The Effects of School Infrastructure on Curriculum Policy Implementation

Rosinah Modikoa Pillay; Machanduke Lucas Shipalana

Department of Public Administration, University of Limpopo, South Africa

E-mail: rosinah.pillay@ul.ac.za; Lukship@gmail.com

Abstract

The school infrastructure plays a critical role towards curriculum policy implementation across the world. In South Africa, curriculum policy implementation is influenced by a variety of factors including basic facilities such as access to proper sanitation, toilets, classrooms and clean running water. However, in most rural areas there are learners who are forced to attend in dilapidated schools with buildings that could collapse on them at any time, which instils fear on learners. This situation has affected many learners throughout their learning as they cannot concentrate. This paper seeks to analyse the effects of school infrastructure on curriculum policy implementation through a qualitative research method. The conceptual framework is used to analyse the literature to respond to the topic in question. Despite the efforts made by the government to implement and transform the curriculum, it has been observed that there are still schools that are characterised by poor facilities within the rural and township areas. This situation resulted in school learners being unable to reach opportunities due to their poor environmental condition that affects their education. When school conditions are unfavourable due to lack of facilities and resources they hinder the access to quality education that could change the lives of the society. This is evident in rural schools where number of learners have died and some drowned in broken pit toilets. It remains the state responsibility to ensure sufficient access towards quality education. Furthermore, the government need to capacitate the teachers within knowledge towards the successful curriculum policy implementation.

Keywords: *School Infrastructure; Curriculum; Curriculum Implementation*

1.Introduction

Curriculum and learning across the world is influenced by the school infrastructure. The fundamental aim of education is to empower the country's citizenry with skills and knowledge to succeed and compete globally (Liu & Wilkinson, 2014). School assets are vital in the development and promotion of education as well as achieving educational objectives. Alavi (2021) purports that there are models for solving challenges and barriers regarding implementation and development of schools, but still, the

challenge of infrastructure is considered as the most fundamental challenge in the development of schools. In concurrence, Hurst and Reeves (2004:12) argue that "the provision of school infrastructure and services usually includes a large operation component, diverse groups of stakeholders and features relatively simple design and technical requirements".

Globally, governments and societies are striving to improve the curriculum so that all learners and young people can attend school and adopt the knowledge and skills they need to lead a sustainable life (Barrett et al., 2019). In 2014, England took an initiative to introduce a new curriculum, which required all the schools to customize to the new curriculum. The aim of the new curriculum is to be more content-rich to ensure that learners receive a process-based curriculum to develop their skills (Greany & Waterhouse, 2016). Therefore, Kitzmiller and Rodriguez (2021) state that large quality disparities in school buildings during and after COVID-19 need to be addressed. Studies show that lack of investment in historic capital and maintenance of school facilities have led to unhealthy school buildings nationwide. The state is responsible for providing access to proper infrastructure and quality curriculum content.

Developing countries such as Kenya have introduced new national curriculum and policies to respond to the national development agenda. Despite government efforts, teachers still come across problems in implementing the new curriculum. According to Syomwene (2013), in Kenya, there are still schools that do not have access to laboratories, classrooms, and desks. With the implementation of free primary education programs, the problem of inadequate facilities is widespread in Kenya. This issue opposes the realization of "Education for All (EFA)" and therefore, the implementation of a more innovative curriculum. Akala (2021) emphasizes that despite all these challenges, Kenya is in the process of introducing a new curriculum over the years. The Government of Kenya continues to invest heavily in education with a Competency-Based Curriculum (CBC) as its motto, in the sense that it acquires the skills and abilities to promote personal well-being and make meaningful contributions to the economy and society.

Despite the effort taken by the South African government in moving away from apartheid to democracy to ensure equity and equal treatment for all, it has not yet achieved adequate and equitable quality education opportunities (Brown, 2006). According to Hasketh (2006), the rural communities with inadequate access to facilities, the school curriculum was designed to ensure that black people do not acquire skills that will make them employable for jobs designed for whites. The curriculum was characterized by content-based rather than outcome-based education and it lacks opportunities for independent and critical thinking. Santika et al., (2021) indicate that the learning process in schools will never be static, but will always follow the progress of science and technology, which is rapidly growing.

Ngxito et al., (2019) are emphatic that rural schools are often characterized by huge educational facilities deficit because of improper planning and lack of investment during and after the apartheid regime. Equal Education Report (EER) (2017), Indicates that when they visited Limpopo they observed that many schools don't have access to proper usable toilets to meet the norms and standards. In the province, only a few schools have access to enough toilets regardless of their structure and functionality to meet the normal requirements. It is further observed that most rural schools are getting water from a community member at a cost that affects the running of activities of the schools.

2. Theoretical Framework

According to Mugisha and Mugimu (2015), learning theories are key to curriculum development and implementation. The learning theories indicate the manner in which people acquire and retain information about the learning principles that are presented to them. Learning theories inform the curriculum development and implementation and provide the relationship between what is acquired in the

classrooms and the conditions in which learning takes place which include infrastructural facilities. Gunderman (2012) concurs that learning theories offer insights into what promotes learning effectiveness and how students learn. Theories of learning shape our educational practices. Learning requires ensuring the transfer of knowledge and skills learned from the classroom situation to other situations in real life practice. Mugisha and Mugimu (2015), purport that it is important to provide students with opportunities to practice and apply what they have learned theoretically in classrooms to other real-life situations, which are essential for an effective learning experience. Kay and Kibble (2015) concur that there are five major learning that is relevant to the curriculum implementation and the environment in which learning takes place which involves the school infrastructure.

Zhou and Brown (2015) purport that social cognitive learning is of the idea that individuals learn by observing others while influenced by the environment in which learning takes place. This means that learners derive knowledge by observation and their behaviour is influenced by the school infrastructure which is the environment in which that learning takes place. Belford (2013) concurs that social cognitive theory learning occurs in a social environment through reciprocity of behaviours, environmental variables (basic facilities such as classrooms, laboratories etc.) and personal factors. Badyal and Singh (2017) assert that behaviorism is a response to an external stimulus as the assumption is that several internal motives cannot be measured hence behavior which is observable can be studied. Zhou and Brown (2015) are emphatic that behaviorism theory can be beneficial to both the teacher and the learner in the classroom as it is concerned with observable and measured behavior and only desirable behaviour is learned. It holds that teachers need to employ strategies on how to teach desired behavior such as classroom contracts and behavior modification.

Badyal and Singh (2017) emphasise that humanism learning theory is based on an individual growth which is self-directed as one takes a journey of exploring one's identity. As such the schooling environment must have extramural activity facilities so that one can explore their talent. Constructivism learning theory is on the view that learners construct knowledge based on experiences which means the development of a new curriculum should be able to encompass the learned experiences. Belford (2013) purports that constructivism views learning from their own cognitive perspective in which they construct their own knowledge and rejects the scientific truth waiting to be discovered. Badyal and Singh (2017) concurs that the critical learning theory outline how to change society by making it equal for everyone through encouraging participation of all learners especially those that were oppressed. The apartheid education system was characterised by marginalisation of black people, therefore the school infrastructure should be designed in a manner that it accommodates all students to access quality curriculum content.

3. The State of School Infrastructure in South Africa

South Africa has experienced development inequalities with regard to the provision of infrastructure as a result of the painful legacies of the apartheid. The government is the one responsible to provide quality education and as such the focus should be directed towards the government policy as one of the main priorities (Motshekga, 2012). School infrastructure is a manifestation of historical inequalities that are deep, protracted, and still unresolved, mainly due to the incompetence of the Department of Basic Education (Metcalfe, 2022). Important factors in the education system, such as curricula, teachers, and educational infrastructure, contribute to the quality of education (Barrett, Treves, Shmis, Ambasz, & Ustinova, 2019).

In South Africa, there are still schools that lack basic facilities such as water and sanitation. The apartheid regime policies has left a mark of severe infrastructural backlogs in black communities while the formerly white schools have access to quality infrastructure such as laboratories, libraries and sports fields (Gibberd, 2020). This situation resulted in school learners being unable to reach opportunities due

to their poor environmental condition that affects their education. When school conditions are unfavourable due to lack of facilities and resources they hinder the access to quality education that could change the lives of the society. This is evident in rural schools were number of learners have died and some drowned in broken pit toilets in the Limpopo province (Gallo, 2020).

The school infrastructure crisis is exacerbated by a lack of funding, a state treasury prosecution, austerity and a lack of funding for basic education. Reducing infrastructure funding will negatively impact the number and speed of school construction projects implemented (Biney, Selebalo & Borman, 2021). It should be kept in mind that very poor infrastructure impacts the progress of both teachers and students. Schools that do not have learners' toilets usually do not have a teachers' toilet either. If the learners get wet or the roof leaks, the teacher will get wet too. The second reason that the quality of the mad school is unlikely is that learners studying in the mad school without electricity, running water and toilets are likely to live in the same disadvantages. The situation is generally related to learning outcomes (Skelton, 2014).

According to Kitzmiller and Rodriguez (2021), public school infrastructure issues associated with systematic racism and historic underinvestment affect health and fair well-being. Muthusamy (2015) reports that literacy and computing skills are essential for effective learning in all subjects across all grades, and it is important for learners to develop these skills based on their individual needs. It is vital to point out that this is difficult in a crowded classroom. Limpopo's Equal Education Report (EER) (2017) emphasises that the school is built from three prefabricated (prefabricated) units that have existed since 2010, but the prefabricated units are intended for temporary building structures doing. This type of structure often lacks facilities such as sports fields, scientific laboratories, and libraries.

Mokaya (2013) concurs that libraries and laboratories are very important in the process of education and learning. The level to which the infrastructures can improve quality education relies on their location, structure, and available facilities. South African School Law (No. 84, 1996) requires laboratories and libraries that meet the school's specific curriculum requirements to enable all schools offering scientific subjects to carry out experiments and scientific research. It emphasizes the need for equipment and consumables. Santika, Sowiyah, Pangestu, Nurahlain (2021) state that the process of achieving educational goals needs to be supported by quality resources, both human and physical, and facilities and infrastructure are one of the physical resources.

The sanitation facilities should include drainage, waste disposal and sufficient water. Gershberg (2014) affirms that inadequate school infrastructure negatively impacts student learning and school outcomes. The education system in many countries is characterised by many factors such as poor maintenance, registration challenges, poor classrooms and the inefficiencies of the government development and school constructions that contributes to the infrastructure gaps. Rodgers (2018) emphasizes that the supply of schools around the world is inadequate to meet demand. The United Nations Educational, Scientific and Cultural Organization (UNESCO) (2018) highlights that there are young children that do not attend schools in both primary and secondary school. The schools have expanded and there are still infrastructural challenges that do not receive attention due to natural disasters. However, the tragic devastation caused by recent natural disasters clearly shows that schools around the world are extremely vulnerable to natural disasters as there is poor maintenance of schools.

According to Santika et al., (2021), school facilities and infrastructure help attract and retain teachers, improve student performance, and have a positive financial impact on the community. South Africa as a developing country still faces challenges that affect the successful implementation of the curriculum as a result of poor school infrastructure. The government as the one responsible for providing quality education still does not meet the standards of proper school infrastructure and as such it is unable to implement scientific curriculum rich-content. The inefficiencies of providing proper textbooks, water

and sanitation, libraries, laboratories make it difficult for the teachers and relevant stakeholders to improve the curriculum.

Skelton (2014) states that in 2013, there were still dilapidated schools in South Africa whereby learners were subjected to attend in schools that did not have proper water and sanitation and access to electricity. In 2009 the situation changed after the government was taken to court as a result of serious infrastructural challenges. The Southern African Development Community (2000) asserts that the government as the custodian of the state should ensure the provision proper facilities such as laboratories, classrooms, libraries, workshops and sports facilities for a conducive environment.

3.1. The COVID-19 On School Infrastructure

The Conversation (2021) states that the COVID-19 pandemic could be a catalyst for action to address the consequences of inequality in the South African education system. Inadequate water and sanitation infrastructure, overcrowded classrooms and a shortage of teachers in specific periods and subjects are some of the challenges faced by the education system so far. Mudaly and Mudaly (2021) contend that in South Africa the focus of many educators is to work towards effective teaching and learning in order to address the past social and educational injustices that were perplexed by the apartheid regime that was characterised by the racial and class segregation. The covid-19 has exposed the inequalities within the educational fraternity and many social injustices. The latter has forced the policy analyst to take a critical decision of reviewing the educational curriculum as the COVID-19 has left the learners vulnerable due to the impossibility of home schooling. Maree (2022) purports that finding sufficient classrooms and desks to accommodate learners during the COVID-19 was a major challenge for most schools in South Africa as learners was expected to maintain social distance. As such accurate measurement were done in order to accommodate the desks required which caused some of the classroom resources to be removed limiting teaching and learning.

Amin and Mahabeer (2021) emphasise that it remains the government responsibility to provide quality education and it is critical to highlight the context in which the schooling environment and curriculum should be designed before the COVID-19 strike. This move will assist the government to derive a rescue plan to respond to the unstable realities and factors that were exposed by the pandemic, especially the ones that relate to the infrastructure and curriculum policy. Maree (2022) argues that the South African education system is unequal as only resourced schools better responded to the pandemic unlike rural communities' schools that struggled severely to deal with the pandemic due to insufficient infrastructural resources. Learners that lived in dire poverty it was difficult for them to progress effectively as the environment was not favourable for them to study.

Maree (2022) contends that unless the challenges of school infrastructure is not addressed to the satisfactory levels, factor that characterise the South African education system will continue to manifest themselves and that will result in an unpleasant situation in the country. The poor and disadvantaged learners in the rural communities will continue to suffer and this inequality was exposed during the pandemic. Gibberd (2020) purports that the government has developed the school infrastructure performance indicator system (SIPIS) as a project that will deal with the provision of basic facilities at the same time focusing on the development of a sophisticated school infrastructure as the driver of providing quality education. The Department of Education has established policies that will deal with the norms and standards of the school infrastructure as they will focus on addressing funding backlogs. They will continue to do that and hope that the existing infrastructure does not deteriorated and continue to be developed.

4. The Extent of Curriculum Policy Implementation

Sebake et al., (2007) concur that post-apartheid there were several policies and legislation have been developed to establish a framework that would lead to the transformation of education system. The challenges remained among the priorities of the National Department of Education (NDoE) to provide sufficient infrastructure within the policies and legislative framework. Hues (2011) states that the need for transform the education system was affected by the apartheid legacy which lasted forty-six years. Davies (1994) argues that it must be taken into cognisance that decisions and negotiations about the curriculum are political decisions which currently is the responsibility of the governing body which is the African National Congress (ANC) in the context of South Africa. Kunene (2009) highlights that the Department of Education appointed the officials to restructure and put together the syllabuses and curriculum content.

Maodzwa-Taruvin and Cross (2009) assert that South Africa's achievement of democracy in 1994 led to the new educational reform named the outcome-based curriculum which was previously named the Curriculum 2005 (C2005). The educational reform process and policy was as a result of the labour movement debates and the outcome-based education (OBE) experiences in New Zealand and Australia. Hues (2011) emphasises that for history, the major problem of the C2005 was with its geographical reform of Social Science area together with the move from content dominance to promotion of skills.

Maodzwa-Taruvin and Cross (2009) argue that the policy was later viewed by some academics, with many labelled many in-depth contradictions that would eventually lead to its end. The policy survived only 12 years after heated debates from politics and academic. The Minister of Basic Education then announced in Parliament of South Africa that the OBE is viewed as ineffective (Motshekga, 2009). Afterwards, the government took a drastic turn towards the curricula initiative called Curriculum Assessment and Policy Statements (CAPS), which is emphasising implementation of curriculum policy and teacher needs through the central knowledge of course disciplines. Further, this gave birth to the reintroduction of new curriculum assessment policy (Maodzwa-Taruvin and Cross, 2009).

Despite the effort made towards the successful implementation of curriculum policy by the government, the rural areas or townships, they are still characterised with variety of challenges that have an effect on curriculum implementation in the schools. Mbatha (2016) highlights some major challenges, as identified by most teachers and head of departments who are affected, especially in rural areas and townships. The challenges that still surface are lack of resources due to budget constraints, lack of access to technological equipment such as computers, internet and teaching aids, lack of professional development such as teacher experience and expertise and curriculum implementation is seen as time consuming

Du Plessis (2021) argues that the colonial past within the context of global shifts and social changes continues to navigate itself in the South African education system as there are many factors that remain untouched and unchanged. This can be observed through the manner in which the curriculum is structured in schools and the access to quality of education. Mogale and Modipane (2021) purport that across the world there are many policies within the education system that are developed to address the educational challenges, but what remains a challenge it is the implementation thereof. The South African government is still faced with the poor implementation of the curriculum policies. It has also been indicated that many teachers have experiences challenges in implementing the Curriculum and Assessment Policy Statement (CAPS) as a result of lack of training. Furthermore, there has been no implementation of safe schools and conducive school programmes in the Limpopo province.

Mtshweni (2022) concurs that the institutions of learning across the world play a critical role in developing the economy and policies of the nations. However, as a result of the COVID-19 pandemic there has be tremendous effects and changes on the manner in which learning should take place. As a

result various institutions had to change the norm of learning by moving to the digital world of online learning. This means that as the government rethink the new curriculum model, the system of online learning need to be taken into cognisance. This is important as many schools are characterised by infrastructure deficits. Letshwene and Du Plessis (2021) purport that as the world transform it also requires the curricula to change. For the past few years the South African schools has experienced several curriculum changes such poses a challenges on the curriculum developers and implementers as the South African education system has undergone many curriculum changes.

Crouch and Hoadley (2022) emphasise that one thing that was not given a special attention as the curriculum reform and complicated by the nature of C2005 was teacher training. Thus, educators that were trained under the apartheid Bantu education lacked opportunity to fight the legacy of apartheid characterised by poor teaching methods. If teachers do not understand the curriculum it is going to be difficult for them to disseminate the information in an understandable manner in the classroom. Gallo (2020) contents that despite the effort made to transform the curriculum and education policy after the apartheid regime the injustices that the black South Africans experienced under the apartheid regime remains the same. This could be observed as the continuation of inequality within the education system in terms of curriculum problems, teacher training, poor infrastructure and funds distribution. It could also highlight mismatch of professional skills in the curriculum and lack of education attainment within the economic and employment sector.

In South Africa the curriculum changes within the democratic era seems to be a serious challenge. As much as the new curriculum emphasize the learner-centred approach, for teachers it seems to be a daunting task. Curriculum changes have an effect on the way teachers disseminate information and the manner in which learners retain information in the classroom. The implementation of CAPS has involved many challenges as there were no enough subject specialist to support teachers, especially those that teach physical sciences and mathematics. Therefore, a change in curricula requires the transformation and training of teachers in order to prepare them to carry the task (Maharajh, Nkosi & Mkhize, 2016).

Viennet and Pont (2017) highlight that as the societies are becoming knowledge based, it has become important for individual and social progress. As such, the education system is ought to provide quality education that is accessible and sustainable to enable the upcoming generations to utilize it to compete in the global economy. However, at times the education policies might fail reach the classroom because of the poor implementation processes that were initiated. Mzangwa (2020) argues that in the South African context curriculum refers to the effectiveness of removing all barriers towards the access of the quality and inclusive education with the propensity to achieve the outcomes.

5. School Infrastructure and Curriculum Policy Implementation

South Africa's education system is primarily characterised by collapsing infrastructure, overcrowded classrooms, and relatively poor educational outcomes. It is perpetuated by inequality, and as a result, these challenges affect the desired outcome (Amnesty International, 2020). According to Amsterdam (2013), the backlog of the vast school infrastructure of most schools is built by the apartheid government and limited public funding for the years following apartheid. This made it a difficult task to improve the quality and level of the school's infrastructure. Soobrayan (2012) highlights that the quality of school buildings is important for education and efforts to improve educational content. Quality facilities provide teachers and students with a supportive environment that can meet changing needs and truly enhance learning and education. Successful education and learning depends on the availability of key resources such as B. Learning materials and educational and learning environments that help drive the implementation of the curriculum. Ahmad (2021) argues that facilities and infrastructure are one of the

educational tools that need to be processed professionally and are an integral part of educational administration.

The key focus of the South African government has been on the curriculum transformation and educational reforms since its establishment of the democratic country. Education is one of the important factors that could be utilized to redress the injustices caused by the apartheid regime. Factors such as the financial resources, curriculum, teacher deployment and access to quality education has been part of the education policy. Despite, the progress made of policy development, curriculum reforms and legislative interventions there are still challenges of delivering quality education (Gumede & Biyase, 2016).The insufficient access to resources is a serious challenge influencing curriculum implementation. The inadequate facilities including classrooms, laboratories, and libraries and sports fields can affect the implementation of the new curriculum.

Van der Nest (2012) has classified the educational resources into three distinct categories. Firstly, the human resources refers to teachers that are responsible for the body of knowledge. Secondly, cultural resources refers to the time and language. Thirdly, material resources refers to the text books, curricula content and technologies that could be intergraded in the teaching and learning process. However, it must be noted that in South Africa the material resources have been a serious challenge in accumulating them and as such that had a negative impact on both learners and teachers. Mahrajh, Nkosi and Mkhize (2018) concur that there is a need to ensure that teachers undergo training in order to know how they can develop their own material resources. These will include the profiling and tracking, discussing project groups with learners, construction of classroom and cooperation between teachers which is time consuming.

5.1. Factors Influencing Curriculum Policy Implementation

Curriculum implementation refers to how teachers deliver instruction and assessment through the use of specified resources provided in a curriculum. Curriculum designs generally provide instructional suggestions, scripts, lesson plans, and assessment options related to a set of objectives. Such designs focus on consistency to help teachers successfully implement and maintain the curricular structure in order to meet various objectives. Understanding the beliefs and concerns of teachers can provide insights into whether curriculum implementation will meet with success or failure. Teacher concerns play a part in the implementation of new curricula, because their concerns sometimes direct the choices teachers make when choosing to add or omit items from the curriculum (Nevenglosky, Cale & Aguilar, 2017).

The government is responsible for developing a curriculum to ensure that learning at school is effective, but other stakeholders are involved in implementing the curriculum. Mitchell (2013) argue that curriculum delivery is driven or influenced by the curriculum's three energy sources. That is, a teacher with fine-grained control over decisions, the subject itself with the resources offered as an education, and finally a student with a need. Must be. Teachers play a central role in implementing educational innovation and curriculum changes (Vanderlinde and van Braak, 2011). The Southern African Development Community (SADC) (2000) emphasises that teachers consider their role in curriculum implementation to be autonomous. Choose what you want to teach from the prescribed syllabus and curriculum. The role and influence of teachers in the process is undeniable, as implementation is through the interaction of learners with planned learning opportunities. Without the right materials, meaningful education and learning cannot be achieved. This also applies to the implementation of the curriculum.

In addition, Kirst and Walker (1971) recognises that state and local education authorities mandate and approve courses by specifying the content contained in them. School district professionals, from supervisors to teacher assistants, have varying degrees of influence in deciding on the degree programs, textbooks, materials, time allocations, etc. that embody the curriculum policy. In addition, Irreson, Evans, Redmond, and Wedell (1989) find that curriculum development is primarily a school-based innovation,

including discussions with teachers on content selection and placement, as well as methods, resources, and lesson plans.

Kaplan (2021) argue that the pressures from principals, curriculum related and negative attitudes of learners frustrate the teachers in school and have a negative impact on the autonomous motivation of teachers that could be utilized towards successful curriculum implementation. The teacher's motivation is one of the important aspect that is required with curriculum implementation as they are the drivers of the whole process. Gallo (2020) emphasise that despite the establishment of new policies and curriculum reforms post-apartheid regime the critical issue that remained a serious problem was lack of training of teachers within the education system. This limit the propensity of learners and students to grab employment opportunity and economic sustainability and access towards the quality education. Pekrun (2021) concur that in this modern environment, the education institutions should be designed in a manner that it support teacher motivation through the guidelines of the institution. At times teachers are not comfortable to attend training and workshops depending on their motivation for that day. As such teachers who do not participate in institutional programmes should not be considered for new positions as they would not have acquire the necessary skills and knowledge that will assist them to participate in the profession.

Mamabolo (2021) asserts that the readiness towards the implementation of the newly developed curriculum remains a challenge for teachers. It must be borne in mind the teachers were still struggling to grapple with the National Curriculum Statement (NCS) after the death of the Curriculum 2005 (C2005), which existed for a short period of time. At the time the teachers' interests lied within the administration, system reporting, recording and paper work. The latter experiences indicate that the curriculum implementation was complicated by the poor integration of the new curriculum by the teachers. As such, the teachers' efficiency and effectiveness remained a challenge, consequently the achievement of the quality results was compromised. Yildiz, Gunay and Ozbilen (2021) purports that the continuous evolution of technology and transformation in the education system has led to the changes in needs of both the teachers and learners and as such this required the need to revisits the guidelines of the education sector. Therefore, this meant that the education sector have new responsibilities. Education is a key that impart knowledge and skills on individuals so that they can be able to participate on a global scale by interpreting issues with a critical view and be able to participate in uplifting the lives of the society and principles. The teacher is one element that important in the educational process and is seen as the driver of change that will assist in the renewal of the education system.

According to Sekhakhane, Govendera and Maphalala (2021), the future of the education system requires a generation that is well prepared given the rapidly changing technology. The South African education system need to take an initiative to equip learners with the computer skills as the online teaching has become a norm today. The recent schools need to take advantage of the fourth Industrial Revolution (4IR) to improve and transform the education system that will respond to the market needs simultaneously ensuring that teachers across the curriculum implementation are well equipped with the digital methods of teaching in order to engage in lifelong learning.

Dhlomo and Mawere (2020) concur that until the teachers are taught and informed of how to implement the curriculum then it must be put on hold, solely because if there is no proper training for teachers then the execution of curriculum will not be successful. The knowledge of teachers within the curriculum implementation is very critical as they are the drivers of a curricula as they are informed of which gaps to fill. Viennet and Pont (2017) purports that the people are central to the curriculum implementation as they are developers of education policies, solely because their characteristics are vital determinants of a successful curriculum. However, are other stakeholders that must be acknowledge as they play a critical role in shaping the process of policy implementation and its outcomes. These other stakeholders include the parents, politicians, labour unions and implementing agencies. The determinants

refers to the entities that use their skills and resources to contribute to the curriculum policy implementation.

5.2. The Impact of School Infrastructure on Curriculum Policy Implementation

In South Africa the continuation of poor education system outcomes remains a challenge that affects the social and economic development ad advancement. As such, the government has cantered their interest towards the improvement of learner performance and ensuring the proper management of the curriculum. It has been revealed in South Africa the problems that affect the learning and teaching are as a result of poor curriculum content and the manner in which knowledge is disseminated to the learners (Schollar 2018). The other problem with the curriculum is the issue of quality and quantity curriculum content, lack of textbooks, lack teacher pedagogy and poor curriculum coverage. There is also lack of experience on both the teachers and learner, and lack of conceptual knowledge of the subjects that they are teaching and as such these lead to poor performance and learning outcomes. The complications envisaged in the curriculum content lead learners to be left behind every year (Amin & Mahabeer, 2021).

According to Mpu and Adu (2021), the term inclusive education refers to the education system whereby all the learners are fully accepted and included and such in South Africa seems to be a problem. Lack of resources has proven to be a barrier towards effective learning as a result of lack of classrooms. This also affect the teachers as classrooms are not sufficient to cater all students as a result of infrastructure challenges. Tabe, Heystek and Warnich (2021) concur that the South African education is characterised by low-quality system that lack visionary leaders to rectify the challenges of resources in order to respond to effective learning. If there are adequate resources to facilitate learning it becomes easier to deal with the proper management of curriculum, monitoring and evaluation.

The availability and quality of resource materials and the availability of appropriate facilities have a significant impact on curriculum delivery. Mokaya (2013) affirms that when there is a proper maintenance of hygiene in schools, learners become attracted and motivated to contribute good academic performance. According to South African Schools Act (No. 84 of 1996), in order for the schools to have a conducive learning environment there are norms and standards that regulate school infrastructure and as such, they must be implemented. Such school infrastructure must be of quality in order to avoid any problems that might relate to health, environment and social wellbeing. The onus is on the government to ensure that they provide access to proper school infrastructure in order to facilitate learning and successful curriculum implementation. The environmental, health and social well-being should not be compromised by the school infrastructure.

6. Methodology

This article has adopted the Systematic literature review (SLR) to respond clearly to the research question. Systematic literature review is a process that identifies, selects and critically appraises research in order to respond to the formulated research question. The main purpose of this system is to produce results that are not biased or ambiguous. The aim of the research study is to evaluate the effects of school infrastructure on curriculum policy implementation using the systematic literature review and further provide recommendations based on the results. The question that might be raised in the current situation is whether the available school facilities does respond to the successful implementation of the curriculum.

The approach used through the systematic literature review was followed by the steps of: research questions identification, literature search, selection review, data extraction, data synthesis and review writing. The research question was successfully identified from the research topic, on the success of curriculum implementation given the available school facilities. The literature for the study was extracted

from articles found on some of the library websites such as Ebscohost, Sabinet, Emerald and Google scholar. The scholarly articles were able to produce the information that respond to the research question. After the data was extracted and synthesised from the available articles the researcher was able to write the literature review and derive results. Furthermore, the researcher was able to make recommendations for possible future reference.

7.Findings and Recommendations

Based on the literature observations, it was discovered that there is a severe shortage and deterioration of school infrastructure, the Department of Basic Education must ensure that funds are invested in school infrastructure and maintenance. Schools must have access to basic facilities such as water, sanitation, and classrooms; failure to do so can result in health risks or poor academic performance. On the finding that there are challenges with implementing the curriculum policy, it is recommended that the Department of Basic Education devote more attention to improving school infrastructure, as it was identified as one of the factors contributing to the failure of curriculum policy implementation. It is recommended that the department create an environment in which all stakeholders are engaged. This initiative will benefit the department because these stakeholders will provide feedback or strategies to improve the school's infrastructure.

There is need for the department to establish workshops and development strategies be implemented to prepare educators for successful curriculum implementation. On the finding that there is a significant mismatch between available infrastructure and curriculum, it is recommended that the Department of Basic Education launch an initiative to raise funds to improve school infrastructure. All the stakeholders should participate in the development of the curriculum and school infrastructure. The Department of Basic Education should work with educators to understand the issues they face on a daily basis. It has been noted that there is a significant gap between the infrastructure available in schools and the curriculum. The issue is that technology has evolved, requiring educators to shift from traditional teaching methods to new ones. Unfortunately, there are no technological devices in these schools that are compatible with the curriculum.

Conclusion

The literature that was analysed clearly indicated that there is still a challenge of school infrastructure despite the effort made by the democratic government in correcting the injustices of the apartheid regime. This resulted in the challenges of providing quality education and transformation of school infrastructure. There are schools within the rural and township areas that still lack basic facilities such as clean running water, sufficient classroom and proper sanitation. The literature further indicate that the challenge towards the successful curriculum implementation is the incapacity of teachers to understand their role within the process of improving curriculum. The situation has exacerbated by the outbreak of COVID-19 pandemic which has attributed to inequalities of providing school infrastructure that threatens the ability to learn and the lives of the learners as a result of poor facilities. This paper suggest the mechanism for effective implementation of curriculum. These include that the government needs to improve the school infrastructure to ensure that learning takes place effectively, to involve various role players such as private sector and other statutory bodies. It is important also to ensure that the government initiates strategies to equip teachers with knowledge that could be utilized in the process of improving the curricula.

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