

Resources in Teacher Training Colleges and the Provision of Quality Education: A study of a Teacher Training College in the Eastern Province, Rwanda.

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Abstract

Teacher Training Colleges (TTCs) are mandated to develop quality teachers in line with the country's competence-based curriculum (CBC). The TTC currently shows a lack of adequate resources to fully implement the CBC. The lack of adequate and appropriate resources compromises the development of quality teachers as expected by the Rwandan education system. This paper examines the importance of resources available for the development of a quality teacher in Rwanda. The study was qualitative and employed a case study design. Out of five TTCs in the Eastern province, one was purposively selected for semi-structured interviews with seven tutors. Observation was also employed. Generated data were analysed thematically informed by Heneveld and Craig's 1996 school effectiveness model. In several ways, resources were identified as failing to meet the requirements specified in the Rwandan curriculum framework. The study recommends that the Rwandan government has to provide adequate and relevant resources for the development of a teacher.

Keywords: Quality education, quality teacher, curriculum framework, resources, Teacher Training College.

Introduction

Resources are critical for the attainment of quality education in any given institution. What matters about resources is their quality, relevance, and adequacy to the set goals of the state and the given institution. The key resources considered in this research are time, human resources, infrastructure and learning materials. This study focuses on some of the main resources that are critical in achieving quality education in the implementation of a competence-based curriculum at a Teacher Training College in the Eastern province of Rwanda. The provision of quality education is in tandem with Sustainable Development Goals (SDGs), Goal 4. This goal aims to ensure the provision of inclusive and equitable quality education and facilitates lifelong learning opportunities for all by 2030 (United Nations, 2015).

Background to Teacher Training Colleges in Rwanda

Since 1994, all schools training primary teachers were grouped in centres under the name teacher training centres, which were later known as Teacher Training Colleges (TTCs). These centres were established to take care of pre-service and in-service training. Graduating student teachers were expected to teach all subjects offered in primary schools. This ended in 2013 with the involvement of Kigali Institute of Education (KIE) which took over the responsibility of primary school curriculum and examinations (Kuilen et al.,2019; Rwanda Education Board,2015; Rwanda Education Board,2020).

Kuilen et al. (2019) and Rwanda Education Board (2020) highlighted that the Ministerial Letter Ref. No.3243/12.00/2010 assigned the former Kigali Institute of Education KIE, currently the University of Rwanda College of Education (UR-CE), the responsibility of overseeing quality in teacher education for all categories of teachers. The

objective was to take responsibility for the primary teacher training curriculum and examinations concerning curriculum development, assessment, and certification in 2011. UR-CE developed and reviewed TTC programs to incorporate new trends in teacher education. KIE came up with 3 options namely Teaching Modern Languages (TML), Teaching Social Studies (TSS), or Teaching Science and Mathematics (TSM). In 2013, as part of the implementation of the Early Childhood Development (ECD) policy, the Ministry of Education recognized early childhood education as a vital foundation for learning. In response to this, the UR-CE opened the fourth option, of Early Childhood Education (ECE). In 2015, UR-CE in collaboration with different partners in education started the review process of the TTC curriculum to ensure that future graduates from TTCs are fully equipped to implement the competence-based curriculum in pre-primary and primary education. The curriculum and the syllabi developed were implemented in 2017 as an experimental version. The following options were designed: Science and Mathematics Education (SME) instead of TSM; Social Studies and Religious Education instead of TSS; and Early Childhood and Lower Primary Education (ECLPE) instead of ECE. TTCs were transferred from UR-CE to the Rwanda Basic Education Board (REB) through the MINEDUC letter 1009/12.00/2017. The aim was to improve teacher development and to ensure pre-service teachers from the colleges are equipped to deliver the competence-based curriculum.

TTCs in Rwanda follow a Competence Based Curriculum (CBC). The CBC takes learning to higher levels by providing challenging and engaging learning experiences which require deep thinking rather than just memorisation. This means moving beyond the recall of information to a level of sufficient understanding for learners to apply their learning in practical situations (Rwanda Education Board, 2020). Competence is using an appropriate combination of knowledge, skills, attitudes, values, and behaviour to accomplish a particular task. That is the ability to apply learning with confidence in a range of situations (Rwanda Education Board, 2020). In the CBC assessment, the thrust is on a collection of evidence, demonstrating how a student can perform according to a specific standard to resolve or overcome a situation. It is key in building knowledge and skills that provide a road map for developing students for their future roles based on their acquired and developed knowledge and skills. There is a highlight on the actual skills and knowledge that a person can practically demonstrate. The availability of resources in TTCs should aim at developing the highlighted competencies. It should not only be the issue of availing the resources but the adequacy, quality, and relevancy of these resources which matters if quality education is to be realised in line with the curriculum framework. The analysis of the circumstances around the provision of resources to achieve these competencies for quality education forms the thrust of this paper.

The Teacher Training College understudy, here designed as TTC One for the sake of anonymity, is one of the 16 teacher training colleges in Rwanda. The TTC was opened in 2015 since then many students have benefited from competence-based education. During the time of the study in the year 2022, the college had 547 student teachers on campus. The college has now two volunteers, one from the Organisation Internationale de la Francophonie (OIF) and another one from Peace Corps Volunteers (PCV). The teaching staff comprised 17 tutors and 11 tutors from

Zimbabwe giving a total of 30. The college has 3 combinations namely Science and Mathematics Education [SME] which comprises Mathematics, Biology, Chemistry, and Physics; Language Education [LE] comprising English, Kinyarwanda, French, and Swahili; and Early Childhood, and Lower Primary Education [ECLPE] that comprises English, Social Studies, Creative Performance, Mathematics, and Integrated Science. In all these combinations, Foundations of Education and Teaching methods are compulsory.

The above background shows the evolution of TTC One and the options offered throughout various stages of teacher education reformation which focused on the provision of quality education. It is worth mentioning that the journey to attain quality education requires various resources which however appear to be a challenge to the institution under study. TTC One shows a lack of adequate resources to fully implement the CBC and develop quality teachers as expected by the Rwandan education system. This is guided by School Effectiveness Model (SEM). The theory is anchored on four factors namely; supporting inputs from outside the school, enabling conditions for school effectiveness, the school climate and the teaching and learning process. Time, human resources, infrastructure and learning materials derived from this theory were looked at in this study. It is to this effect that this study sought to analyse the state of resources in the institution and the provision of quality education. Further, the study explores the effects of lack of resources on the provision of quality education at TTC One in the Eastern Province of Rwanda. The study also recommends ways of providing adequate resources to ensure quality education.

Theoretical framework

The study was informed by the School Effectiveness Model. Heneveld and Craig (1996)'s School Effectiveness Model (SEM) comprises four correlated core broad factors that affect school effectiveness and learner outcomes. The first factor are supporting inputs from outside the school, enabling conditions, school climate, as well as the teaching and learning process. Supporting inputs from outside the school that are critical for the provision of quality education include strong parental and community support, effective support from the government or responsible authority, and adequate facilities. Additional supporting inputs encompass appropriate teacher development programmes and sufficient curriculum materials. As a result, the insufficiency of supporting inputs can be an impediment to school effectiveness thereby affecting quality education. In the context of this study we made reference to infrastructure as a resource impacts on quality education. Enabling conditions for school effectiveness is the second set of factors in the model. They include efficient school leadership, a competent teaching force, flexibility and autonomy, and sufficiency of time spent in school. Effective school leadership calls for adequate support to teachers in terms of learning materials and infrastructure, and the pursuit of high instructional standards, complemented by frequent horizontal and vertical communication (Heneveld & Craig, 1996). In relation to this study we are advised on how human resources, infrastructure and learning materials influence quality education. The school climate is the third set of school effectiveness factors which include positive teacher attitudes and expectations, order and discipline, an organised curriculum, and a system of rewards and incentives (Heneveld & Craig, 1996). This factor further guided our study on

the role of time on quality education through organisation of the curriculum. The teaching and learning process is the fourth factor of the SEM that determines school effectiveness. High student learning time, learner-centred teaching methods, as well as continual student assessment and feedback, are among the variables that influence the teaching and learning process (Heneveld & Craig, 1996). Under the teaching and learning process the outside environment of the school organisation has an impact on school effectiveness. The researchers underscore that learning institutions interact with their environment to enable high performance through maximum utilisation of time. The four factors identified by Heneveld and Craig (1996) provide us with an all-inclusive picture of the determinants of school effectiveness and quality education. Hence the choice of the theory to guide this study.

Literature

Literature is explored under the following subheadings: Quality education, time, human resources and infrastructure, and learning materials as the key components of resources required for the quality of education.

Quality Education

Quality education refers to a set of factors within the education system that are believed to produce effective student achievement including measurable dimensions of student learning (UNICEF,2000, in Habyarimana, Hashakimana, Ntawiha, Zhou,2022).In the same vein, Tanall, Kereteletswe, and Visjcher (2010) view quality education as the process of excellent management of education focusing on a quality school environment for learning, quality of teacher interactions to support learning and interactions that support the needs and interests of the individual learner. These definitions focus on factors that are set on student excellence or best outcomes as quality education.

Quality education in Rwanda is defined as all learners leaving school equipped with the skills, knowledge, attitudes, and values needed for Rwanda's economic and social development and for their own further educational and social development (Nizeyimana et al., 2021). These authors portray quality education as an education that produces the relevant competencies for use in given contexts. The same authors further assert that the expansion of various well-managed school funding programs can help to raise the quality of basic education in Rwanda. The source in this regard highlights funding as critical in supporting quality education in institutions. In the same vein, Desiano (2011) avers that teachers are the most important educational resource and quality education cannot happen without them. The provision of quality education is in tandem with Sustainable Development Goals (SDGs), Goal 4. This goal aims at ensuring access to inclusive and equitable quality education and facilitating lifelong learning opportunities for all by 2030 (United Nations, 2015). SEM theory also regards teachers as critical in setting the school climate which is critical towards the use of resources for quality education (Heneveld & Craig's, 1996).

Time

Time is a valuable resource for every educational institution to achieve its intended goals. The amount of time allocated for specific activities in the teaching and learning process matters a lot in developing expected competencies. Farbman

(2015) points out that Learning institutions with more allocated time than average facilitate higher learner performance than those who lag behind. Furthermore, a study conducted by Cattaneo et al. (2016) in Switzerland established that the more time devoted to teaching and learning, the better the learning outcomes are achieved. Thus, for the attainment of quality education, the issue of time needs to be taken cognisance of. There should be time to practice learnt concepts, independent study and research. However, it should be noted that if the time is not well allocated in tandem with the content to be taught this can result in an overload on the part of the students and facilitators. This can negatively affect the provision of quality education.

In Rwanda, teachers are said to spend long hours at work teaching because of an overloaded time table. That affects preparation for classes and negatively impacts student interaction (Nzabairwa & Nkiliye, 2012). Teachers are required to teach eight hours a day, that is 40 hours a week, and complain about not having time for other classroom-related activities such as lesson planning, marking, and reporting among others. Insufficient time allocation for completing learning tasks leads students to feel overworked, increasing their tendency to abandon deep learning and encouraging surface learning approaches (Karjalainen et al., 2006). The factor of time is analysed in view of the proposals made by the SEM theory forming the lenses for this study.

Human resources

Staffing issues are of paramount importance in every learning institution to achieve its goals. In a school, human resources have a bearing on the performance of students. This encompasses the availability of adequate qualified teachers and motivation in terms of remuneration for maximum delivery of lessons to students. This is reinforced by Pusvitasari (2021) in a study conducted in Indonesia who states that human capital is a basic factor in learning institutions as the desired outcomes can only be attained with motivated, adequate and quality human resources. This is complemented by Qutni et al. (2021) who postulate that an educational institution whose goal is to develop should pay greater attention to human resources to improve the quality of education. From these views, it becomes imperative that highly motivated human resources that match the existing number of students are one of the key drivers of promoting quality education. Nizeyimana et al (2021) opine that some of the school conditions that affect the quality of basic education are a shortage of teachers and a lack of teachers' training. In addition, these preceding scholars assert that a shortage of qualified teachers is particularly significant in rural areas because teachers are not willing to go to those areas. The SEM theory also asserts that factors around the teachers affect the learners in schools in curriculum implementation (Heneveld and Craig, 1996). Lack of access to the work place, standard infrastructure and resources teachers need as they do their work could be contributory factors to such a situation in remote areas.

Infrastructure and learning materials

In enhancing quality education in learning institutions the nature of infrastructure plays a significant role. Infrastructure comprises learning rooms, outdoor learning areas and technology-based infrastructure such as computer and science

laboratories. The existence of adequate facilities promotes quality institutions of learning. In line with this, Barrett (2017) asserts that well-resourced libraries and fully equipped computer and science laboratories enable those in charge of teaching to research current trends in the content to be taught. With reference to outdoor infrastructure, Barrett et al. (2019) noted playgrounds as important in enabling sporting activities, competitions and training sessions to enhance holistic human development which impacts positively on learner performance. The preceding views clearly indicate that infrastructure influences the attainment of quality education which will be a compromise without it. Also, research conducted by Amsterdam (2013) found that a lack of learning facilities has a negative bearing on the teaching and learning process implying that performance will be greatly affected. The same situation could be prevailing in TTCs in Rwanda.

The inadequate resources do not support the implementation of the curriculum (Laralundang, 2013; Mkandawire, 2010). Nizeyimana et al. (2021) underlined that extrinsic factors such as a lack of resources and teaching facilities, decrease teacher job satisfaction in Rwanda. These authors state that inadequate school equipment, financial and material support to both teachers and learners hinder the quality of education. In the case of Rwanda, MINEDUC (2010) cited in Nizeyimana et al. (2021) recognizes the insufficient supply of quality textbooks and learning materials across all subjects.

According to Uworwabayeho and Muhire, (2016), the monitoring and evaluation survey conducted on 12 TTCs revealed that students' performance in examinations for the award of a Primary Teacher Education Certificate may result from existing differences in the physical environment and available teaching and learning resources at various TTCs. Thus, TTCs with better physical environments, teaching and learning resources performed better than others. TTC Save was found to have relatively better infrastructures compared to the rest; it has enough playgrounds, classrooms, tutors' offices, a library, reading space and support staff offices, a well-equipped laboratory for science, a clean and secure environment that promotes inclusive, equity and equality education hence its top performance among all TTCs. On the other hand, TTC Matimba is less equipped in the above-mentioned aspects and as a result was ranked low in performance in the evaluation. It is worth noting that TTC Save benefits from governmental support and Marist Brothers while TTC Matimba gets support only from the Rwandan government. The aforementioned study emphasised how infrastructure enhances quality education. However, this current study goes beyond this as it further adds time, and human resources to the list of factors that impact quality education.

As regards to learning materials, it is evident that the provision of sufficient learning materials is one of the key factors that influence quality education UNESCO (2017). They facilitate the acquisition of expected competencies. They may include books, computers and the internet, among others. Learning institutions need to be resourced with sufficient books with a reasonable ratio of students (Haulle & Kabelege, 2021). In addition, Ghavifekr and Athiarah (2015) indicated that ICT assists educators to adapt to the current global trends of substituting traditional teaching

methods with technology-based learning equipment and facilities. Therefore, it should be an obligation for every learning institution to ensure that learning materials are fully catered for as a way of improving the quality of education. To that point, SEM theory also proposes that these must be sufficient and relevant to enable effective implementation.

Methodology

The study was qualitative and used a single case study design. The approach was used because it answers questions about the complex nature of a phenomenon from the participant's point of view (Creswell, 2017). In the context of this study, the qualitative research approach assists in answering questions on the impact of lack of resources at the Durinsampled TTC on quality education. A single case study enables the researcher to have a deeper understanding of a phenomenon under study and more careful study is done (Gustafsson, 2017). In this study, this was achieved by concentrating on one TTC and having more time with the selected case.

Out of five TTCs in the eastern province of Rwanda, one was purposively selected for semi-structured interviews with seven tutors out of 30, who had rich information required for the study as serving members in the TTC. According to Cohen, Manion & Morrison (2011) semi-structured interviews are used to gather data using open ended questions. In addition, observation was also employed on the actual use and impact of the resources in the TTC during the implementation of the curriculum. According to Van Schie (2023) observation refers to seeing participants and phenomena in their natural settings to gain insight into their behaviours. The researchers observed infrastructure, learning materials, teaching and learning in the institution. The observation was used to establish the actual effects of lack of resources in the TTC. During semi structured interviews data was audio recorded complimented with note taking. Generated data were analysed thematically informed by Heneveld and Craig's 1996 school effectiveness model. Time, human resources, infrastructure and learning materials are the themes that came from the major issues raised by respondents in line with the study objectives during data generation. The evaluation ensured trustworthiness through 'member-checking, where selected participants determined the accuracy of the findings (Sandstrom, 2018). Results from the study cannot be generalised but can serve as a basis to inform other TTCs with a similar description. Confidentiality of information and anonymity of participants and the school was ensured by coding in this study.

Findings and Discussion

This section presents data generated from interviews guided by the research objective which was to explore the effects of lack of resources on the provision of quality education at a TTC in the Eastern Province of Rwanda. Participants were asked questions on the adequacy of staffing and the challenges they face in the curriculum implementation. Their views were clustered into the following subheadings: time focused the time table and teaching load; human resources theme explores number of tutors, members of the discipline department and library staff; infrastructure encompasses

classrooms, library and laboratories; learning material included computers, books, projectors, science apparatus and vehicles. The subsequent sections contain their views:

Time

The semi-structured interviews established that the time factor has had a negative impact on quality education in the TTC. The participants echoed that the time allocated needed to be increased and that both student teachers and tutors were overloaded. As a result, less attention was given to participatory teaching methods in striving to cover syllabus content. Tutors have to work extra hours to ensure coverage of schemed work. This compromises the quality of teaching and learning. The following citations from the participants support the findings.

One tutor said:

Challenges we face in the implementation of English come as a result of time, large classes which makes it difficult to reach out to each student within the given time, and lack of adequate materials including internet access which cannot be easily accessed during teaching and learning time. Time table is too busy for both student teachers and tutors to research and practice. The 40-minute time allocation for lectures is also inadequate for skills presentation and practice. The ideal time would be one and a half hours (Tutor 1).

Tutor 5 had this to say: "There is more content in the foundations of education than time available. To curb the issue of congested timetable mass lectures can be used for common modules."

The findings indicate that the time allocation for lessons is not adequate to ensure the quality delivery of lessons. Tutors work beyond normal hours to cover the planned content. Such a scenario is not good for the realisation of quality education. The preceding views concurs with Karjalainen et al. (2006) and Nzabalirwa & Nkiliye, (2012) on the essence of time. A study by Cattaneo et al. (2016) states that students with varying abilities greatly benefit from more learning contact. Suggested approaches and assessment tools in the syllabi may not be implemented if the timetable is congested. The timetable should be easy for students and tutors to find time to research as suggested by participants. There is more to be done to the timetable to allow adequate time for learning, research, practice, and presentation. All the factors of the School Effectiveness Model concur by asserting that the sufficiency of time spent in teaching and learning has positive results on quality education. Failure to balance these preceding aspects results in the false implementation of the CBC and subsequently missing the vision of the country stated in the curriculum framework.

Human resources

It emerged from the study that staff establishment in the TTCs did not match the basic requirements that promote quality education. This mismatch has been noted among tutors, library staff, ICT, and the students' discipline

department. It was also revealed that there is a need for qualified personnel in some of the departments. For the library and ICT there is only one staff member each to serve 547 students. The discipline department is made up of staff 4 members against the same number of students. Other tutors face on average face a class of 60 students.

A participant had this to say:

The library needs a qualified librarian, currently, a placeholder has been put in place as an institutional arrangement... dining needs more manpower to accelerate the cooking and serving of food so that the next phase of learning is not delayed. The Department of Discipline needs an additional two members (Tutor 7).

Another participant gave the following view:

Staffing in ICT is not adequate. The section has one member. The member is overwhelmed with a lot of tasks, namely teaching and Technical support. The English section has three tutors. There is a need for an additional two members if methodologies that effectively promote proficiency are to be applied (Tutor 3).

The responses from the participants show an urgent need for adequate staffing if the CBC is to be achieved. Lack of adequate staffing in the highlighted areas hampers the distribution of learning materials and the application of relevant and effective approaches and assessment tools. This is in line with Nizeyimana et al. (2021)'s view on shortage of teachers and quality of training. This is in tandem ideas of Pusvitasari (2021) and Qutni et al. (2021) on investing on human resources. ICT and the library should have extra staff so that they operate additional hours to allow student teachers access to computers and literature. ICT as highlighted in the document analysis is critical in proficiency and the teaching of other learning areas. Professional foundations provide cross-cutting issues in other areas. If the area is not adequately staffed with specialists in other foundations student teachers may not be adequately prepared as agents of social change as propounded by the Rwandan curriculum framework. English proficiency remains handicapped if staffing remains low in the English section as the participant highlighted, for more work is needed to pitch up the proficiency in the TTC. With Reference to staffing, the SEM as guided by the second factor hints on the need for a competent teaching force for good performance to be attained.

Infrastructure

The participants indicated that infrastructure did not match the number of student teachers available and some of it was not there at all like science laboratories. The cited insufficient facilities include a large smart classroom, a spacious library, a bigger kitchen and dining hall, a music studio and a modern Teacher Resource Centre (TRC). Resourcing TTCs with adequate infrastructure from the views proffered by the participants would ensure the provision of quality education.

One of the participants asserted that:

A large smart classroom is required which can accommodate large numbers of students to allow for practice of skills learnt by students. The capacity of the library, which is too small to accommodate even a class of 40 students ...does not allow students to work in the library. Therefore, there is a need for a state-of-the-art library. There is also a need for a bigger Kitchen than the current one. Other challenges manifest themselves in the lack of adequate materials ... as well as laboratories that should ensure quality implementation of the science curriculum. There is also no music studio and a modern TRC room that should aid in the proper implementation of the curriculum (Tutor 6).

From the responses given, we noted that they are pointing toward a lack of infrastructure. The situation to a high degree is not compatible with the provision of quality education. With such a prevailing situation in TTCs in Rwanda, it is imperative for the responsible authorities to construct more of the facilities mentioned by the research participants to produce competent teachers and the morale of tutors. The discussion fits well on what Nizeyamana et al. (2021) emphasised on external factors and quality education. The informing theory of this study by Heneveld and Craig (1996) also mentions the need for adequate infrastructure to enhance performance among students as mentioned in factors one and two.

Learning materials

It also emanated from the study findings that a lack of adequate learning materials, such as textbooks, computers, science apparatus, slow internet connectivity vehicles for teaching attachment supervision hamper the full implementation of the curriculum. This results in low performance among student teachers. The following excerpts show the views given by the participants on learning materials:

A participant said:

Challenges include the lack of textbooks for the library. There are no hard books for foundations of education Senior 2 and 3. There are only soft copies and students do not have computers or cell phones to access the reading materials (Tutor 4).

Furthermore, the other participant said:

Application of ICT, Syllabus Unit 2 on computer maintenance is not feasible ...there is no equipment (tools, laptops, Desktops) for repairs, disassembling, and assembling. One cannot work with non-functional equipment and at the same time, one cannot work with few working machines in the institution (Tutor 1).

In relation to internet connectivity one participant asserted that;

The network is slow and cannot connect 100 computers. There should be fixed projectors in each classroom for effective teaching but there is a high shortage of these in the college where there are 3 projectors to be shared among 10 classes (Tutor 2).

The other participant had this to say; "Science teaching is a challenge due to the lack of adequate materials such as science chemicals and apparatus. Students cannot carry out experiments. Thus, science teaching becomes more of a theory." (Tutor 5)

One participant echoed that:

Our teaching practice needs attention. There is a need for a sufficient budget to allow adequate supervision of students on attachment. The current scenario is that funding allows a student to be seen once by the college tutors and this compromises the quality being produced. The TTC has only one vehicle and has no minibus to help in school activities including teaching practice supervision. The nature of our student deployment will result in tutors rushing over supervision as they use public transport, this interferes with the quality of supervision or assessment of students on attachment (Tutor 7).

The study findings established that the TTC lag in terms of the provision of textbooks, science equipment, and internet access which supports connectivity of 100 computers. This implies that SDG 4 cannot be achieved as long as learning materials are not fully provided to meet the needs of student teachers. According to the reviewed literature, inadequate school equipment, and financial and material support for both educators and students impede the provision of quality education (Nizeyamana et al.,2021; Laralundag, 2013; Ghavifekir & Athiarah, 2015). There is a need for commitment to avail learning resources through adequate funding as this accelerates the full implementation of the curriculum in TTCs. Fully equipped libraries and computer and science laboratories enable educators and students to research current global trends (Barret, 2017; Uworwabayeho & Muhire,2016; Haule & Kabelege, 2021). Teaching practice is a critical point in the development of a teacher. This point requires adequate support if the quality of the teacher being produced at the TTC is to match the standard described by the curriculum framework in this paper in earlier sections. The SEM points out that responsible authorities should support teachers with enough learning materials to meet a high level of instructional standards.

Conclusions

This paper explored the impact of resources in a TTC and the provision of quality education in the Eastern Province of Rwanda. The paper established that the time factor has a negative impact on quality education in the TTC. The time allocated to teaching and learning is not sufficient to develop relevant skills intended in the curriculum framework. Both

student teachers and tutors are overloaded. Tutors have to work extra hours to ensure coverage of schemed work. This compromises the quality of teaching and learning, especially in line with CBC. It emerged from the study that staff establishment among tutors, library staff, ICT, and the students' discipline department in the TTCs does not match the requirements that promote quality education. Lack of adequate staffing in the highlighted areas hampers the application of relevant and effective approaches and assessment tools. The study establishes that infrastructure does not match the number of student teachers available. It also emerged from the study findings that a lack of learning materials, hamper the full implementation of the curriculum. The study also concluded that Teaching Attachment needed to be adequately funded for effective supervision.

The study recommends that the Rwanda Basic Education Board work on the curriculum offered in TTCs and subject combinations to create time for effective CBC implementation. Rwanda Basic Education Board is urged to work on staffing to ensure critical areas mentioned are fully resourced to ensure maximisation of teaching and learning time in the TTC. REB and NESA should ensure supervision of students on teaching attachment is done adequately to help improve the quality of student teachers. The Government of Rwanda is urged to accelerate the issue of key infrastructure and provision of critical equipment at the TTC.

References

- Amsterdam, C. (2013). School infrastructure in South Africa: *Views and experiences of educators and learners*. Canada *International Conference on Education*, 1–5.
- Barrett, P. (2017). Primary considerations for learners as individuals” *Learning Spaces: making more effective learning spaces*, Vol 3.4, Birmingham: Imaginative Minds Ltd,
- Barrett, P., Treves, A., Shmis, T., & Ambasz, D. (2019). *The Impact of School Infrastructure on Learning: A Synthesis of the Evidence*. NW Washington: World Bank Publications.
- Cattaneo, M.A, Oggenfuss, C, & Wolter, S.C. (2016). *The more the better? The impact of instructional time on student performance*. Bonn: The Institute of the Study of Labour.
- Cohen, L Manion, L& Morrison, K (2011). *Research methods in education*, London: Routledge.
- Creswell, J. W. (2017). *Essential Skills for Qualitative Researcher*. Los Angeles: Sage Publisher.
- Desiano, S. (2011). Quality teachers are a cornerstone for quality learning. Retrieved from <https://sites.google.com/a/educationcommons.rw/rec-2011-06/news.Retrieved> (Accessed on 15 October, 2023)

- Farbham, D.A. (2015). The case for improving and expanding time in school: A review of key research and practice. Washington: National Centre on Time and Learning.
- Ghavifekr, S. & Rosdy, W.A.W. (2015). Teaching and learning with technology: Effectiveness of ICT integration in schools. *International Journal of Research in Education and Science (IJRES)*, 1(2), 175-191.
- Gustafsson, J. (2017). Single case studies vs. multiple case studies: A comparative study. Halmstad: Halmstad University.
- Habyarimana, J. Hashakimana, T. Ntawiha, P. Zhou, k (2022) Quality Education in Rwanda: A Critical Analysis of Quality Indicators. *ISOR Journal of Humanities and Social Sciences*,27(2),52-70.
- Haulle, E. & Kabelege, E. (2021). Relevant and quality of textbooks used in primary education in Tanzania: A case of Social Studies textbooks. *Contemporary Education Dialogue*, 18(1), 12-28.
- Heneveld, W. & Craig, H. (1996). Schools Count: World Bank project design and the quality of primary education in Sub-Saharan Africa. Washington DC: World Bank.
- Karjalainen, A., Katariina, A., & Jutila, S. (2006). Give me Time to Think. Determining Student Workload in Higher Education. A practical Guide for Teachers and Curriculum Designers. University of Oulu: Teaching Development Unit.
- Kuilen, H.S.V., Altinyeiken, H.K. Voogt, J.M, Nzabaliwa, M (2019). Policy adoption of learner-centred pedagogy in Rwanda: A case of study of its rationale and transfer mechanisms. *International Journal of Education Development*,67,64-72.
- Mkandawire, S. B. (2010). Impediments to curriculum implementation in learning institutions. *African Higher Education Review*, 8(2),1-16.
- Nizeyimana, G., Nzabaliwa, W., Mukingambeho, D., & Nkiliye, I (2021). Hindrances to Quality of Basic Education in Rwanda. *Rwandan Journal of Education*, 5(1),53-67.
- Nzabaliwa, W. & Nkiliye, I. (2012). A Study on the socioeconomic conditions of teachers in Primary and Secondary Schools in Rwanda: Case of Bugesera, Nyarugenge and Ruhango Districts. *Rwandan Journal of Education*, 2(1), 71-82.

- Pusvitasari, R. (2021). Human resources management in improving the quality of education. *Al-Tanzim: Jurnal Manajemen Pendidikan Islam*, 5(2),125-135.
- Qutni, D., Kristiawan, M., & Fitriani, Y. (2021). Human Resource Management in Improving. The Quality of Education. *Edunesia: Jurnal Ilmiah Pendidikan*, 2 (2), 354-366.
- Rwanda Education Board (2015). *Curriculum Framework Pre-primary to upper secondary*. Kigali: REB/MINEDUC.
- Rwanda Education Board (2020). *Curriculum framework for teacher training colleges*. Kigali: REB.
- Tatnall, A, Kereteletswe, O, C. & Visjcher, A (2010). *Information Technology and Managing Quality Education*. Kasane: Springer.
- UNESCO. (2017). *Making textbook content inclusive: A focus on religion, gender, and culture*. Paris: UNESCO.
- United Nations. (2015). Sustainable Development Goals are in sync with Africa's priorities: *African Renewal*. <http://www.un.org/africarenewal/magazine/december-2015>.
- Uworwabayeho, A., & Muhire, I. (2016). Statistical Analysis of TTC Students' performance in the examinations for the Award of a Primary Teacher Education Certificate. *The Rwandan Journal of Education*, 3, (2), 51-61.
- van Schie, D (2023). *The fundamentals of Qualitative Research: Using insights from a Loss and Damage Case Study*. London: IIED