teaching and learning, and that it primarily entailed the implementation of effective teaching-learning methods that enhance learners' academic performance. Conversely, findings also revealed that some principals consider Instructional Leadership as giving orders to create an awareness of the necessity to improve teaching and learning standards. Also, since it is the responsibility of the departmental heads to monitor and evaluate teaching and learning and to safeguard instructional time, they viewed Instructional Leadership as a process that promotes the school's functionality.

The quality of teaching and learning in the classroom is at the centre of Instructional Leadership which is crucial for improving learner-outcomes. Based on the findings and practices that characterise Instructional Leadership in the two schools, there is the need to create and share teaching-learning best practice strategies, in addition to teachers being provided with sufficient relevant resources, support, and guidance to achieve the vision and mission of the school to achieve enhanced instructional practices.

Additionally, it is also important to note the evidence indicates that Life Sciences teachers from the two schools see Instructional Leadership as a way for school principals to collaborate with other instructional leaders to monitor, evaluate, support, and motivate teachers. Lastly, since one Life Sciences teacher from school B considered Instructional Leadership to be giving out orders to teachers, the researchers established that teachers understand the concept of Instructional Leadership based on the roles and functions performed by their principals and departmental heads.

SUGGESTION

The findings of the study address the paucity of knowledge on teachers' perspectives regarding subject-specific Instructional Leadership in South African schools. As such, policymakers should develop guidelines to improve the quality of Instructional Leadership in schools on subject-specific Instructional Leadership. Also, intensive training and networking with 'model' school principals will engender a better quality of Instructional Leadership without which schools may slide into dysfunctionality.

REFERENCES

- Adeyemi, T.O., & Bolarinwa, R. (2013). Principals' leadership styles and learner academic performance in secondary schools in Ekiti State, Nigeria. *International journal of academic research in progressive education and development*, 2(1):187-198.
- Alderson, P., & Morrow, V. (2020). *The ethics of research with children and young people: A practical handbook*. Sage Publication. <http://dx.doi.org/10.4135/9781446268377>
- Alig-Mielcarek, J. M. (2003). *A model of school success: Instructional leadership, academic press, and learner achievement*. Ohio State University Press.

- Bambi, A. (2013). *The role of head of departments as instructional leaders in secondary schools: implications for teaching and learning*. University of Johannesburg Press.
- Boyce, J., & Bowers, A. J. (2018). Toward an evolving conceptualization of instructional leadership as leadership for learning: Meta-narrative review of 109 quantitative studies across 25 years. *Journal of educational administration*, 56(2). <http://dx.doi.org/10.1108/JEA-06-2016-0064>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative research in psychology*, 3(2): 77-101.
- Brazer, S.D., & Bauer, S.C. (2013). Preparing instructional leaders: A model. *Educational administration quarterly*, 49(4): 645-684.
- Buczynski, S., & Hansen, C. B. (2010). Impact of professional development on teacher practice: Uncovering connections. *Teaching and teacher education*, 26(3): 599-607.
- Burch, P., & Spillane, J. P. (2003). Elementary school leadership strategies and subject matter: Reforming mathematics and literacy instruction. *The Elementary School Journal*, 103(5): 519-535.
- Busetto, L., Wick, W., & Gumbinger, C. (2020). How to use and assess qualitative research methods. *Neurological Research and Practice*, 2: 1-10.
- Bush, T., & Glover, D. (2013). School management teams in South Africa: A survey of school leaders in the Mpumalanga Province. *International Studies in Educational Administration (Commonwealth Council for Educational Administration & Management)*, 41(1): 21-40.
- Carraway, J. H., & Young, T. (2015). Implementation of a districtwide policy to improve principals' instructional leadership: Principals' sensemaking of the skillful observation and coaching laboratory. *Educational Policy*, 29(1): 230-256.
- Cherbow, K., McKinley, M. T., McNeill, K. L., & Lowenhaupt, R. (2020). An analysis of science instruction for the science practices: Examining coherence across system levels and components in current systems of science education in K 8 schools. *Science Education*, 104(3): 446-478. <https://doi.org/10.1002/sce.21573>
- Cruickshank, V. (2017). The influence of school leadership on learner outcomes. *Open Journal of Social Sciences*, 5(9): 115-123. <https://doi.org/10.4236/jss.2017.59009>
- Day, C., Gu, Q., & Sammons, P. (2016). The impact of leadership on learner outcomes: How successful school leaders use transformational and instructional strategies to make a difference. *Educational Administration Quarterly*, 52(2): 221-258. <https://doi.org/10.1177/0013161X15616863>
- Desimone, L. M., & Pak, K. (2017). Instructional coaching as high-quality professional development. *Theory into practice*, 56(1): 3-12.
- Diamond, J. B., & Spillane, J. P. (2016). School leadership and management from a distributed perspective: 2016 retrospective and prospective. *Management in Education*, 30(4): 147-154.
- DeWitt, P. M. (2020). *Instructional leadership: Creating practice out of theory*. Corwin Press.
- Dongo, E. (2016). *The principal's instructional leadership role towards creating effective teaching and learning: A case study of two high schools in Ivory Park Township*. Master's dissertation. University of South Africa, Pretoria. https://uir.unisa.ac.za/bitstream/handle/10500/22614/dissertation_dongo_e.pdf.
- Du Plessis, P. (2013). The principal as instructional leader: Guiding schools to improve instruction. *Education as Change*, 17(1): S79-S92.
- Edmonton Public Schools. (2018). *Principals as instructional leaders: A review of the literature*. [Online]. <https://cassalberta.ca/wpcontent/uploads/2018/11/Principal-Leadership-Literature-ReviewFinal-Version.pdf>
- Fuentes, S., & Jimerson, J. B. (2020). Role enactment and types of feedback: The influence of leadership content knowledge on instructional leadership efforts. *Journal of Educational Supervision*, 3(2): 6. <https://doi.org/10.31045/jes.3.2.2>
- Glickman, C. D., Gordon, S. P., & Ross-Gordon, J. M. (2017). *Supervision and Instructional Leadership: A Developmental Approach* (10th ed.). New York: NY: Pearson.
- Goddard, R., Goddard, Y., Sook Kim, E., & Miller, R. (2015). A theoretical and empirical analysis of the roles of instructional leadership, teacher collaboration, and collective efficacy beliefs in support of learner learning. *American Journal of Education*, 121(4): 501-530.
- Hallinger, P., & Murphy, J. (1985). Assessing the instructional management behavior of principals. *The elementary school journal*, 86(2): 217-247.

- Hallinger, P., & Heck, R. H. (2010). Leadership for learning: Does collaborative leadership make a difference in school improvement? *Educational management administration & leadership*, 38(6): 654-678.
- Hallinger, P., Wang, W. C., & Chen, P. (2015). *Assessing instructional leadership with the principal instructional management rating scale* (pp.1-23). DOI 10.1007/978-3-319-15533-3
- Hallinger, P., & Hosseingholizadeh, R. (2020). Exploring instructional leadership in Iran: A mixed methods study of high-and low-performing principals. *Educational Management Administration & Leadership*, 48(4): 595-616. <https://doi.org/10.1177/1741143219836684>
- Hamad, I., Demissie, G., & Darge, R. (2021). Instructional Leadership Challenges in Public Secondary Schools in Sudan. *Techhub*, 21(1): 364. <https://doi.org/10.47577/tssj.v21i1.3847>
- Hao, N.T. (2016). Teachers' perceptions on principals' instructional leadership behaviors in Vietnam. *Journal of Teacher Education*, 1(1): 1-11.
- Harris, A., Jones, M., Cheah, K. S. L., Devadason, E., & Adams, D. (2017). Exploring principals' instructional leadership practices in Malaysia: insights and implications. *Journal of Educational Administration*, 55(2): 207-221. <http://dx.doi.org/10.1108/JEA-05-2016-0051>
- Hattie, J. (2012). *Visible learning for teachers: Maximizing impact on learning*. Routledge.
- Hayton, P., & Spillane, J. W. (2008). Professional community or communities? School subject matter and elementary school teachers' work environments. In *Leadership for Learning* (pp. 65-79). ResearchGate. http://doi.org/10.1163/9789087903909_005
- Heck, R.H., & Hallinger, P. (2014). Modeling the longitudinal effects of school leadership on teaching and learning. *Journal of educational administration*, 52(5): 653-681.
- Hou, Y., Cui, Y., & Zhang, D. (2019). Impact of instructional leadership on high school learner academic achievement in China. *Asia Pacific Education Review* 20(4): 543-558. <https://doi.org/10.1007/s12564-019-09574-4>
- Hoy, A. W., Hoy, W. K., & Davis, H. A. (2009). Teachers' self-efficacy beliefs. In *Handbook of motivation at school* (pp. 641-668). Routledge.
- Jenkins, J., & Pfeifer, R. S. (2012). The Principal as Curriculum Leader. *Principal Leadership*, 12(5): 30-34.
- Kadir, J., & Nimota, A. (2019). Good Governance Issues in Education System and Management of Secondary Schools in Kwara State, Nigeria. *EJEP: EJournal of Education Policy*. Spring 2019: 1-14.
- Kars, M., & Inandi, Y. (2018). Relationship between principals leadership behaviors and teachers organizational trust, An article. *Eurasian journal of educational research*, 18(1). <http://dx.doi.org/10.14689/ejer.2018.74.8>
- Katz, J. (2015). A theory of qualitative methodology: The social system of analytic fieldwork. *African Review of Social Sciences Methodology*, 1(1-2):131-146.
- Kiat, K., Tan, H., Heng, M. A., & Lim-Ratnam, C. (2017). *Curriculum leadership by middle leaders: Theory, design and practice*. London: Routledge.
- Klein, E. J., Taylor, M., Munakata, M., Trabona, K., Rahman, Z., & McManus, J. (2018). Navigating teacher leaders' complex relationships using a distributed leadership framework. *Teacher Education Quarterly*, 45(2): 89-112.
- Le Fevre, D., Timperley, H., Twyford, K., & Ell, F. (2019). *Leading powerful professional learning: Responding to complexity with adaptive expertise*. Corwin.
- Lee, M., Walker, A., & Chui, Y. L. (2012). Contrasting effects of instructional leadership practices on learner learning in a high accountability context. *Journal of Education Administration*, 50(5): 586-611.
- Lochmiller, C. R. & Cunningham, K. M. (2019). Leading learning in content areas: A systematic review of leadership practices used in mathematics and science instruction. *International Journal of Educational Management*, 15(4).
- Louis, K. S., Leithwood, K., Wahlstrom, K. L., & Anderson, S. E. (2010). *Investigating the links to improved learner learning*. The Wallace Foundation.
- Lwaitama, A. L., & Galabawa, J. C. J. (2008). *Community secondary schools: How long is their journey to quality education?* Paper presented as a contribution to the ongoing national education debate, 21st October 2008. Dar es Salaam: Tanzania Education Network (TEN).
- Makhubele, P. (2016). *Implementation of Natural Sciences and Technology practical activities by novice and expert teachers*. University of Pretoria Press.

- Manaseh, A. M. (2016). Instructional leadership: The role of heads of schools in managing the instructional programme. *International Journal of Educational Leadership and Management*, 4(1): 30- 47. DOI: 10.17583/ijelm.2016.1691
- Malinga, C. B., Jita, L. C., & Bada, A. A. (2021). Instructional Leadership Capacity of Secondary School Science Heads of Department in Gauteng, South Africa. *International Journal of Learning, Teaching and Educational Research*, 20(12): 267-293.
- Marshall, C., Brereton, P., & Kitchenham, B. 2015. Tools to support systematic reviews in software engineering: a feature analysis. In Proceedings of the 18th international conference on evaluation and assessment in software engineering. pp. 1-10.
- Mestry, R. (2013). The innovative role of the principal as instructional leader: A prerequisite for high learner achievement. *International Proceedings of Economics Development and Research*, 60: 119–123.
- Mestry, R. (2017). Principals' perspectives and experiences of their instructional leadership functions to enhance learner achievement in public schools. *Journal of Education*, 69:257- 280.
- McNeill, K. L., Lowenhaupt, R., Cherbow, K., & Lowell, B. R. (2022). Professional development to support principals' vision of science instruction: Building from their prior experiences to support the science practices. *Journal of Research in Science Teaching*, 59(1): 3-29.
- Murphy, J., Neumerski, C. M., Goldring, E., Grissom, J., & Porter, A. (2016). Bottling fog? The quest for instructional management. *Cambridge Journal of Education*, 46(4): 455-471.
- Ng, F. S. D., Nguyen, T. D., Wong, K. S. B., & Choy, K. W. W. (2015). Instructional leadership practices in Singapore. *School Leadership & Management*, 35(4): 388-407.
- Ng, F. S. D. (2019). Instructional leadership. In *Instructional Leadership and Leadership for Learning in Schools: Understanding Theories of Leading*, pp.15-48.
- Ngema, M. (2016). Using individual needs analysis to promote the effectiveness of foundation phase teachers in Umfolozi Circuit, KwaZulu-Natal. Doctoral Thesis. [Online]. <https://api.semanticscholar.org/CorpusID:157113855>
- Olvera, M. E. R., Reyes, N. L. G., & Ochoa, J. A. (2015). Integrated Curriculum Design Revision: The Case of the School of Accounting and Administrative Sciences of the UMSNH. *Higher Education Studies*, 5(2): 25-37.
- Omodan, B. I. (2022). The potency of social constructivism on classroom productivity in universities. *Studies in Learning and Teaching*, 3(1): 36-45.
- Polit, D., & Beck, C. (2019). *Resource manual for nursing research: Generating and assessing evidence for nursing practice*. Lippincott Williams & Wilkins.
- Ravitch, D. (2011). *National standards in American education: A citizen's guide*. Brookings Institution Press.
- Rahbi, D.A., Khalid, K., & Khan, M. (2017). The effects of leadership styles on team motivation. *Academy of Strategic Management Journal*, 16(2): 1-14.
- Robinson, V. 2011. *Learner-centered leadership* (Vol. 15). John Wiley & Sons.
- Robinson, V. M., Lloyd, C. A. & Rowe, K. J. (2008). The impact of leadership on learner outcomes: An analysis of the differential effects of leadership types. *Educational administration quarterly*, 44(5): 635-674.
- RSA. Department of Basic Education [DBE]. (2011). *Curriculum and Assessment Policy Statement (CAPS)*. Pretoria: Government Printer.
- Sandholtz, J. H., & Ringstaff, C. (2014). Inspiring instructional change in elementary school science: The relationship between enhanced self-efficacy and teacher practices. *Journal of Science Teacher Education*, 25(6): 729-751.
- Shelton, S. (2010). *Strong leaders strong schools: 2009 school leadership laws*. National Conference of State Legislatures.
- Sibomama, I. (2022). Perceptions of teachers on the instructional leadership behaviours of secondary school principals in Rwanda. *Educational Management Administration & Leadership*, 50(1): 64-80.
- Sibomama, I. (2020). The influence of instructional leadership behaviours of principals on teachers' instructional practices in Rwanda: a case study of selected secondary schools in the Nyamagabe district. Doctoral thesis. University of the Witwatersrand, Johannesburg.

- Sisman, M. (2016). Factors related to instructional leadership perception and effect of instructional leadership on organizational variables: A meta-analysis. *Educational Sciences: Theory and Practice*, 16(5): 1761-1787. <https://psycnet.apa.org/doi/10.12738/estp.2016.5.0172>
- Steele, M. D., Johnson, K. R., Otten, S., Herbel-Eisenmann, B. A., & Carver, C. L. (2015). Improving instructional leadership through the development of leadership content knowledge: The case of principal learning in algebra. *Journal of Research on Leadership Education*, 10(2): 127-150.
- Spillane, J. P. (2005). Distributed leadership. *The educational forum*, 69(2): 143-150.
- Spillane, J. P., & Hopkins, M. (2013). Organizing for instruction in education systems and school organizations: How the subject matters? *Journal of Curriculum Studies*, 45(6): 721-747.
- Thaba-Nkadimene, K. L., & Nkadimeng, M. P. (2020). The factors that impede head of departments in committing and executing their instructional leadership roles among selected Limpopo Primary Schools in South Africa. *Journal of African Education*, 1(2): 39-59. <http://dx.doi.org/10.31920/2633-2930/2020/1n2a2>
- Taole, M. J. (2013). Exploring principals' role in providing instructional leadership in rural high schools in South Africa. *Studies of Tribes and Tribals*, 11(1): 75-82.
- Tuitoek, J.K., Yambo, J.M.O., & Adhanja, R.A. (2015). Contributions of school-based factors on learners' academic performance in public secondary schools in Eldoret West Sub-County, Uasin Gishu County. *European Journal of Research and Reflection in Educational Sciences*, 3(1).
- Weber, J. (1996). Leading the instructional program. In: S. Smith & P. Piele (Eds.). *School Leadership: Clearing House of Educational Management*. Eugene. (pp. 253-278).
- Whitaker, M. E. (1997). *Principal leadership behaviors in school operations and change implementations in elementary schools in relation to climate*. Indiana State University Press.
- Winn, K. M. (2016). *Instructional leadership in elementary science: How are school leaders positioned to lead in a next generation science standards era?* University of Iowa Press.
- World Bank. (2010). *Recruiting, retaining, and retraining secondary school teachers and principals in Sub-Saharan Africa*. Washington DC: The World Bank.
- Yow, J. A., Wilkerson, A., & Gay, C. (2021). Mathematics and science teacher leadership understanding through a teacher leadership course. *International Journal of Science and Mathematics Education*, 19: 839-862. <http://dx.doi.org/10.1007/s10763-020-10080-y>
- Yukl, G. (2010). *Kepemimpinan Dalam Organisasi. Edisi Kelima*. Jakarta: Raja Grafindo Persada.