


A Proposed Unified Conceptual Framework for Quality of Education in Schools

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Abstract

Quality of education in schools requires accurate descriptions of all its components to judge its realization and plan for its improvement. However, it can be difficult to obtain such descriptions in an effective manner. This article aims to propose a unified conceptual framework for quality of education in schools to facilitate an understanding of the quality of education. The conceptual framework proposed here is multi-dimensional in nature and based on operational experience by the authors with studying education systems' performance in general, and particularly, quality of education in schools. The unified conceptual framework proposed here is informed by systems theory and acknowledges the interdependence among the components of quality of education and levels of the education system. In conclusion, we reiterate the importance of a conceptual framework for quality of education that explicates the relationships among the numerous education components (inputs, processes, and outputs) among the various education levels of the education system (national, tertiary, school, and pre-school) as a primary science for understanding the quality of education in schools as an essential step toward providing a scientific base for the study of education quality in schools.

Keywords

education, social sciences, educational administration, leadership, policy, schools, quality of education, conceptual framework, education levels

Introduction and Background

During the past years, there has been a renewed focus on the quality of education in schools worldwide after the United Nations Educational, Scientific and Cultural Organization (UNESCO, 2004) declared that quality of education in schools was generally declining in many countries. As such, quality of education is pointed out as the crucial issue of the post-2015 educational agenda worldwide (UNESCO, 2014). Attention on quality of education in schools has centered on the various relationships among the inputs, processes, and outputs, with the recognition that students should receive good quality of education. The movement toward the provision of quality of education in schools to all students has been accompanied by various research studies aimed at finding the quality of various education systems for improvement purposes (Benavot, 2011; Garira et al., 2019; Giannini, 2015; Meera, 2015; Mohammad, 2017). This is particularly essential for high quality of education, which is considered essential to provide young people with adequate knowledge and skills as well as sustaining countries' social and economic development (European Commission/EACEA/Eurydice, 2015).

Research on quality of education has primarily focused entirely on inputs, processes, or outputs either at the school level (Giannini, 2015; Jenjekwa, 2013; Mazise, 2011), pre-school level (Biersteker et al., 2016; Pianta & Hamre, 2009; Slot et al., 2015), tertiary level (Akareem & Hossain, 2012; Madani, 2019), or national level (Hapanyengwi et al., 2018; Kanyongo, 2005; Postlethwaite & Kellaghan, 2008). Unfortunately, there has been no parallel research agenda on the relationships among the inputs, processes, and outputs at all the levels of the education system and how these may contribute to the overall quality of education. This lack of focus on the relationships among the inputs, processes, and outputs at the various levels of the education system may have stemmed partly from a lack of consensus on the conceptualization of quality of education in schools. The aim of

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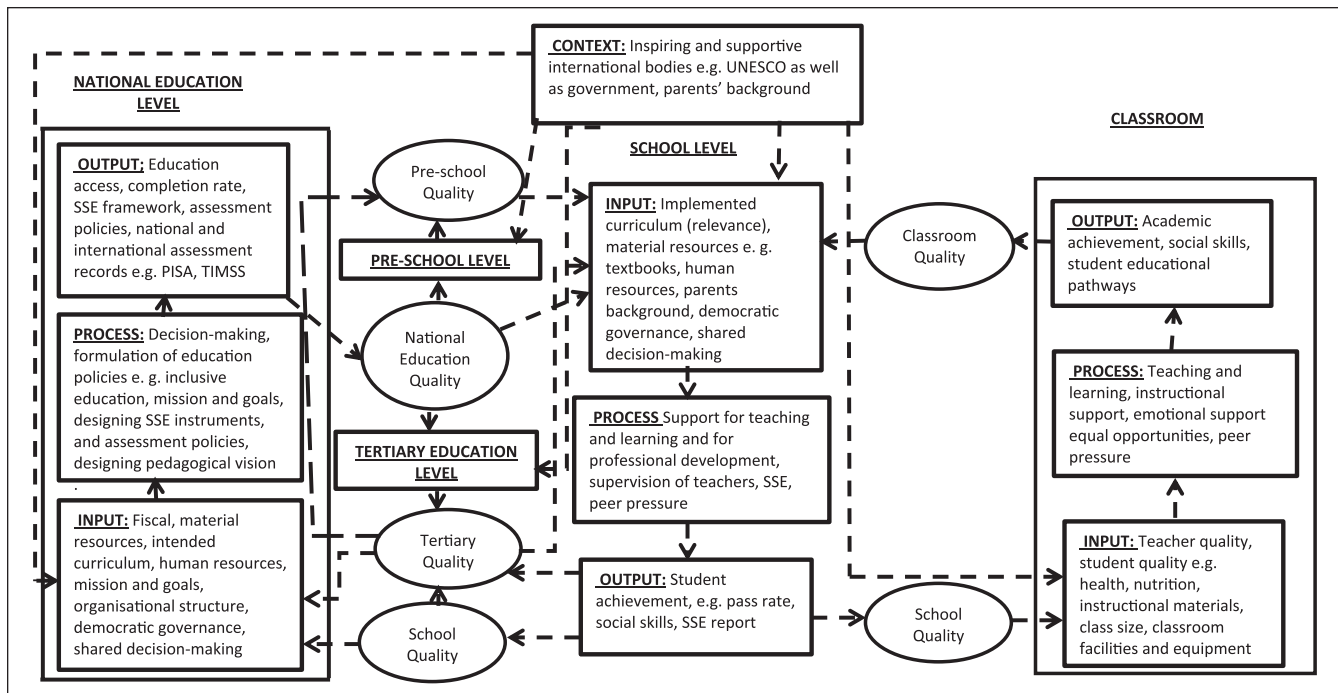


Figure 1. The proposed unified conceptual framework for quality of education in schools.

this article is to propose a unified conceptual framework for quality of education in schools, which considers systems theory to conceptualize quality of education in schools. Instead of focusing on a single level of the education system, for example, the national, the school, or the classroom, to conceptualize quality of education as previous studies have done (see Jenjekwa, 2013, Hapanyengwi et al., 2018), our framework considers all these levels to conceptualize quality of education. Systems theory was applied to help in the development of a unified conceptual framework for quality of education. Therefore, one important difference of our proposed unified conceptual framework for quality of education with the previous ones is that, it advocates for a systemic approach to the understanding of quality of education through focusing on the components of quality of education at all the levels of the education system than focusing at a single level (see Figure 1). We believe that a unified and operational conceptual framework for quality of education is vital for education quality to be fully realized and improved in schools. This study is significant in that it may help various stakeholders to have a better understanding of quality of education in education systems, which will help them to seek better ways of its realization and improvement. The study is also substantial in that it may help education systems to design and develop effective evaluation and monitoring systems to evaluate quality. It is also important in that it may also encourage research on the development of conceptual frameworks for quality of education in schools which is currently limited.

To provide a scientific base for the study and understanding of the quality of education, it is necessary to articulate a conceptual framework that explicates the various components of education within the different levels of the education system and the relationships among them. Our initial problem in developing the conceptual framework for quality of education in schools presented in this article was the uncertainty about what constitutes a conceptual framework for quality of education in general and a conceptual framework for quality of education in schools. Therefore, we aim to design and develop a unified conceptual framework for quality of education in schools that may help to facilitate an understanding of the quality of education in schools by the various stakeholders in education. The unified conceptual framework for quality of education presented here may help the various education stakeholders to be aware of their various roles in the realization of quality of education in schools and its improvement thereof. The idea is to understand the conceptual framework for quality of education in schools from a theoretical and practical perspective as a way toward improving the quality of education in schools.

Literature Review

Recently, debates in education have focused on quality of education, defined here as fit for purpose, which relates to the entire characteristics of education (inputs, processes, and outputs). It has been realized that achieving universal basic education on its own may not be fully accomplished

without the provision of quality of education (UNESCO, 2004). Steyn (2001) affirms that the need for quality of education is the single most important thing and quality makes the difference between success and failure. Although there is a consensus that there is a need to provide good quality of education to all students worldwide (UNESCO & UNICEF, 2012), there is little agreement as to what constitutes quality of education. Quality of education may be understood differently by different education stakeholders. Williams (2001) indicates that quality of education is better understood in terms of output. Although student achievement in tests and public examinations may signify good quality of education to many, a holistic understanding of education quality should be in terms of inputs, processes, outputs as well as outcomes of education which include student knowledge (academic and cultural heritage), social preparation (societal trends and needs), and also personal development (personal and educational needs and interests) (Thijs & Van den Akker, 2009).

Substantial research has been done on quality of education with considerable evidence on poor quality of education in most education systems (Benavot, 2011; Garira et al., 2019; Spaul, 2015). Nevertheless, there is dearth of research on how quality of education may be improved. However, existing literature and research are consistent that constant monitoring and evaluation of education quality done by the schools through School Self-Evaluation (SSE), a process whereby school communities find out about their conditions, processes, and outputs, are effective for improvement purposes (Carlson, 2009; Department of Education and Skills, 2016; Estyn, 2014). Taking this into consideration, the present study aims to propose a unified conceptual framework for quality of education in schools as a way toward helping education stakeholders to have a better understanding of quality of education. This understanding may also help to enhance the realization of quality of education in schools and its improvement thereof.

Several frameworks for understanding quality of education have been developed. These include Scheerens' (2000) "Integrated model of school effectiveness," Griffith's (2008) "Proposed model for assessing quality of education," Howie's (2002) "Factors related to Mathematics achievement" model, Luong and Nieke's (2014) "Conceptualizing quality education from the paradigm of recognition" framework, among others. Taken together, these frameworks are a rich source of ideas on how to understand education quality. However, these frameworks or models focused on inputs, processes, and outputs of education without a clear indication of these aspects at each of the various levels of the education system (national, tertiary, school, and pre-school) and the context in which these levels of the education system operate. Moreover, these frameworks were developed without a systemic approach to conceptualizing quality of education to enable a holistic understanding of quality of education, which the proposed

unified conceptual framework hopes to achieve. Without a unified conceptual framework that focuses on the interconnectedness of the components of quality of education (inputs, processes, and outputs) at the various levels of the education system, there is likely to be little understanding of the effects of the external forces on the overall education system or its sub-systems (national, tertiary, school, and pre-school levels). Hence, we aim to propose a unified conceptual framework for quality of education in schools that expounds various components and levels of the education system as a way toward helping the general public and researchers to understand the quality of education as well as their roles in its realization. This unified conceptual framework for quality of education may also be used as a basis for finding effective ways of improving the quality of education.

To develop a sound conceptual framework for quality of education in schools, it is vital to pay attention to the existing theories and researches. In relation to conceptual frameworks of research studies, Leshem and Trafford (2007) indicate that they should be derived from the following:

- Writers' works and relevant researches;
- Researchers' own experiences of the research problem;
- Reflecting on reading, experience, and developing research assumptions (Leshem & Trafford, 2007).

Moreover, they indicate that conceptual frameworks are typically developed from the theoretical foundations of the study. Hence, the type of theoretical framework underlying a study determines the conceptual framework of that study. Therefore, without an explicit theory underpinning the development of any conceptual framework either of a research study or for quality of education, it may be difficult to judge the relevance of such a framework. Several theoretical frameworks are available in educational studies and other disciplines, such as natural and social sciences, to inform the development of conceptual frameworks. These include the systems theory (Banathy & Jenlink, 2004), behaviorism (Pritchard, 2017), constructivism, (Lazarus, 2010), cognitivist (Mwamwenda, 2009), among others. Therefore, a comprehensive theoretical framework is essential to help inform the development of any conceptual framework. We discuss the theoretical framework employed in this article in the next section.

Theoretical Framework

The conceptual framework for quality of education in schools proposed here (see Figure 1) is based on systems theory applied to education. This theory is important for understanding any education system for it contrasts with numerous fragmentary reforms aimed at improving aspects or parts of the education system which may not normally succeed

(Barile & Polese, 2010). This theory derives its notion from science, where it is believed that a set of parts of a system interact to achieve specified objectives (Banathy & Jenlink, 2004; Wright, 2008). Similarly, in an education system, various levels of the education system (national, tertiary, school, and pre-school) and their associated classrooms, together with their relevant stakeholders, should work together to achieve systemic educational goals. This involves developing relevant monitoring and evaluation instruments for use in monitoring and evaluating education to find out whether quality is being realized, which should be a joint effort of all education stakeholders. In our proposed conceptual framework for quality of education, SSE is a central component at all the levels, where the national level should design and develop an SSE framework (see Figure 1). After its evaluation to ascertain its quality, this SSE framework should be given to schools, where it should be used to do the actual SSE in the school as well as in classrooms. After the SSE, an SSE report, which will be a description of the evaluation's findings, will be produced (see Figure 1). The SSE report will also highlight what needs to be improved to enhance quality of education in the school. So, SSE is a crucial component for quality improvement as shown in Figure 1. Failure to realize educational goals may be unfitting to assume that problems may be at any one of the levels of the education systems. Instead, a comprehensive analysis of the education system should be done to understand the problem and to find out the exact source of the problem. This may help to ensure effective improvement to take place. To this effect, Mele et al. (2010) suggest that when working with systems, we should explore critically the problem itself with all those who are affected by it. This may help to ensure an effective solution to the problem. Without a comprehensive systemic approach to solving educational problems, improvements may only be based on trial and error which may fail to address the problems. Furthermore, general solutions to educational problems may not necessarily work since each education system is unique. Unfortunately, very few people are trained in systems theory approach to research in education. Considering systems' theory approach to education, the conceptual framework for quality of education in schools proposed here acknowledges a bidirectional influence of quality of education among the different levels of the education system, whereby the quality of education at one level will influence that of the other levels and vice versa.

The Proposed Conceptual Framework for Quality of Education

Our proposed conceptual framework for quality of education in this article (see Figure 1) is based on an input, process, output approach, where these should be specified at every level of the education system namely, the national, pre-school, tertiary, and school levels. The consideration of inputs, processes, and outputs at every level of the education

system in conceptualizing quality of education in this article assumes that for quality to be realized, there needs to be a clear understanding of the responsibilities of various stakeholders at each of the different levels of the education system.

Our conceptual framework for quality of education in schools was developed as part of a larger study on the development of an SSE framework for classroom quality in Zimbabwean primary schools. The conceptual framework proposed here is multi-dimensional in nature and based on operational experience by the authors with studying Zimbabwean and South African education systems' performance in general, and particularly, quality of education in schools. Design research, a systematic study of designing, developing, and evaluating educational interventions as solutions to educational problems (Plomp, 2009), was used in the development process of an SSE framework. Design research was considered as a suitable research design for the study because it aims at pursuing new, novel, and socially constructed solutions to problems, through generating design principles, which are both theoretically supported and practically tested (De Villiers, 2005). Design research was compatible with the study's objectives since it aimed to develop an SSE framework for evaluating the quality of education in Zimbabwean primary schools. Through developing an SSE framework, we also managed to come up with a framework for quality of education in schools which we report here. The development of a proposed framework for quality of education in schools was an attempt to gain a deeper understanding of quality of education in schools which would be monitored and evaluated using an SSE framework. A preliminary phase in the larger study on the development of an SSE framework revealed that participants' main understanding of quality of education in schools was in terms of students' achievement in academic subjects (Garira, 2015). This also confirms Williams' (2001) assertion that quality of education is better understood by many in terms of its output than can be done in any other aspect. However, student achievement should not be thought of in terms of achievement in academic subjects only. It should also be viewed in terms of students' cultural heritage, social preparation, personal development (Thijs & Van den Akker, 2009), and other aspects (see also Figure 1) to help total development of students. The proposed conceptual framework for quality of education reported here was developed through a review of relevant literature as well as existing frameworks. Figure 1 presents a proposed conceptual framework for quality of education in schools.

Our proposed conceptual framework for quality of education in schools is among the first frameworks for quality of education to use a systemic approach in conceptualizing quality of education, where components of quality of education (inputs, processes, and outputs) are considered at all the levels of the education system at once. It places substantial responsibilities to various stakeholders in the education

system in terms of supplying inputs and the processes they are expected to carry out for quality educational outputs to be realized, which is discussed in the next section.

The Context

In our proposed conceptual framework for quality of education, the context provides inputs to all levels of the education system (national, tertiary, pre-school, and school; see Figure 1). The context may include the government, international bodies such as UNESCO and UNICEF, and other social structures with interest in education which may include parents and other civic and private organizations (see Figure 1). The context also provides inputs directly to the classroom. This may be in the form of exercise books and other school stationary which parents buy for their children. Parents may also provide inputs directly to the classroom by helping their children with homework. In its framework for understanding education quality, UNESCO (2004) emphasized the importance of the context for quality of education to be realized. Therefore, the context plays a crucial role in education in that it provides enabling conditions for schooling (Scheerens, 2004).

The National Education Level

This level comprises the national head office of the education system, the provincial, and the district levels (South African Department of Education, 2009). In our proposed conceptual framework for quality of education in schools, Figure 1 shows that the national education level receives inputs from the context. After receiving the inputs, some processes happen at this level. These processes may include decision-making on various aspects of education such as the formulation of education policies, designing pedagogical vision, designing assessment policies, designing educational mission, vision, and goals (Garira, 2015) (see Figure 1). Other processes should also involve designing and development of SSE frameworks for use in evaluating and monitoring the quality of education in schools (see Figure 1). These processes produce outputs, which are highlighted in the conceptual framework as education access, completion rate, SSE instruments, among others (see Figure 1). These outputs, put together, comprise the national education quality (see Figure 1). Most of the outputs at the national level of the education system are given to institutional levels (tertiary, school, and pre-school) as an input (Garira, 2015) (see Figure 1). These three institutional levels, in turn, give their outputs to their respective classrooms as inputs. Research has shown that an education system that works together with the other levels of the education system may offer high-quality learning opportunities (Garira et al., 2019; Lewis & Pettersson, 2009). Although the national level of the education system is not the focus of this article, it is an essential level of the education system for it provides inputs and other enabling conditions for effective teaching and learning to take place in

schools (Scheerens, 2000). The national level of the education system also designs and develops the intended curriculum which will be given to schools for implementation together with other inputs. The different levels of the education system should work together to offer learners high-quality learning opportunities.

The Tertiary Education Level

In our proposed conceptual framework for quality of education, the input, process, and output details are not provided for the tertiary level in Figure 1, because this level is not the focus for quality improvement in this article. However, quality of education at this level in terms of inputs, processes, and outputs affects and is in turn affected by the quality of education of the other institutional levels (pre-school and school levels) as well as the national education level (see Figure 1). The tertiary education level, which includes colleges (including teacher education colleges) and universities (Akareem & Hossain, 2012), receives inputs from the national education level which may include human and other material resources. Some processes happen at the tertiary education level, and this will produce an output labeled as tertiary quality (see Figure 1). This output, mainly consisting of human resources and knowledge, will be given as an input to the school and the pre-school levels, (see Figure 1), as graduates of universities and teacher education colleges are the teachers and leaders in the schools. Tertiary quality is also fed back to the national level, because this level of the education system provides manpower for the labor market as well as research and innovation outputs. Although the realization and improvement of tertiary quality and the pursuit of excellence may be the responsibility of higher education institutions themselves (Houston, 2008), other levels of the education system also contribute to this quality (see Figure 1).

The Pre-School Level

The input, process, and output details at this level are also not indicated in Figure 1, as neither of this level is a focus for quality improvement in this article. Like the tertiary level, the pre-school level also receives inputs from the context and from the national education level in the form of human and other resources (see Figure 1). The processes which happen at this level mainly comprise teaching and learning, which include emotional support, instructional support, and classroom organization (Pianta & Hamre, 2009). Within each of these major processes, there are various dimensions of classroom interactions, which are essential for the development of children that also happens here. In addition to these teaching and learning processes, some decision-making processes also take place. These processes produce a certain quality, denoted as pre-school quality (see Figure 1), which will be given to the school level as an input, mainly in the form of pupils.

The School Level

The school receives inputs from the national, tertiary, and pre-school levels, as well as from the context (see Figure 1). These inputs may include human and material resources, educational mission and goals, assessment policies, among others (see Figure 1). After receiving these inputs, many processes happen within the school level. These processes may include decision-making by school administrators on the allocation of resources, support for teaching and learning, management of resources, among others (see Figure 1). Since schools differ in their effectiveness (Sammons, 2007), their qualities are also bound to differ. The processes which happen at the school level produce an output which is denoted as school quality (see Figure 1).

At the school level, how the curriculum will be implemented depends on the quality of the processes within the school and on the quality and quantity of the inputs provided to this level by the other levels (context, national, tertiary, and pre-school). Research indicates that proper utilization of the resources provided to schools by the other levels of the education system may help for the realization of quality of education and its improvement thereof in schools (Garira et al., 2019). Some of the outputs at this level are listed in Figure 1. The output from the school level, which is indicated as school quality (see Figure 1), is given to the classroom as an input as well as being fed back to the national and tertiary levels in terms of quality of labor force and quality of students (see Figure 1). So, if school quality is good, this may also have a positive effect on the quality of the national and tertiary levels of the education system (see Figure 1). This is also because the national quality of education is an overall reflection of the quality of education in schools (Garira, 2015). Therefore, school quality alone can be an indicator of quality of the education system. The pre-school, school, and tertiary levels all have their respective classrooms. However, in our conceptual framework for quality of education in schools (see Figure 1), details of the classrooms for the pre-school and tertiary levels are not indicated as these are not the focus for quality improvement in this article. Only details of the school's classroom are shown (see Figure 1).

The classroom. The classroom is within a school and receives inputs from the school and from the context (see Figure 1). Like at the pre-school, school, and tertiary levels, quality of education in the classroom may be determined through inputs, processes, and outputs. It is in the classroom where most inputs from the other levels of the education system should gainfully be utilized for the benefit of all students. Research indicates that student achievement is high in classrooms of good quality (Garira, 2015; Rivkin & Schiman, 2015). The processes that go on in the classroom are important to realize quality of education in schools. Thus, it is vital to monitor and evaluate what goes on in schools, and particularly in

classrooms, to find out where improvement may be required for effective realization of quality of education.

While schools may prescribe the processes which they expect to take place in classrooms through the induction of teachers, these may merely be guidelines of how teachers should deliver curriculum content to students. The actual classroom processes are determined through the interactions between teachers and students with the provided resources. Examples of some processes which happen in classrooms are listed in Figure 1. The teaching and learning processes may include such aspects as breadth and depth of curriculum, time on task, and instructional effectiveness (Hollingsworth et al., 2006). These classroom processes will also determine the attained curriculum, which many education stakeholders not only understand in terms of student achievement in academic subjects (Williams, 2001) but should also be thought of in terms of student achievement, social skills, and future student educational pathways (Thijs & Van den Akker, 2009).

Due to the bidirectional influence of quality among the various levels of the education system, the quality of education in the classroom influences and is also influenced by the quality of education at the school level and in turn, this level's quality will also do likewise to the national education level (see Figure 1). Although all the other levels of the education system contribute to the final output of education, which some authors (Kudari, 2016; Williams, 2001) and many education stakeholders underscore student academic achievement as the most important, it is at the school level, and particularly in the classroom, where this final output is mostly evident since most of the students' time is spent in the classrooms. However, cognitive achievement is not the only desired output of education as this should also include preparation for society and for professional life (Thijs & Van den Akker, 2009). The school level, the classroom, or the student can be chosen as the unit of analysis to determine the quality of education. Since the greatest part of student learning takes place in the classroom, it is where most student achievement is realized. Therefore, if quality of education is determined by student achievement (cognitive, cultural heritage, social preparation, and personal development; Thijs & Van den Akker, 2009), the classroom can be an indicator of quality of education. It is, therefore, essential to monitor and evaluate quality of education at all levels of the education system, and particularly classroom processes, to achieve good quality of education.

Limitations

There are potential limitations to this study. First, it is possible that the method applied in the development of the unified conceptual framework for quality of education presented here could not capture all the components of quality of education at the various levels of the education system. Since this was part of the larger study on the development of an

SSE for classroom quality, the conceptual framework was developed through a review of the related literature and a review of the existing frameworks on quality of education. The lack of consultation of stakeholders about the components of the framework could have left other essential ones. In addition, there was limited literature on unified conceptual frameworks for quality of education, which could have negatively affected the contents of the unified conceptual framework for quality of education. There is, therefore, a need for further empirical studies which involves various education stakeholders who may further inform the development of a more comprehensive, unified conceptual framework of quality of education.

Conclusion

The main innovation in this article is the development of a unified conceptual framework for quality of education in schools. Systems theory was used to help in understanding quality of education as well as in developing the unified conceptual framework for quality of education in schools. Inputs, processes, and outputs formed the basis of the conceptual framework, where it was highlighted that these should be specified at every level of the education system. Our conceptual framework helps the various education stakeholders to understand their roles in that it demarcates responsibilities so that each one is aware of the roles they are to play in the realization of quality of education in schools (see Figure 1). A unified conceptual framework for quality of education in schools is, indeed, essential as it may help to increase the understanding of the roles to be played by the various education stakeholders for quality of education to be realized in schools. We believe that such a unified conceptual framework for quality of education may help to define quality of education in schools from a systemic perspective. It could also evolve as a quality measurement tool for self-assessment to aid continuous quality of education improvement in schools. Moreover, it is likely that the explication of a conceptual framework for quality of education as the basis for understanding quality of education may encourage researchers to examine the interconnectedness among the various levels of the education system and other components of the conceptual framework which may help to improve quality of education in schools.

Our framework provides a general conceptual framework for quality of education in schools which can be used in various education systems to understand quality of education. The article acknowledges the importance of the interconnectedness of the various levels of the education system to realize educational goals. Our proposed conceptual framework demarcates responsibilities to various stakeholders in the various levels of the education system to enhance stakeholders' understanding of their roles and responsibilities in the realization of quality of education in schools. Hence, all levels of the education system have a role to play in SSE

either in the planning or implementation process for quality of education to be realized.

Considering the differences in perspectives of the various education systems, the aim is to set out a globally applicable conceptual framework for quality of education in schools that can be used to suit the local contexts. It is hoped that education systems may use the proposed conceptual framework proposed here to understand quality of education and how it may be realized in schools. It should be noted that due to the bidirectional influence of quality among the various levels of the education system, there is no privileged level at which one can understand quality of education since all the levels contribute to the overall quality of education.

Despite being relevant to the context where this unified conceptual framework for quality of education was developed, information presented here can also be applicable to other education systems. This can be especially applicable in some developing countries where effective frameworks for understanding quality of education may not be available. Hence, this information can innovatively be applied to other education systems in their pursuit to understand quality of education in schools. Although the contexts may be different from where the conceptual framework was developed, the way the challenges of understanding quality of education present themselves in various education systems may be the same and how these challenges can be addressed may be similar in nature.

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References

- Akareem, H. S., & Hossain, S. S. (2012). Perception of education quality in private universities of Bangladesh: A study from students' perspective. *Journal of Marketing for Higher Education*, 22(1), 11–33.
- Banathy, B. H., & Jenlink, P. M. (2004). Systems inquiry and its application in education. In *Handbook of research on educational communications and technology* (pp. 37–58). Mahway, NJ: Lawrence Erlbaum.
- Barile, S., & Polese, F. (2010). Smart service systems and viable service systems: Applying systems theory to service science. *Journal of Service Science*, 2(1–2), 20–39.
- Benavot, A. (2011). Improving the provision of quality education: Perspectives from textbook research. *Journal of International Cooperation in Education*, 14(2), 1–16.

- Biersteker, L., Dawes, A., & Hendricks, L. (2016). Center-based early childhood care and education program quality: A South African study. *Early Childhood Research Quarterly*, 36(2016), 334–344.
- Carlson, B. (2009). School self-evaluation and the “critical friend” perspective. *Educational Research and Review*, 4(3), 78–85.
- Department of Education and Skills. (2016). *Looking at our school 2016: A quality framework for post-primary schools*. The Inspectorate, Department of Education and Skills.
- De Villiers, M. R. (2005). *Three approaches as pillars for interpretive information systems research: Development research, action research and grounded theory: Research for a changing world*. <http://hdl.handle.net/10500/13199>.
- Estyn. (2014). *A self-evaluation manual for primary schools*.
- European Commission/EACEA/Eurydice. (2015). *Assuring Quality in Education: Policies and Approaches to School Evaluation in Europe*. Publications Office of the European Union.
- Garira, E. (2015). *The development of a school self-evaluation framework for classroom quality in Zimbabwean primary schools*. University of Pretoria.
- Garira, E., Howie, S., & Plomp, T. (2019). An analysis of quality of education and its evaluation: A case of Zimbabwean primary schools. *South African Journal of Education*, 39(2), Article #1644. <https://doi.org/10.15700/saje.v39n2a1644>
- Giannini, M. (2015). Organization and quality in school education. *Procedia–Social and Behavioral Sciences*, 174(2015), 1735–1739.
- Griffith, S. A. (2008). A proposed model for assessing quality education. *International Review of Education*, 54(1), 99–112.
- Hapanyengwi, O., Chataika, T., & Dirwai, C. (2018). *Quality of education: Interrelationships between learning environments and learning outcomes and child development in basic education in Zimbabwe*. Save the Children.
- Hollingsworth, J., Fowler, M., & Ybarra, S. (2006). *Method for generating classroom productivity index*. US Patent (Patent No. US 7, 131, 842 B2).
- Houston, D. (2008). Rethinking quality and improvement in higher education. *Quality Assurance in Education*, 16(1), 61–79.
- Howie, S. J. (2002). *English language proficiency and contextual factors influencing mathematics achievement of secondary school pupils in South Africa*. University of Twente.
- Jenjekwa, V. (2013). Access and quality in education in resettlement schools: The case study of Zvivingwi secondary school in Gutu District, Masvingo province in Zimbabwe. *International Journal of Educational Administration and Policy Studies*, 5(2), 15–21.
- Kanyongo, G. Y. (2005). Zimbabwe’s public education system reforms: Successes and challenges. *International Education Journal*, 6(1), 65–74.
- Kudari, J. M. (2016). Survey on the factors influencing the student’s academic performance. *International Journal of Emerging Research in Management and Technology*, 5(6), 30–36.
- Lazarus, S. (2010). *Educational Psychology in social context*. Oxford University Press.
- Leshem, S., & Trafford, V. N. (2007). Stories as mirrors: Reflective practice in teaching and learning. *Reflective Practice*, 7(1), 9–27.
- Lewis, M., & Pettersson, G. G. (2009). *Governance in education: Raising performance* [World Bank Human Development Network Working Paper]. <https://ssrn.com/abstract=1992404>
- Luong, M. P., & Nieke, W. (2014). Conceptualizing quality education from the paradigm of recognition. *Journal of Education and Practice*, 5(18), 178–191.
- Madani, R. A. (2019). Analysis of educational quality: A goal of education for all policy. *Higher Education Studies*, 9(1). <https://doi.org/10.5539/hes.v9n1p100>
- Mazise, A. (2011). *Challenges and prospects of quality primary education in Zimbabwe rural schools: A case study of Kadoma rural schools*. University of Fort Hare.
- Meera, N. S. (2015). Quality education for all? A case study of a New Delhi government school. *Policy Futures in Education*, 13(3), 360–374.
- Mele, C., Pels, J., & Polese, F. (2010). A brief review of systems theories and their managerial applications. *Service Science*, 2(1–2), 126–135. https://doi.org/10.1287/serv.2.1_2.126
- Mohammad, R. T. (2017). Assessing the quality of education in Saudi Arabia. *International Journal of Economic Research*, 14(17), 521–528.
- Mwamwenda, T. S. (2009). *Educational psychology: An African perspective*. Durban: Heinemann.
- Pianta, R. C., & Hamre, B. K. (2009). Conceptualization, measurement, and improvement classroom processes: Standardized observation can leverage capacity. *Education Researcher*, 38(2), 109–119.
- Plomp, T. (2009). Educational design research: An introduction. In T. Plomp & N. Nieveen (Eds.), *An introduction to educational design research*. Enschede: National Institute for Curriculum Development.
- Postlethwaite, T. N., & Kellaghan, T. (2008). *National assessments of educational achievement* (Education Policy Series No. 9). https://www.iaaed.org/downloads/9_finalweb.pdf
- Pritchard, A. (2017). *Ways of learning, learning theories and learning styles in the classroom*. Fulton Publishers.
- Rivkin, S. G., & Schiman, J. C. (2015). Instruction time, classroom quality, and academic achievement. *The Economic Journal*, 125(588), F425–F448.
- Sammons, P. (2007). *School effectiveness and equity: Making connections* [Keynote presentation]. The International Congress of School Effectiveness and Improvement (ICSEI), Fort Lauderdale, FL, United States.
- Scheerens, J. (2000). *Improving school effectiveness* (Fundamentals in Educational Planning, No.68). United Nations Educational, Scientific and Cultural Organization.
- Scheerens, J. (2004). *The quality of education at the beginning of the 21st century* (Background paper prepared for the Education for All Global Monitoring Report 2005: The quality imperative). United Nations Educational, Scientific and Cultural Organization.
- Slot, P. L., Leseman, P. M., Verhagen, J., & Mulder, H. (2015). Associations between structural quality aspects and process quality in Dutch early childhood education and care settings. *Early Childhood Research Quarterly*, 33(4), 64–76.
- South African Department of Education. (2009). *Trends in Education Macro-Indicators Report*. <http://pmg-assets.s3-website-eu-west-1.amazonaws.com/docs/100108report.pdf>
- Spaull, N. (2015). *Education quality in South Africa and Sub-Saharan Africa: An economic approach* (Doctoral thesis). University of Stellenbosch.
- Steyn, G. M. (2001). Focusing on guiding principles of quality to redesign educational institutions. *South African Journal of Education*, 21(1), 17–24.

- Thijs, A., & Van den Akker, J. (2009). *Curriculum in development*. Netherlands Institute for Curriculum Development (SLO).
- United Nations Educational, Scientific and Cultural Organization. (2004). *Education for all: The quality imperative. EFA global monitoring report 2005*.
- United Nations Educational, Scientific and Cultural Organization. (2014). *Education for all global monitoring report—Teaching and learning: Achieving equality for all*.
- United Nations Educational, Scientific and Cultural Organisation & United Nations Children’s Fund. (2012). *Quality education: End of decade notes on Education for All*. Paris: UNESCO & UNICEF.
- Williams, J. H. (2001). On school quality and attainment. In J. Crisp, C. Talbot, & D. B. Cipollone (Eds.), *Learning for a future: Refuge education in developing countries* (pp. 88–108). United Nations High Commissioner for Refugees.
- Wright, D. (2008). *Thinking in systems: A primer*. Chelsea Green Publishing.

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