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Leadership and context for the improvement of quality education in socio-deprived school contexts

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In this article we report on an exploration of leadership and context for the improvement of quality education in South African socioeconomic-deprived school contexts viewed through Hellinger's contextual theory, open systems theory, Bronfenbrenner's ecology of human development, and Bourdieu's theory of field, habitus and power. A post positivistic approach allowed for a quantitative research design which employed an interpretivist lens to use the theory and the context to interpret the numbers. A self-designed questionnaire was used for the data collection. We analysed the data by means of the Statistical Package for the Social Sciences (SPSS) analysis program and evaluated using a Likert scale. In the study reported on here, the mean scores – sorted from the highest, which means the most important factor, to the lowest – are presented. The findings reveal that low teacher professionalism and non-compliance to the regulations, contextual factors outside the schools (teenage pregnancy, vandalism), learners' circumstantial challenges, high accountability by the department without considering schools' contextual factors, and a lack of parental involvement in the teaching-learning process were among the biggest challenges for principals to influence quality education.

Keywords: context; ecological theory of human development; field; habitus; influences; power; quality education; systems

Introduction

We explored the role that school leadership and context play in the improvement of quality education, focussing on South African socioeconomic-deprived school contexts. In South Africa quality education is mostly uncritically equated with academic performance as measured in examination results. Since it was not the purpose with this article to argue about the conceptualisation of quality education, the term “quality education” and “academic performance” are used as synonyms. We depart from the assumption that school leadership is deemed an important factor that assists dysfunctional schools to improve their academic performance. Despite their geographical locations, schools are under surveillance of the Department of Education to implement curricula that ensure that all learners perform according to the set standards. The premise of this article is that the context or field (according to Bourdieu) in which the schools are located within the education system has a strong influence on school performance. Based on the theoretical framework we explore this to determine how much influence principals really have on the improvement of the quality of education.

Background to the Educational Context in South Africa

South Africa schools are divided into five quintiles (groups) according to their socioeconomic context. According to Van Dyk and White (2019) schools categorised as quintile 1 are situated in socioeconomic-deprived communities, whereas those categorised as quintile 5 schools are situated in affluent communities. Van Dyk and White further note that all quintile 1, 2 and 3 schools, and some quintile 4 schools, are declared no-fee schools – parents do not pay any school fees. In 2019, 87% of schools in South Africa were considered no-fee schools, and 79% of learners were, at the time, attending classes in these schools. Unlike fee-paying schools, state funding per learner in no-fee schools is higher. In 2020, no-fee schools received R1,466 per learner, while quintile 5 schools received R466 per learner (Department of Basic Education [DBE], 2019). Quintile 5 schools have compulsory school fees, and since they are located in more affluent areas (mostly in urban areas), annual school fees are close to R15,000 per child. This already raises social justice issues within this two-tier system regarding quality education to all learners. The filling of teaching posts is another challenge for schools in rural and low socioeconomic areas. According to the DBE (2019:11), 72% of secondary schools filled posts in 2017 of which quintile 5 schools had the highest proportion of positions filled.

Moreover, Mbokazi (2015:472) highlights some of the challenges of the open system in South African schools. He notes additional challenges in South African rural schools, such as parental involvement, which creates a paradoxical situation due to multifaceted circumstances such as parents' illiteracy, poverty, and broken family cases. Amid circumstances of this nature, school principals find it difficult to continue with their work and influencing the context that affects their work and school performance. Zulu, Bhengu and Mkhize (2021) further note that in some instances school governing body (SGB) members are not experienced or qualified to perform their expected duties although they are a key component in the interaction between the school and the community.

Problem Statement

Section 16A of the South African Schools Act (SASA) as well as the Personnel Administrative Measures (PAM) (DBE, 2020) emphasise that principals are accountable for the quality of education, which is highlighted with the examination results, especially in secondary schools.

Principals who teach may also have an influence on the time they have to improve the general quality of education at their school. According to oral information from the South African Education Union ([SAEU], 2021), school principals generally do not teach that much, especially in secondary schools. Depending on the subject areas, especially scarce skills subjects like mathematics and science, some principals may teach because no other teachers are available to teach these subjects. Smaller schools in rural and low socioeconomic communities also experience challenges due to a lack of teachers, and, therefore, principals must take the responsibility of also teaching. However, Sibanda and Baxen (2016) note that most school principals no longer teach, as the current scope of work has increased with the focus currently on school effectiveness.

Spaull (2016) notes that global expectations and demands have shifted from principals mainly being instructional leaders to principals being educational leaders who, among others, can foster continuous development of staff, active involvement of parents, community engagement, as well as growth of learners. This complex context in which principals are expected to perform their leadership is the focus in this article. The main question being explored is: What are the possible influences of principals in schools in low socioeconomic contexts to improve the quality of education?, and the sub- question is: Which socio economic factors are regarded as important for school leaders to pay specific attention to?

Influence of Internal and External Contexts and School Leadership

It is well documented that context, academic improvement and leadership are interconnected. According to Johns (2006:386), context is defined as “situational opportunities and constraints that affect the occurrence and meaning of organisational behaviour as well as functional relationships between variables.” Brewer, Okilwa and Duarte (2020) define educational contexts as internal and external factors in a school. Dimmock and Walker (2000) “argued that the lack of contextually sensitive frameworks in the study of educational leadership created a situation where scholars rarely explicitly bound their findings within geo-cultural limits.” That is why the context becomes the focus for the analysis in this article.

Clarke and O’Donoghue (2017) claim that the effects of context seems to have been neglected or ignored in academic literature focus on educational leadership. According to Hallinger (2018:9), educational leadership focusses on what works without taking context into consideration. Researchers focussing on educational leadership confirm that leaders who are cognisant of their particular context achieve better outcomes (Brauckmann, Pashiardis & Ärlestig, 2023). Therefore, the emphasis is on the possible influence or ability of educational leaders to improve the quality of education in challenging contexts.

Conceptualisation of Context

Three theories are used to conceptualise what is meant by the context in which school principals function: Hallinger’s conceptual framework, the open systems theory, Bronfenbrenner’s ecological systems theory, and Bourdieu’s theory of field, habitus and power. These three theories look at the context in which principals function. Although these theories are not normally used in a collaborative perspective, such perspective provides a broader and deeper understanding of the context and the possible influence of principals in and on the context in which they function.

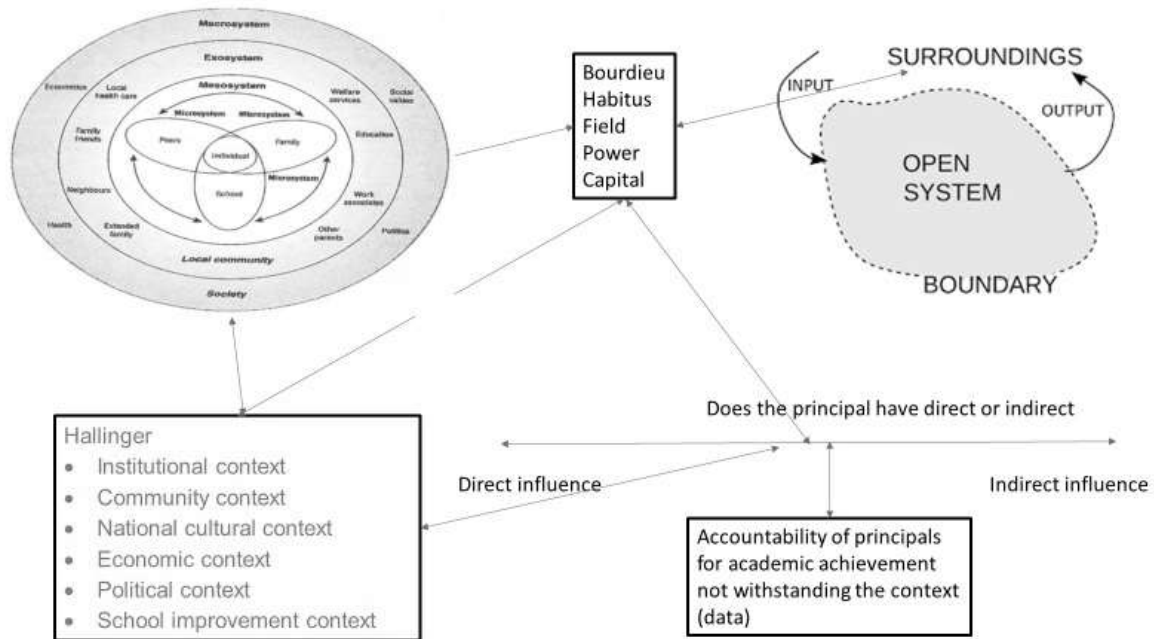


Figure 1 Principals and contextual influence for school improvement

According to Bronfenbrenner’s bio-ecological systems theory, the individual and/or groups function in multiple systems: the microsystem (e.g., family, poverty level), mesosystem (e.g., home-school partnership), and macrosystem (e.g., rural culture) (Iruka, DeKraai, Walther, Sheridan & Abdel-Monem, 2020).

Lunenburg (2010) claims that systems may be open or closed, which implies that organisations are either strongly or less influenced by their environment. Hallinger’s theory of contexts elaborates on five essential contexts, namely, institutional, community, national cultural, economic, political and school improvement. These can be incorporated in the different systems levels suggested by Bronfenbrenner (1977). Bourdieu’s theory links with the above by indicating that the individual with habitus functions in a specific field (different systems levels according to Bronfenbrenner) links to the context areas that Hallinger mentions. The interaction between these systems and contexts has a certain influence on the potential effectiveness of leaders.

The three theories provide the lenses through which principals’ influence on school improvement in socioeconomic-deprived school contexts is explored.

Hallinger’s Contextual Framework

In this section, we explain the five elements that surround school environments based on Hallinger’s contextual framework theory.

Institutional context

According to Hallinger (2018) an institutional context is defined as the “education system as well as the state, regional and district units that comprise it.” Cross-national studies have indicated that institutional structures (thus the context) have an influence on principals (Lee & Hallinger, 2012). Institutional context can be aligned with Bronfenbrenner’s macro-, meso- and specifically the microstructure.

Community context

Studies by Matshe (2014) and Zuze and Juan (2020) highlight the different concerns in schools situated in urban and rural socioeconomic-deprived contexts. Hallinger (2018) states that the importance of this context has increased due to a growing gap in the performance of urban and rural students, which also seems to be similar in the South African context where physical and financial resources play an important role. The community context includes the role players and the infrastructure in the proximity of the school, for example, the parents, religious and other organisations. Nkengbeza (2016) claims that in some instances community conflicts shape the way in which school leaders behave, which can negatively influence school performance.

National cultural context

Principals also face challenges related to the national context, from poverty to new legislation

and curricula (Arar, 2015). Consequently, Da'as and Ali (2021:7) note that while looking at issues of effective leadership in different school contexts, the unfolding socio-political processes should be considered. According to Truong, Hallinger and Sanga (2017), this is especially true in divided societies where educational leaders face other challenges such as poverty and challenges related to their status in their respective countries, as is the case in our context.

Economic context

According to Hallinger (2018:12), “the level of economic development of a society shapes many of the conditions that impact a principal’s work: teacher quality, class size, per-pupil expenditure, parental education and involvement, school facilities, size and quality of libraries, access to technology.” In the South African context this is strongly linked to the diverse socioeconomic communities – from low socioeconomic societies with less finances to support and improve school facilities to high socioeconomic contexts where high school fees allow for the improvement of facilities and the appointment of additional teachers. Some of these factors remain beyond the influencing ability of school principals, for example, poverty in the national context, which is linked to the inability of the community to pay any or any additional school fees. Nevertheless, principals and managers should be made aware of these factors in their planning.

Political context

Hallinger (2018) describes how the political context shapes the way in which school principals practise leadership. In the South African context, a concrete example of the political context is the involvement of unions (such as the South African Democratic Teachers Union [SADTU]) in matters pertaining to the practices of school leaders. Unions influence the decision-making at school level, for example, the appointment of staff members.

Another example in South Africa is the national authority (political authority) which determines which Matric results are to be considered the highest priority. Therefore, it is our view that the political context explicitly shapes the role and the way in which school leaders behave.

In the next section we discuss the open systems theory and Bronfenbrenner’s ecological systems theory to describe how school principals can influence the achievement of quality education in socioeconomic-deprived school contexts.

Bronfenbrenner Ecological Systems Theory and Systems Theory

Systems theory

According to Senge (2006:89), “a system can be defined as an interrelated set of elements functioning as an operating unit.” Open and closed

systems refer to the interaction of an organisation with the other role players in the system similar to Hallinger’s context or Bourdieu’s field. For example, in an open system, a school implies that there is multidirectional influence between the school and the community around it (the mesosystem, or the macrosystem). In a closed system, the school functions without taking the possible input of and influence by the community into consideration and is not aligned to influence the community around it. The open and closed systems do not follow linear process because these systems function in complex interrelated systems (Owens & Valesky, 2011). To align Bronfenbrenner’s ecological model more closely with the open system (cf. Figure 1), the circle is indicated in dotted lines to indicate a more open system where influences are reciprocal. This is on the assumption that schools normally function in an open system with direct and indirect influences between the school (microsystem) and the community closely around the school.

Hallinger indicates that schools are always situated in social, political and economic contexts (cf. Figure 1) that have direct and indirect links to the school. The social, political, and economic contexts in which schools function are influenced by the interaction with local and national levels. It is, therefore, important that school principals manage and develop internal operations while constantly engaging with the environment (external factors) to respond to the demands from the external environment and anticipating and responding to these. Bourdieu (Rawolle & Lingard, 2008) refers to the context or the system as the field where there is always some form of power play between the different role players of which the principal was the focus in this research. Owens and Valesky (2011) explain open and closed systems using the same terminology and format as in Bronfenbrenner’s ecological systems theory (cf. Figure 1). These two approaches to systems theories view the same phenomenon through different lenses.

Bronfenbrenner’s ecological systems theory

In a recent study, Maniram (2015:23) unpacked Bronfenbrenner’s theory (cf. Figure 1). According to this theory, principals or a child, depending on who the focus of the analysis is, find themselves embedded in three layers of context that influence their functioning as individuals, namely the microsystem, mesosystem, and macrosystem. In the context of this study, the school context is a major factor that affects the academic performance of learners. The context entails not only the immediate surroundings (microsystem) but also the mesosystem, which is the community outside and closest to the school, and the macrosystem, which

involves national and international role players and contexts.

Although Bronfenbrenner focussed on the development of the child, the same ecological model is applicable to other human development and human interaction (Maniram, 2015:23). For this study, the microsystem includes the child, parents, and teachers (including the principals) at the school. However, the crucial element is how the interaction between the child and the fellow actors in the micro, meso and macro level affect the personal and academic development of the child. These interactions may be positive or negative – factors inside the school as well as the meso- and macrosystems may have positive and/or negative influences on the child and their academic achievement.

Bourdieu's Theory of Habitus, Field and Power

According to Bourdieu, *habitus*, field and power have a significant influence on school leadership (Rawolle & Lingard, 2008). Koetaan (2020) posits that Bourdieu's theory explains habitus in its visibility: habitus is the internal characteristics of the agent which is visible through the actions and structures in which the individual functions. She further contends that Bourdieu's habitus is what the agent has learnt, it is deep-rooted and often an unconscious part of beliefs and a value system, and it is responsible for one's actions, how one thinks and behaves. It is often unconscious and as a leader one does not even realise that one acts according to what one has learnt and who one is. Habitus is, therefore, the internal factors, from personality to experience and history, which may influence a principal's leadership, which is based on habitus functioning in a specific field in which the principal must ensure own, learner and teacher performance.

For Bourdieu, (Rawolle & Lingard, 2008) *field* is the social space where role players interact and practise their trade. This is where they can use their capital to their own advantage or to the advantage of the group. In the field, power play between the different role players is evident because they are trying to gain the upper hand for their own advantage. Certain agents (in this case, principals as leaders) may be more aligned with a specific field of functioning, and, therefore, they may be less or more effective, depending on the alignment between habitus and field. Principals can, therefore, use different capitals as power tools to achieve the goals they want to achieve (Rawolle & Lingard, 2008).

One can say that there is a close link between habitus (a person's background and behaviour) and field (education system and its policies) in school management. As much as policies (as part of the field) influence principals' conduct and practices, their character and personality (their habitus) also influence the way in which they conduct the formal

business of managing the school. Habitus and field cannot be separated – what principals consciously or unconsciously bring to work eventually influences the way in which they respond to issues in the school. In our research, the principal and the context – the community and role-players inside and outside the school – cannot be separated, thus it is an open system.

Bourdieu also explains different fields – the field of politics, education, and various other social institutions (Claridge, 2015), which align with Hallinger's contextual framework as well as Bronfenbrenner's different layers in the ecological system (cf. Figure 1). The concept "field" entails the goals to be achieved – a history of how positions and the power that goes with these positions relate to each other (Claridge, 2015). On the other hand, habitus entails a set of historical relations embedded in people which appear or manifest in the form of mental and bodily patterns of viewing things, recognition and conduct. The field of education, for instance, can be defined as an institution which is managed by a set of rules and regulations, and these rules and regulations influence the behaviour and actions of the school principal. The difference between field and habitus is that field operates within the institution and habitus manifests within the individual.

Furthermore, according to Bourdieu's theory, leaders should be aware of two forms of power: invisible/hierarchical power; and personal power in their leadership (to influence the school environment in this case (Rawolle & Lingard, 2008). Effective and efficient school leadership is only attained through the combination and proper use of power and authority (Girling, 2016). Principals must be aware of these powers, the powers that they have and how they may be able to use these to influence the micro and specifically the meso levels to the school's and individual learners' advantage. Principals will also realise that, linked to power play, they do not have sufficient power to influence all the factors in the micro and mesosystem, for example, the political context indicated by Hallinger (cf. Figure 1).

Principals, by virtue of their positional role, have both hierarchical and positional power within the school. According to Avgar and Neuman (2015), power involves the ability of the school leader to convince teachers to collaborate and accept the school vision. Bottery (2016) claims that school principals become influential if they can empower school staff with the aim of solving problems jointly so that they collaboratively improve school performance.

For Bourdieu (Rawolle & Lingard, 2008), power is culturally and symbolically created. People often experience power differently based on the field (their position in the field, for example, a parent or a teacher or a community leader) and,

consequently, context and environment become key influences in the field. According to Bourdieu, (Claridge, 2015) tension and contradictions appear when people come across challenges that emerge from the context. In the school context, principals in their capacity, can use hierarchical power to influence teachers to work harder in order to improve school performance. On the other hand, teachers can resist the power of the school leader by ignoring all the efforts of the principal to improve the quality of school performance.

Brinia, Zimianiti and Panagiotopoulos (2014) note that school principals, by virtue of their position, are expected within and outside the school community to have the ability to influence teachers and parents towards the successful goal(s) of the school. Principals must be made aware that their symbolic capital (status, reputation and respect) puts them in a position to influence teachers towards the improvement of school performance. They may also use this symbolic capital to influence the meso- and macrosystems, specifically the community outside the school. This is the closest influence that the principal may have outside the school; their status may have a significant influence on the community and the relationship between communities and schools. This indicates that schools are open systems, since they cannot operate in isolation. School leaders become effective in their school leadership when they are aware of their power. They can, therefore, exert their power to influence the microsystem in the school, at least the mesosystem just outside the school, and ideally also the macrosystem. Their power provides school principals with the opportunity to build the type of school they want to lead.

Research Design

A quantitative research design was used, since the purpose of the research was to determine how a larger number of respondents felt about the factors that had been identified during prior interviews. Nieuwenhuis (2016:59) indicates that the post positivist approach to research is a good combination of using numbers interpreted against the context and reality in which the respondents live and work. We used quantitative data from a questionnaire to provide a quantitative indication of the respondents' perspectives. The numbers were then interpreted in the context of the post positivistic approach to the research. Babones (2016) indicates that an interpretive qualitative approach provides opportunity to use quantitative data interpreted against the lived experience and context. The data were interpreted against the theories discussed and the context in which the respondents lived.

Questionnaires were developed using the data collected from interviews conducted in a previous

stage of the study (Ivankova, Creswell & Plano Clark, 2016). The data collected through the questionnaires were analysed to accommodate the interpretation of the descriptive statistics.

The purpose of the quantitative data was to investigate the participating teachers' opinions about the issues that influence the management and leadership in their schools to improve the quality of education, and to determine whether there were any significant correlations with the areas in which the schools were located and with the principal's biographical information.

A 4-point Likert scale was deemed appropriate, as it provides clear and concise answers from respondents and allows analysis of the easier data (Pietersen & Maree, 2016b:181). The scale allowed the participants to express their opinions about the factors and their influence on the quality of education on a scale from 1 (Very small influence) to 4 (Big influence). The 4-point Likert scale accompanied the closed questions and required of respondents to either disagree or agree, thus eliminating neutral responses (Boone & Boone, 2012:para. 3)

Study Site, Sampling and Participant Selection

The questionnaires, consisting of biographical and Likert-type closed questions, were distributed to schools in the Gauteng, North West, KwaZulu-Natal and Free State provinces of South Africa. Ten schools per district were randomly selected from a total of eight districts. The schools were predominantly rural and township schools and 15 staff members per school were randomly selected for a total of 1,026 respondents. From these respondents only 426 questionnaires were received and were used for the data analysis.

The population comprised of schools in low socioeconomic areas of the country – in South African terminology, these areas are in the rural areas and townships (i.e., before 1994, the former resident areas for non-White citizens) and newly established informal settlements with little infrastructure and no official town planning. The possible limitation that the schools were not distributed over the full district or the full province was not deemed to be problematic, since the schools were in similar circumstances – low socioeconomic situations, unemployment, and other social ills. Therefore, the schools in the final sample were similar to most other schools in the provinces.

Data Collection

The research collaborators (two academics per province) who distributed the questionnaires contacted the selected schools and prepared enough questionnaires for each school so that each staff member received a questionnaire to complete.

Different methods were used to distribute the questionnaires – from personal delivery (to each school) to using courier companies and district officials. The same methods were employed to collect the questionnaires after about a week. The distribution and collection of the questionnaires posed significant challenges. One such challenge was school staff who did not answer their phones and/or respond to electronic mails (emails) after they were identified to be part of the data-collection process.

Notwithstanding the above-mentioned challenges, an acceptable 461 completed questionnaires were collected and provided sufficient data for statistical analysis.

Reliability and Validity

A questionnaire is considered reliable when it is tested with a similar sample and the same results are obtained. Since the questionnaire was self-designed, it may be possible that the same results can be achieved if the questionnaire is employed with a similar sample (Pietersen & Maree, 2016a). The validity, specifically content validity, was verified, since the content of the questionnaires was based on the literature on this theme and interview data during the second phase of this project. The interviews were conducted and transcribed before the questionnaires were compiled. Content validity was verified by the co-researchers – experienced academics in the field of education management and leadership – during electronic discussions as a research team. As the questionnaire determined the experiences and perceptions of the respondents, it was difficult to determine validity as a statistical certainty. The content and construct validity were verified as mentioned above (Pietersen & Maree, 2016a).

Ethics

The normal ethical process was followed to obtain permission from the ethics committee of the university where this study was registered, the provincial and district offices, and each of the selected schools. All individual respondents completed consent forms and were informed about all their rights in the consent form.

The questionnaires were delivered to the schools at a prearranged time and handed over to

an administrator at the school who, at a meeting, requested the teachers to complete the questionnaires. The administrator explained the purpose of the research and provided information on what would be done with the data. The contact information of the main researcher was also provided if anyone required more information or if they experienced any problems.

After completion, the questionnaires were sealed in an envelope and kept in the office of the support staff member from whom the research collaborators later collected the envelopes.

Data Analysis

The quantitative data were analysed with basic descriptive statistics indicating the mean scores which was followed by a factor analysis. These two statistical analyses provide the quantitative data to indicate which factors have potentially the biggest influence on the quality of education in schools.

Since the data were collected from teachers and principals, a comparison between the two groups is deemed important since the leadership (principals) must lead schools in the specific context. Principals and teachers work at different levels at the school and, therefore, it is important to determine whether the perceptions about these factors differed. This may indicate to the principals which factors needed the most important attention to prevent the influence on quality education or to improve the context.

Factors influencing quality education

The factors listed in Table 1 were identified in the literature and were mentioned during prior interviews in the first phase of this project. During the interviews these factors emerged as the most important that may influence the ability of principals to lead schools towards sustainable improvement of quality education.

The factors in Table 1 were evaluated by means of a Likert scale and are presented based on the mean score, sorted from the highest, which means the most important factor, to the lowest. It is a combination of principals' and teachers' perspectives.

The following scale was used:

1 = Very small influence; 2 = Small influence; 3 = Some influence; 4 = Big influence.

Table 1 Factors influencing the quality of education in the researched schools

	<i>M</i>	<i>SD</i>
1) Teacher knowledge of the subject matter	3.43	0.821
2) Single-parent families	3.35	0.811
3) Learners are frequently late	3.31	0.918
4) Teachers' ability to maintain discipline in class	3.24	0.798
5) Teachers' commitment and motivation	3.21	0.862
6) Learners frequently absent	3.21	0.948
7) Parents' lack of involvement in their children's education	3.19	0.998
8) Learner disciplinary problems	3.19	0.971
9) Gangsterism and drugs	3.13	1.012
10) Child-headed homes where there is no adult as the head of the home (learners)	3.12	0.919
11) Hungry children	3.1	0.989
12) Learner commitment and motivation	3.09	1.004
13) Insufficient learning material	3.01	1.018
14) Teenage pregnancies	2.94	0.929
15) Language of instruction	2.92	1.035
16) Insufficient support from the subject advisors/curriculum specialist	2.87	1.023
17) Teachers not attending classes regularly	2.69	1.105
18) Lack of leadership by my head of department (HoD)	2.69	1.052
19) Bad relationship between teachers and learners	2.66	1.119
20) Teachers not preparing well	2.58	1.076
21) Teachers frequently absent from school	2.57	1.106
22) Teachers are frequently late	2.54	1.129
23) Bad relationship between leaders and teachers	2.54	1.11
24) Bad relationship between parents and teachers	2.51	1.12
25) Bad relationship between teachers	2.48	1.159

Thirteen of the 25 factors show a mean of 3 and above, which implies that they have a significant influence on the quality of education. The remainder of the factors show a mean of 2.48 and higher, and, therefore, they have some influence. All the respondents agreed that these factors had a larger influence; in other words, they are important enough to create some challenges for the management and principals' leadership, which may have a negative influence on the quality of education and, therefore, on learners' academic performance.

From the individual factors, a matrix pattern was created with Oblimin rotation. The factor analysis was conducted to group the individual factors to assist in the interpretation of the factors which may play a role in the quality of education.

(Pietersen & Maree, 2016b). The validity and reliability of the statistical data were determined by a principal component exploratory factor analysis with Oblimin rotation (Lorenzo-Seva, 2000) on the 25 items measuring problems that may influence principals' ability to lead schools in socioeconomic-deprived contexts with the expectation of improving the quality of the education in these schools.

A Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy of 0.92 was determined, and the factor analysis was suitable (Schreiber, 2021). According to Kaiser's criterium and the scree plot, five factors were extracted, explaining 63.8% of the total variance.

The following matrix patterns were observed:

Table 2 Matrix patterns

	Factors				
	Learner and context problems	Teachers not complying	Teachers' commitment	Bad school relationships	Learner teaching problems
Individual factors					
Bad relationships					
N98 Bad relationship between parents and teachers	0.79				
N97 Bad relationship between leaders and teachers	0.79				
N96 Bad relationship between teachers	0.75				
N99 Bad relationship between the teachers and the learners	0.73				
N95 Lack of leadership by my head of department (HoD)	0.52				
N105 Insufficient support from the subject advisors/curriculum specialist	0.47				
Cronbach's alpha coefficient	0.89				
Teacher professionalism					
N91 Teachers' commitment and motivation		0.847			
N93 Teachers' knowledge of the subject matter		0.807			
N92 Teachers' ability to maintain discipline in the class		0.739			
Cronbach's alpha coefficient		0.77			
Learner contextual and personal problems					
N84 Single-parent families			-0.781		
N85 Child-headed homes where there is no adult as the head of the home			-0.770		
N83 Teenage pregnancies			-0.768		
N82 Gangsterism and drugs			-0.698		
N86 Hungry children			-0.692		
Cronbach's alpha coefficient			0.82		
Learner academic problems					
N103 Learner disciplinary problems				-0.768	
N100 Learners frequently absent				-0.684	
N101 Learners are frequently late				-0.676	
N94 Parents lack of involvement in the children's education				-0.665	
N102 Learner commitment and motivation				-0.665	
N104 Insufficient learning material				-0.383	
N106 Language of instruction				-0.367	
Cronbach's alpha coefficient				0.83	
Teacher non-compliance					
N89 Teachers are frequently late					-0.869
N88 Teachers not attending classes regularly					-0.831
N90 Teachers frequently absent from the school					-0.828
N87 Teachers not preparing well					-0.790
Cronbach's alpha coefficient					0.92

As reliability tests, we used Cronbach's alpha coefficients to verify the internal consistency and reliability of the Brief Cope scale as well as the Statistical Package for the Social Sciences (SPSS). Instrument's constructs Cronbach's alpha of the factors ranged between 0.77 and 0.92, which, according to recognised standards (Pyrzack & Oh, 2018), is considered acceptable in terms of reliability, as indicated in Table 2.

A factor loading of each individual factor with a loading close to -1 implies that the individual factor is closely associated with the identify factors, for example, teachers are frequently late with a loading of -0.869 is, therefore, strongly associated with teacher non-compliance. The learner problems in this case are prevalent in low socioeconomic contexts. Learner problems can be strongly linked to problems that learners experience at school, for

example, absenteeism and late coming. Some of the relationship problems can also stem from contextual factors, for example, problems between teachers and parents and teachers and learners if teachers do not understand the context from which the learners come or do not take this into consideration.

Two categories highlight teachers as possible challenges and problems with regard to the quality of education, namely teacher professionalism and teacher non-compliance. This is significant, as teachers have a direct influence on the quality of education versus principals' indirect influence. Principals as leaders must lead in the specific situation and ensure that challenges are addressed to improve the quality of education at a sustainable level.

Comparison between principals and teachers

The data represent the perspectives of the participating teachers and principals based on the categories identified in the factor analysis indicated in Table 2. We gathered data from teachers and principals, and we wanted to determine whether a difference existed in their opinions about the specific issues mentioned in the context that we studied. This is important since the teachers are working at another level in the school and may have different experiences of the importance of

these factors. Therefore, they are not directly indicating the leadership issues; the principals and the teachers provided an insight into the potential challenges and importance of these factors which were mentioned in the questionnaire. Therefore, the comparison was to determine whether a difference existed in their opinions and if so, the leadership should take notice thereof and may have to change their approach, leadership, and activities to work within this context.

Table 3 Comparison between teachers' and principals' perspectives on the categories

		<i>M</i>	MSE	Variance school	HLM <i>p</i> -value	<i>d</i>
Teacher professionalism	Principal	3.33	0.448	0.025	0.784	0.06 small
	Teacher	3.29				
Learners and contextual problems	Principal	3.25	0.465	0.051	0.362	0.18 small
	Teacher	3.12				
Learners' teaching problems	Principal	3.08	0.474	0.011	0.718	0.07 small
	Teacher	3.13				
Teachers not complying	Principal	2.86	0.963	0.001	0.152	0.29 small
	Teacher	2.57				
Bad school relationships	Principal	2.65	0.753	0.013	0.842	0.04 small
	Teacher	2.61				

For each category, the mean Likert scores (according to principals and teachers) are provided (mean) as well as the mean standard error (MSE) and variance explained by school identity (variance school). Hierarchical linear model *p*-values and effect sizes respectively indicate the significance and size of differences between perspectives.

Cohen classifies effect sizes as small ($d = 0.2$), medium ($d = 0.5$) and large ($d \geq 0.8$). According to Cohen, a medium effect of .5 is visible to the naked eye of a careful observer. A small effect of .2 is noticeably smaller than the medium effect but not so small to be trivial. However, these ballpark categories provide a general guide that should also be informed by context (Sullivan & Feinn, 2012). Since all the effects are smaller than .2, there is no obvious visible difference in the opinion between the perceptions of teachers and principals. The importance of all these factors in the context are, therefore, according to the teachers and principals important enough and may have an influence on the quality of education (as indicated by the respondents) and important enough that principals as leaders must provide leadership to curb or prevent these challenges.

The principals' and teachers' perspectives on the importance of each category did not differ significantly. In fact, their perspectives on the order of importance of the categories were similar, as both groups scored teacher professionalism and learner and contextual problems as the most important contributors.

Discussion of the Findings

The data that emerged from the questionnaire reveal the important indicator for schools that influence academic performance and how leaders may act and what may be important for later development at the different levels of the system.

Context is of the essence for this article; specifically to interpret the quantitative data. Quantitative data cannot be discussed outside the context in which it functions and, therefore, the post-modernist approach. The three theories discussed earlier have different perspectives and emphasis on context and the influence, therefore, provide the framework for emphasising and understanding the context in which leaders function.

It has been accepted that principals have an indirect influence while teachers have the most direct influence. The highest category indicated by the mean scores is teachers' professionalism (cf. Table 2 and 3). The findings in this research is similar to the international and South African specific findings of the TALIS report (Organisation for Economic Co-operation and Development [OECD], 2019). The report indicates that teachers' professionalism pose important challenges since their qualifications, important indicators of professionalism, are lower compared to similar countries. The report also indicates significant problems with teachers' ability to maintain discipline in class. These findings are supported by this research, since the commitment and motivation of teachers with regard to subject knowledge

matters and their ability to maintain class discipline were identified by the respondents as the most important factors that influence the quality of education. The second category regarding teachers is directly linked to teachers' professionalism and indicates that teachers do comply with the professional expectations of teachers (cf. Table 2 and 3). The respondents indicated that teachers' frequent unpunctuality, not attending classes regularly, absenteeism and not being well prepared for class significantly influenced the quality of education.

It is expected of principals to have a stronger influence on teachers to rectify or prevent the above-mentioned challenges since principals are in hierarchical power positions and teachers are accountable to principals for the quality of their work. On the other hand, principals may have less influence on learners' contextual problems linked to the community (meso level) outside the school.

If it is accepted that schools are functioning in an open system (cf. Figure 1), the community, a deprived low socioeconomic context in particular, will potentially influence learners and teachers, as indicated in the tables.

Teachers' motivation level may specifically create a power struggle between principals and teachers. Bourdieu's theory (Rawolle & Lingard, 2008) provides some insight into the power struggle between principals and teachers in the field regarding teachers' lack of professionalism and their non-compliance. This is also one of the categories in which principals are expected to have more direct influence as teachers are officials appointed by the Department of Education under the principal's authority. Principals may use different powers to change teachers' attitudes and practice. Principals have legitimate and positional power which they may use to address teachers' late coming and lack of preparedness. This may potentially create power struggles in the form of negative attitudes and opposing initiatives by the principal, or principals may try to act strongly against non-cooperative teachers, such as taking labour action against them. In another approach, principals may rather use their personalities and social capital to influence teachers to improve their negative commitment and professionalism in an interpersonal relationship of trust. The context which includes the principal's personality (habitus) as well as the relationship between principal and teachers and parents are contextual influences which determine the most appropriate leadership actions for principals. There is no one-size-fits-all approach and successful principals are better able to adapt and rate the context than less successful principals.

The non-compliance of teachers – with the second-lowest mean scores of 2.86 (principals) and 2.57 (teachers) (cf. Table 3) – also indicates that

principals may have much more direct influence on these factors than on the contextual situation outside the school. As indicated earlier, it is evident from the South African context that teachers, their negative attitudes in particular (cf. Tables 2 and 3), seem to be an overriding factor, as more schools are performing below the expected level than not.

Since principals have potentially more power and influence on the challenges with regard to teachers than on the context in the community (e.g., pregnancy, drugs and poverty), they may prioritise the challenges inside the school to improve the quality of education. Principals cannot negate the contextual factors outside the school, since the open system has a direct influence (based on the relationship between the microsystem inside the school and the mesosystem outside the school). A positive teaching and learning climate in the school is essential for quality education. Therefore, teachers' positive attitudes and their professional conduct as well as the improvement of the socioeconomic context outside the school also need attention from the principals. The interaction in the open system between school and the community directly outside the school is essential to address social ills such as teenage pregnancy and drugs. That will assist in creating a positive learning climate in the school where learners can feel safe and valued.

Principal's habitus may prepare them better for their responsibilities at schools in low socioeconomic context. The personal experiences as a child and or a teacher in similar schools may provide a better understanding for principals to act in a positive way to improve the situation. This habitus may provide principals with a deeper understanding and may enable them to directly or indirectly influence the situation. As indicated by Hallinger (cf. Figure 1), principals may be more able to directly influence the institutional contextual level and the direct community close to the school than the macro level further away from the school.

The factors linked to learners' problems – for example, late-coming, lack of motivation and commitment, disciplinary problems and absenteeism – can be directly associated with the challenging circumstances in their context outside the school (i.e., mesosystem). There are sufficient examples of principals who improve the quality of education by creating a positive school climate through committed teachers who are prepared to go the extra mile (Heystek, 2022; Zulu et al., 2021). This emphasises the priority of principals to attend to teachers' issues about which they potentially have more direct influence than on the socioeconomic context outside the school. Although it remains an important factor, the socioeconomic context can thus not be used as a

scapegoat for the lack of improvement in the quality of education.

As indicated in Table 3, the contextual and personal circumstances of learners have potentially the most significant negative influence on the aim of achieving better academic results. This is indicated by the mean score based on the principals' and teachers' opinions (3.25 and 3.12, respectively), which is an indication that these factors potentially have a great influence on teaching and learning and learners' examination results.

Conclusion

It may be unfair to expect that all schools perform at the same academic level. Principals' accountability is challenged and questioned with regard to the social justice within the system. The diverse contexts at micro, meso and macro level in South Africa has created a two-tier education system in which about 60% of schools are located in lower to low socioeconomic contexts with the rest in much better to "perfect" socioeconomic contexts. Principals, as accountable heads of schools, are expected to perform at the same academic level, irrelevant of the socioeconomic context of the school.

From the data it is evident that teachers' commitment and professional conduct are serious problems which principals must manage and lead. This may be the most important level and aspect which needs attention from principals since it may be the most direct and fastest process to improve quality education. Principals have direct power and authority over teachers. Teachers who are dedicated, prepared and on time make a difference and principals have a direct influence on this factor. Principals have less direct influence on the second factor, namely deprived socioeconomic contexts, which influence the quality of education. Principals do not have any direct power and influence over, for example, parents who are unemployed or parents not living with the children. Hence, the direct influence line must be important for a possible shorter-term solution. The socioeconomic context must get attention but it is a broader societal process in which principals and community must collaborate to resolve challenges in the broader, medium to longer term.

Although principals may have more direct influence on the teachers rather than the learners and specifically on the meso context outside the school which influences the learners, this still poses a challenge for principals. Principals do not have control over external factors such as laws and policies, political factors, frequent curriculum changes and contextual factors that impact their ability to improve quality education. One could argue that by arming themselves with knowledge of the environment and the contextual external factors

of their schools, principals can empower themselves to improve their experiential knowledge.

Therefore, it is recommended that leadership and context should be included in principals' training before they are appointed. Principals cannot be accountable for the meso level influence (in the community, outside the school). Since the meso level has such an important influence on the quality of educations, principals must be trained and realise that they must collaborate better with parents and different community organisations to support quality education. Principals must understand the open system and reciprocal relationship between the different levels in the education system (Heystek, 2022; OECD, 2019).

Hence, there is a need for further research to explore how contextual factors can influence principals' leadership and management practices and enhance quality education.

A limitation of this study was that the focus was solely on socio-deprived school contexts – schools in rural contexts. Further research could focus on the same subject combining urban (predominantly higher socioeconomic context) and rural (lower socioeconomic) contexts.

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Authors' Contributions

JH conceptualised the article, did the data collection and statistical analysis, wrote the problem statement, the data presentation, the analysis and interpretation and conclusions. MS contributed to the literature data and research method.

Notes

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