Challenges of Internship in Rwanda Teacher Education and Mitigating Solutions; A Case of One Teacher Training College

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Abstract
Globally, Teacher Education (TE) has revolutionized. This article is to reconceptualise the Rwanda TE internship models to meet the current global educational transformation. The research adopts the qualitative approach within the interpretive paradigm with the case study design. Data was collected from fifty student-teachers and twenty tutors from TTC Matimba. Face-to-face interviews, questionnaires and focused discussions were separately administered to the two groups. The results show that the current internship model is experiencing some challenges chiefly in fulfilling the Competence Based Curriculum (CBD) recently introduced, hence the need to reconceptualise. Chief among the challenges is the duration spend on internship for the full development of all the critical competencies as outlined in the CBC of 2015. Recommendations centre on internship model reconceptualization to fulfil the government vision on educational prosperity for sustainable development.

Keywords: Teacher Education, Internship, Competence Based Curriculum

Introduction

Preparing teachers for the 21st century requires a close look. Rwanda Teacher Education (RTE) is on the right path for the realization of her economic development. This realization is in tandem with the 21st Social Development Goals (SDGs). The action is commendable because it is scoping its educational practices to sustainable economic development goals. The process is meant to capacitates learners for realising their full potentials as responsible citizens of their country. This eradicates inequalities in employment opportunities. Rwanda is mandated to positively rely on its citizens for its future development. In Rwanda, the use of Information Communication and Technology (ICT) systems in everyday life forms the key pillars of Competence Based Curriculum (CBC). This is tandem with REB's visions of improving the quality of Basic Education (BE) across the board. Rwanda's world of tomorrow like today would be economically better, globalized and networked as envisioned. This study therefore suggested for a new internship model, that recognises the development of the much-needed competencies by every teacher in Rwanda.

Background to the study

Teacher education in Rwanda like elsewhere abroad is not an event but a process. Fundamentally, making stock of where RTE came from and where it is going or should go is guiding. The researcher reviewed reports about education in Rwanda such as those from World Bank (2011) and VVOB (2017). These are only examples. The information from these sources added value to the reliability and validity of the study. To begin with, having realised the shortcomings of the Knowledge Based (KB) curriculum which was knowledge based and teacher centred, Rwanda adopted the CBC starting 2015 (Kizito et al., 2019). So, the aim was to develop students' independent, lifelong learning habits; proper skills and knowledge; and applications to real-life situations. (Darling-Hammond, 2012). The full adoption of the new

curriculum followed the stake-holders consultative RTE's strategic plan of 2010. According to Simpson and Muvunyi (2013) the plan was aimed at improving education, particularly skills development to meet labour market demands. According to the World Bank report (2011) the strategy was to place learners at the centre of learning to broaden their knowledge, skills, values, and attitudes for nation building. In his acknowledgement note as a collaboration gesture to fulfil the national vision, Ndayambaje (2020) also concurs and acknowledges the role University of Rwanda (UR) to TTC syllabi review to improve on its quality. In like manner, Mbarushimana (2021) also acknowledges the role REB is doing in supporting education that is addressing the societal needs and labour markets. Without over relying on scholars, the above sentiments prove that RTE is in tandem with the international educational best practices. This is in line with one of the objectives of the TTC curriculum that aims to promote standards bench marked internationally. In this regard, the researcher is compelled to develop an alternative practicum model to bridge the gap between the previous one and the proposed one. This is to develop a 21st century teacher who can redefine and revolutionize their educational practices.

Theoretical Framework: **Concern-Based Adoption Model**

This model was developed in 1974. This theoretical model eases change that helps leaders and researchers understand, lead, and check the complex changes in education (Hall et al, 1974). This applies to the Rwandan context because the Rwandan education curriculum experienced some changes. Curriculum-Based Adoption Model (CBAM) informs innovations in schools (Sweeny, 2008). Over and above, Rwandan Basic Education focuses to developing a teacher with the competencies for the 21st century educator. Additionally, this model applies to this study because the major key point is that change is a process and not an event (Bella & Dyer, 2007). To the study context, the development of the required competencies in Rwandan context should depend more on teacher participation. According to CBAM, change implementation is an entire system effort. In the Rwanda teacher training contexts, the development of competence-based skills should not only be confined within the four corners of the classroom. When students are out on internship, the same required competences must be more emphasised and nurtured. According to CBAM, the school is the primary organizational unit for change because sustaining change requires more time, interventions, and leadership (Hall et al., 1974). The internship period should be longer than the current one term because internship competences need more to develop.

Brief literature review

The researcher used both primary and secondary sources of raw data There are various definitions of internship, but all have similar characteristics. For instance, an internship is a supervised working and learning experience, which earns academic and professional credit. Internships allow students to apply the theoretical knowledge acquired in the classroom to practical experiences (Stretch and Harp, 1991). The internship programme opens the workplace and plays a primary and critical role in the student teacher's pedagogical growth (Mecca, 2010). According to Reece (2010), in Italy internship is compulsory for all those students studying for a degree to experience. In the Netherlands, the

internship period is for approximately five months. In the United States of America (USA), Australia and the United Kingdom (UK) offer internship opportunities known as sandwich placements (Van Mol, 2017). These place a student so that the placement develops and increases their employability. In South Africa, (DHET, 2018), for the PGCE qualification, 6 to 8 weeks (about 2 months) supervised school-based practice is required and for a Bachelor of Education degree 20 to 32 weeks (about 7 and a half months) over four years is recommended. In India, most of the Bachelor of Education programmes are offered for one year with the actual course running to around 9 months. In Ghana, In the 2002/2003 academic year, UEW adopted a year-long internship model of teacher preparation as part of a larger re conceptualisation and restructuring of the University's teacher education programme (Ministry of Education, (2017). In Rwanda, in 2003, Kigali institute of Education (KIE) now known as University of Rwanda College of Education and the ministry of education extended the internship period for education students from three months to one year (University of Rwanda, 2018). Following Rwanda Education Board as part Ministry of Education efforts has revised the Teacher Training College curriculum *to* ensure that graduating teachers are efficient to help produce better citizens (MINEDUC, 2020). The teacher trainees would spend their year, which is their final year in teaching practice. According to 2015 curriculum framework of TE in Rwanda, student teachers in TTCs go on internship during early September to mid-December. Prior to the final deployment, students engage into classroom and school-based teaching under the supervision of their tutors as a preparatory measure. Referring to Rwanda TTCs, there has been some concern that pre-service teacher education in Rwanda remains too academic and theoretical, with most of the lecturers having little or no direct experience of the day-to-day challenges of classroom teaching (Bennell & Ntagaramba 2008). The argument was that the objective of increasing periods for internship among students pursuing their respective degree and diploma courses was aimed at improving their practical teaching skills. In general, teacher education is inevitably inadequate that the students cannot be prepared for every possible situation in their career (Northfield & Gunstone, 1997)

Statement of the problem

Rwandan TE aims to develop a competent teacher in various competence areas such as literacy, numeracy, communication, use of ICT among others (MINEDUC, 2020). From the researcher's observations, this has tremendously been theoretically pronounced and taught in teachers' colleges for a lengthy period, yet its implementation during internship by student teachers has been very minimal. This is assumed to have been caused by fleeting period during student internship. Hence, there are some inconsistences in CBC pronunciation and its implementation during internship. This has been worsened by several factors, but chiefly among them short internship duration. The assessment instrument used on internship has extraordinarily little on measurement of the desired competences. For instance, the competences' part has been given 4 out of 40 on the assessment instrument. In short, there is a mismatch between the duration set for internship and competences development during the same period.

Rationale

Teacher education encompasses a lot. It includes policies, procedures and activities meant to equip student teachers with skills, knowledge, values, and attitudes. The quality of education depends on the quality of the teacher (Sultana, 2009). The success of the learner is measured by the teacher competences, motivation, and creativity. Teacher education provision centres inclusive of TTCs should equip new teachers with both basic and generic competences. TTCs' must implement enabling frameworks to fulfil the country's vision, goals, and the strategic plans. The new Rwandan CBC aims to promote education for sustainable development, implement human capital development, develop quality assurance mechanisms, check, and evaluate human capital development and training programmes. In this regard, internship processes in Rwanda TE must play a complementary role in developing teachers that would prove functional insights into teaching such as dedicated, creative, motivated, and enthusiastic. It is for this reason that the study was conducted to suggest for a rethink in internship model in developing student teachers with the basic and generic competences. This ensures student-teachers' commitment to their profession, problems, structure, and training processes such as internship.

Research Questions

i. How are the Rwandan TTCs practising internship in teacher development?
ii. What are the challenges associated with the current internship framework implementation?
iii. What internship model can be developed as an alternative to the current one practised by Rwandan TTCs?

Research objectives

i. To find out how Rwandan TTCs are practising their internship in teacher development.
ii. To investigate the challenges associated with the current internship framework implementation.
iii. To develop an alternative internship model to reduce the experienced challenges.

Methodology

The study adopted a qualitative methodology, which relies on views and opinions of the participants. It is a type of the method based on social interactions between the researcher and the participants (Stake, 2010). The researcher adopted the interpretivist research paradigm by understanding the phenomenon of developing an alternative to new internship model in Rwanda TTCs using the participants' viewpoints. Interpretivism argues that truth and knowledge are subjective (Ryan, 2018). Put simply, meaning is derived from given data, events, or situations from the point of view of the participants. In the researcher's case, data was collected through structured and unstructured interviews, group discussions and narratives. Key institution is Matimba TTC and a few surrounding schools. Matimba Teacher Training college was purposively selected as a case study representing all the 16 TTCs in Rwanda because it is an embodiment of details about the subject matter under study. Additionally, it is the case which enables the type of concentration or focus needed to bring to light the issues that are at play within the study. Most importantly, case

studies are good for describing, comparing, evaluating, and understanding distinct aspects of a research problem. A case study reduces the ambiguity of "biting too much" and the difficulty of concentrating and analysing large areas and volumes of information (Baxter and Jack, 2008). What is currently obtained at Matimba TTC can be inferred to other 16 TTCs because all the TTCs operate under Rwanda Basic Education Board (REB). In this context, inferrement is possible because the recruitment, administrative and deployment of students' patterns on internship do not differ much from institution to institution because they run under one umbrella board (REB) which publish polices and supplies legal frameworks. On the respondents' population data was collected using interviews from a sample of 20 tutors from Matimba TTC. Ten percent (10%) of the student population of 2023 (Year 3 students) was selected to produce 30 participants. The researcher did sampling following the rule of the thumb that a sample in research should be at least 10 % of the total population (Maxwell, 2000). Year 3 students were selected because they had completed their internship and assumed that they were conversant with pertinent issues about internship experiences. Data collection from students was done through focus group discussions. In both cases, data are presented through thick descriptive narratives, that involves some direct quotes in some instances. Data analysis was done using interpretive paradigm whereby observations were interpreted through the eyes of the participants as embedded in the social context. Inductively, the researcher applied a bottom-up approach where the researcher constructed knowledge and proposed new theory that appears from the data. Conclusions were drawn from aggregating clusters of opinions and ideas to come up with themes.

Results/Findings

How Rwanda TTCs' are practising internship in teacher development

According to 2015 curriculum framework of TE in Rwanda, student teachers in TTCs go on practicum during early September to mid-December. The internship programme opens the workplace and plays a fundamental role in the student teacher's pedagogical growth (Mecca, 2010). Prior to the final deployment, students engage in classroom and school-based teaching under the supervision of their tutors as a preparatory measure. In other words, the student teachers go on internship during the first term of their Year 3 study. They are deployed to schools closer to their homes to reduce transport and accommodation costs. These place a student so that the placement develops and increases their employability. Like any other international standard practice, when student teachers are in their internship, they are assigned to a mentor who will guide them in their day-to-day classroom practices. The mentor is a qualified teacher. While on internship, tutors visit their student teachers for supervision and assessment purposes. Tutors visit students at least once. Tutors use a standardised assessment form to supervise. The major components in this instrument are preparation and planning; competence developed and cross cutting issues; learners' engagement and progress; teaching and learning methods; management of learners; assessment of learners; and use of medium of instruction and communication. Marks are awarded based on the actual lesson observed while the student teacher was found teaching. During the supervision process, some feedback is provided to student teachers focusing on areas of

weaknesses and strengths in a bid to improve on the next assessment period. When the period of practicum ends, students return to college for their final phase in their studies. It is again in the final or third term of their study, where students would go to the nearby practicing school to do their final examination by tutors from other TTCs, local college tutor and school mentor. The mark obtained from this exercise will constitute the final practicum mark together with marks obtained from the peer and micro-teaching exercises.

Supervision challenges associated with the current internship model

During students' final year three term, a host of tutors from one TTC go to another TTC for external examination. Their personnel go there for a duration of about at least 4 days, assessing students on their final lesson of the internship. Three supervisors, one local, external and the school-based teacher assess the students to produce an averaged final TP mark. From the FGD held on the effects of such an arrangement, several opinions come from both the students and the tutors. Ross (2009) advocates for specialised training to be accorded to external examiners in recognition of their transformative roles. One tutor, Tutor E claimed that, "the whole arrangement does not sound good because if you give lower marks to students of a particular TTC, when their turn of externally assessing yours comes, they will retaliate by awarding lower marks without being objective." Thus, there is much influence of the external examination on the teaching and learning in schools (Djurić, 2015). Tutor H also echoes the same sentiments and said, "awarding of marks depends on the mutual relationship that exists between TTCs" Asked further for suggestions to this observation, Tutor H goes further to say that, "I think it is a prudent idea for the responsible ministry to randomly select external assessors from all TTCs so that assessment becomes more efficient and objective". Rind and Mari found a strong correlation between the quality of external examination and teaching-learning patterns in the schools (2019). From the researcher's observation, some tutors from TTC A were even hosted by tutors from the hosting TTC. This would make it difficult for the hosted tutor to award lower marks even in cases that deserve it because of some personal relationships that could have been developed between the host and the hosted tutors. Although giving professionalism the benefit of doubt, the universal system may be prone to some temptations and abuse.

Challenges in implementing CBC in TTCs during internship

The CBC include critical thinking, creativity, research, communication, cooperation, and lifelong learning. During internships, student teachers face some of the major challenges presented below. The challenges are either college or practising school-associated. In colleges, the major themes are insufficient time to use ICT gadgets, scarcity of teaching materials, limited learning space and no follow-up on competence development from tutors. From practising schools, scarcity of learning materials and lack of a research culture on improving classroom practice were observed.

College-associated challenges

- **Insufficient time to use ICT during students' residential stay in college.**

One of the key principles of the curriculum framework in Rwanda is an integration of ICT. So, the document on CBC (2015) explains that "the curriculum must enable educators and students to use ICT as a tool to improve the quality of education in all subjects at all levels in teaching and learning practices. ICT must support the emergence of teaching and pedagogical student-centred approaches as well as encouraging research, communication, and collaborative learning" (p. 4). According to the statistics obtained from the Principal's office records, at TTC Matimba, there are 318 students in Year 1, 338 in Year 2 and 246 in Year 3. The time distributed to each class per week on average is 40 minutes. The time is inadequate considering the nature of ICT. At times, the time given especially in the morning sessions is affected by holding of long meetings for all staff which may end up eating ICT lessons' time. On average, a term has approximately 12 weeks, therefore each class make use of the computer lab 12 times a term. Additionally, each class is composed of 76 students on average. A total of 76 students using 45 functional desktops as alluded above, advances the argument that the time to learn ICT is inadequate, yet ICT is one of the key principles in developing a CBC. Poor ICT Infrastructure is also another principal issues and challenge in successful implementation of ICT in education, Infrastructure such as hardware, software, internet access, and similar other resources which are required to integrate technology in teaching and learning are not sufficient (Kaur, 2015.)

Scarcity of computers/laptops

Information got from the interview the researcher conducted with the ICT personnel at TTC Matimba is that there are only fifty (50) XO laptops for a student population of 902 students, implying that on average, one laptop is used by 18 students. From the researcher's physical counting, 45 of available Computer desktops are functioning meaning that one desktop is used by 20 students. To make matters worse, I have never seen any students with a smartphone, they are not allowed by the power that be. It is expected that through smartphones, learners will augment the little provisions of laptops, because smartphones can also be used to surf the internet, do research, and apply fundamental ICT skills. From the researcher's observations, students do not type their assignments nor engage in research to advance their digital literacy. Lack of the continuous use of the ICT gadgets after the normal lessons time at times like during the night, weekends, is worrisome. If a teacher's school does not possess adequate computers and fast internet connection, the implementation of educational technology is not feasible. (Gray et al., 2010). Limited internet connectivity, insufficient access to ICT devices and lack of ICT skills are major challenges in all Rwandan school (Mugiraneza, 2021).

Inadequate learning space

At TTC Matimba, there are two SMART classrooms where ICT lectures are to be conducted. On average there are approximately 74 square metres big. are too small to accommodate a large population of students who range from 70 to 80 per class. From my observation, the type of furniture in the SMART classroom does not allow free movement and enough free play by students to fully make a utilisation of the gadgets. This also make a negative impact on the later job waiting for students on practicum. Moreover, there is no air conditioning which is necessary for the cooling of

electrical gadgets such as computers. Despite, there are no computer technicians who repairs the damaged computers. Apart from this, the printing services for learners are not there at all. In the main ICT room, some desktops are being mounted, but they lack important software for various subjects such as music learning and writing software like Finale and Sibelius, GIS software in for geography, only to mention but a few. Additionally, the case with this one college is that there are only one qualified personnel to manage the whole college of about 1000 students plus 45 tutors. Despite the growing trend to integrate ICT into teaching and learning, there is still a lack of ICT literacy among teachers. (Mugiraneza, 2021). Additionally, for effective integration of ICT in Rwanda, therefore, there is a need to train more teachers to improve their ICT literacy with respect to content, pedagogy and technology (Government of Rwanda 2003).

- **Practising schools associated challenges**

Scarcity of adequate learning materials in practicing schools

From the researcher's observation, particularly from the visited practicing schools, there are also a number of some challenges about implementation of the effective and qualitative practicum in line with the CBC implementation. Some of the challenges observed on this TTC were even worse in several schools randomly visited. For instance, there are no adequate ICT gadgets which again are critical in developing a competent teacher especially in this 21st century which is technologically advancing. Student teacher, A explained that "The situation is some of these practising schools is worrisome. You could hardly use a computer because either there are no computers at the school or that there is no power to enable us to make use of the available ICT gadgets." Due to a limited budget, REB has been affected to provide sufficient digital content for all subjects, including digital content that is aligned with the current competency-based curriculum (Mugiraneza, 2021). Asked about the number of qualified personnel to teach ICT in primary schools, Student Teacher K argues that "Sir, you would be lucky to find out a qualified ICT teacher in some of these primary schools, the majority have no ICT knowledge and skills." Lack of the required materials coupled with lack of qualified personnel totally defeats the whole purpose of developing digital literacy in schools. Some of the implications are that the country will be going nowhere because the country's projections and developments will be hampered by lack of implementation on the ground. Worse-still the country's investment in digital literacy education will retard because challenges outweigh the benefits. Most of the student teachers bemoaned lack of funding to buy some learning and teaching materials. Student-teacher E says, "When we are out on teaching practice, our backgrounds are different, some have money to support themselves, but not some of us from the poor backgrounds. We end up using the basic provisions to teach because we feel like not overburdening our parents with money for buying teaching materials or media." Lack of finances also have a debilitating effect on student teachers. Perhaps funding of some sort could be set aside to help student teachers to buy teaching materials to fulfill their dreams of becoming fully-fledged competent teachers. If this is not done, the implications are that the whole T.P exercise may not be fully implemented. This makes it difficult for the government to fully measure its successes and failures to implement CBC. This is because one of the

key points of the CBAM theoretical framework is that change is a process, implying that it takes a long time. Teachers' use of ICT for pedagogical purposes is affected by inadequate infrastructure, including computers and other devices. Where REB has provided computers, some classrooms cannot use them because of the lack of electricity. (Mugiraneza, 2021).

No research culture during Tp

Research is fundamental for teacher profession development, particularly action research. As one of the key pillars of CBC, students are supposed to undertake research particularly action research which seeks on improving the teacher's classroom practice. It is during this period on practicum students should be guided and be helped by their tutors to undertake such a study. Undertaking a unit in research methodology provides those professionals working in the education system with a systematic, reflective approach to address areas of need within their respective domains. (Hine 2013). Students should by the end of their practicum be able to author a report on their researchers. providing teachers with the necessary skills, knowledge, and focus to engage in meaningful inquiry about their professional practice. The researcher asked learners about research during internship, and all the asked students confessed that, they are ignorant of what research is all about. Student teacher D confessed that, "I personally don't know what you are asking about." Asked whether during Tp they engage in any research activity, Student teacher X answered that, "I only heard of the word research during lecture periods in college, but when it comes to Tp, I am not aware of how it should be done." It is against the reasons that the researcher generated some insights into the need to reconceptualise the practicum in Rwanda TTCs to mitigate against the challenges and shortcomings of the current practicum framework, though it encompasses the whole teacher training model. According to REB (2018) document, competences cannot be taught personally like subject knowledge. they are acquired over time through the cumulative effect of a learner centred approach. This has a bearing on the length of the internship duration. In this regard, focus of the proposed practicum model would be on the 4 terms Tp duration as outlined below. For example, in 2003, Kigali institute of Education (KIE) now known as University of Rwanda College of Education and the ministry of education extended the internship period for education students from three months to one year.

The proposed new internship framework

- **3-4 -2 Model**

The new proposed internship model is derived from Rwandan curriculum framework of 2015 on basic and generic competences**.** The Rwandan CBC framework clearly outlines the basic competences that must be developed together with the cross-cutting themes to be fused across all the subjects in the curriculum. In the proposed model, the basic competences are juxtaposed with the generic ones. However, the development of these competences should be done smoothly across all the levels of teacher development but more elaborately during practicum in TTCs. It involves a continuous cycle of action, reflection, and learning (Warhurst & Thompson, 2007). This addresses the concerns that pre-service teacher education in Rwanda remains too academic and theoretical, with most of the lecturers having little

or no direct experience of the day-to-day challenges of classroom teaching (Bennell & Ntagaramba, 2008). A time-to-time evaluation intended to assess mastery of skill-competence is critical to evaluate the fixed competences, the learning outcomes, and criteria linked to these learning outcomes (Ten Cate, 2007). Students should develop literacy and numeracy competences, use of ICT, engage in entrepreneurship and business development, be able to effectively communicate, make use of science and technology and soft skills such as citizenship. It is at this critical phase where the trainee teacher should be able to fully develop and later prove these competences during internship or before they graduate. What is required is increased knowledge about the several types of effect that can be achieved, both on an individual level and on an organizational level (Salas & Cannon-Bowers, 2001).

Table 1

Rwandan curriculum competences adopted from Rwandan Manual document on Competence-Based Curriculum 2015

Term	Basic competences to	Generic competences
1	Literacy and communication	Creativity and innovation
2	Numeracy and Entrepreneurship and business development	Research and problem solving
3	Science and technology	Critical thinking
4	Use of ICT and communication in official language	Cooperation, interpersonal relationship skills

In developing the teacher, three key players have a fundamental role, that is the college supervisor, host teacher and aspiring teacher. The interfacing of these three key players is critical. Having interacted with the participants and hearing their views and opinions the 4-term practicum duration was suggested. According to this proposal, student teachers are expected to spend three terms in their Year 1 study, followed by 4 terms in practicum and 2 terms in their last residential phase (3-4-2 Model)**.** Arguments from this proposed model emanate from the sentiments of the participants and informed by the CBC demands. The justification and modalities for the suggested 4 terms internship duration are clearly explained below.

Term 1: Development of literacy and communication competences in Term 1 of the model

Literacy and communication are essential elements in cognitive development and these should be developed in term 1 of the training of students inclusive of suggested internship model. These are fundamental for students to access and make sense of their world. Being able to quantify and measure their environment in diverse ways will assist them to make wiser judgements about the kind of actions to take in their lives. UNRWAPR (2013. From the researcher's

observation, a considerable number of students have problems in reading and communication especially when using a variety of subjects, Kiswahili, English and even the Kinyarwanda. In this regard, the model suggests that student teachers on Tp should spent 4 terms to develop some basic literacy and communication literacy at least at the level of their learners. Basic literacy refers to the ability to construct, communicate and interpret meanings for a range of purposes and in a range of contexts (UNRWAPR (2013). Most of the students seen doing the actual teaching in many cases use Kinyarwanda more often than other official languages in communication, which is not bad, but the best method to develop metalinguistic skills is through practising speaking the language more than often. This is in line with RTE guideline that the teacher should use a variety of communication skills (listening, writing, speaking, reading) and presentations (volume, articulation and facial expressions) techniques (REB 2018).The researcher's suggestion as informed by the responses from the participants and 2015 CBC guidelines is that, if students are to spend about 4 terms being assisted in developing literacy and communication skills such as developing of appropriate language structures, intonation, pronunciation and the use of registers in all the official languages in Rwanda, the literacy rate will improve at a faster rate than the current one.

Term 2: Development of numeracy and entrepreneurship and business competences

Numeracy is the ability to work out with numbers and mostly related to mathematics, science, commerce, and business. For the improvement of the learning outcomes, critical early literacy and numeracy skills needed to be developed within a broad, balanced, and enjoyable curricular experience (Education Development Centre (2018). During a suggested 4 term Tp duration, student teachers will develop the ability to vigorously work out with numbers across many subjects that require some calculations of some sort. As envisioned by CBC on entrepreneurship, the creation of some businesses and entrepreneurship in schools of practice would be clear. Student teachers would be assessed at least on one business project of their own creation as a team or individually. Entrepreneurship and business development should not just be a course that is theoretically taught during students' stay in college because financial literacy is key to one's success. Theory must be transformed into practice, and this must be seen before students finally leave college. By that arrangement, Rwanda would be transformed into an enormously powerful business enterprise, because the young generation would be economically empowered at a youthful age.

Term 3: Development of Science and innovation competences

Science and innovation competences are critical in nation building. This point like earlier on alluded to should be transformed into practice**.** Lecturing about science and innovation should not only end in lecture rooms. Tp is the rightful time when students should develop their science and innovation competences through the integration of generic competences. In this regard, student teachers should be awarded marks on the innovation and science competence part, and this should be included on the assessment form. Visible scientific projects should be created by students during their Tp as a testimony to show that they have developed the innovation competences through the science subjects. It is during Tp that students have more time to innovate and create. In short, a hands-on approach to science

and innovation competence development should be proved in schools during Tp. A CBC is a type of curriculum that produces goods and services. According to REB (2018) one of the competence indicators is have a thorough Science and mathematics knowledge that enables him/her to develop the teaching/learning materials, lesson planning, to deliver the lesson and connect with his/her daily life activities using English as the language of instruction.

Term 4: Development of ICT competences

More time should be given to the use of ICT. Student teachers should experiment with ICT tools to the fullest, while on their Tp. Students should explore and navigate at least one available ICT gadgets at any given practising school. Being equipped with the necessary ICT skills, the student teachers should then apply the same skills and knowledge to the learners in their practicing schools. The TTCs tutors should then make a follow up on these students on TP, to help, supervise and assess them particularly on the use of ICT in teaching and learning. It is claimed that only a highly skilled workforce will run in an increasingly sophisticated environment and allow Rwanda to become the competitive and diversified economy that it aspires to be (MINEDUC, 2010). Computer-based technologies are powerful pedagogical tools for they are sources of information and extensions of human capabilities and contexts for social interactions. (Bransford et al., 1999, p. 218). ICT competence development is critical in today's networked world.

Analysis

Based on the study, the findings show that there are some challenges being experienced by student teachers during internship, such as lack of enough teaching resources. Coupled with these are lack of ICT gadgets, no electricity in some schools, and a fully loaded curriculum as per my observation. Therefore, development of the needed competences as envisioned by the CBC cannot be workable within a short space of time internship is being done in Rwanda. Although the challenges related to the accessibility of innovative technologies for teachers are widespread and differ from country-to-country current research studies write down that lack of access to resources, including Wi-Fi, is another complex challenge that prevent teachers from developing the needed competencies to be able to tackle educational issues. Without both good technical support in the classroom and whole-school resources, teachers cannot be expected to overcome the obstacles preventing them from using ICT (Lewis, 2003) and to develop the new CBC. According to the CBAM model, teachers should be at the highest developmental level of implementing curriculum change. This is true because, teachers should be able to describe, measure and understand the changing nature of the new curriculum to adapt accordingly. The teacher is at the focal point in school curriculum change and implementation. Successful development of CBC depends on full teacher participation in the process. That is one of the reasons governments invest in teachers. The same should also be done in time and resources as they are critical to curriculum changes. Basing on this analysis, some recommendations to mitigate against some of these challenges are done below.

Conclusions

The foregoing reflection explains the close relationship between competence development and internship duration. In fact, RTE is being commendable for supporting its TTCs with the ICT facilities. At least something is kicking on the ground. The availability of SMART classrooms, laptops, desktops and even tablets for tutors is a clear sign to this noble call of making Rwanda educationally sustainable. However, there is great need of the support for trainee teachers to be equipped with the gadgets when they go out on practicum. The implications of the findings are that without the understanding of the concept of curriculum change processes, the envisioned competence development outcomes may not be fully achieved. The CBAM supplies a framework from which student–teachers may understand the competence development from their subjective experiences during T.P. As such the period should be long for student-teachers to have a better understanding. For example, going on T.P for a period of at most 12 weeks does not guarantee that a student teacher has got and developed all the competences enshrined in the curriculum. Other factors might be at play such as poor timing of student deployment. On the other hand, other demands from the practising schools might have a high priority on the student-teacher's life. Thus, acclimatisation and standing the ground may take about 2 weeks thereby further reducing the time on internship. The hosting or practicing schools need to be supported in the same manner the TTCs are being supported because it is the students in the schools that need to benefit more for sustainable quality education. Without further arraying my fears, the T.P duration should be lengthened to accommodate all the variables, that may impede on the full implementation of a CBC in Rwanda.

Recommendations

In view of the findings in this study, the following recommendations were done.

- The internship should be done over a period of more than one term to allow all the learners enough time to put theory into practice. This study recommends a duration of at least one academic year or 12 months inclusive of holidays, to develop a teacher meant for the 21st century.
- The internship assessment form should have a portion on the use of ICT, science, technology, business, and entrepreneurship.
- All practising schools to be electrified and have reliable internet connectivity to allow the student teachers to carry out research and use the resources effectively.
- The government to buy laptops for students on internship or colleges to lend them laptops when going on internship.

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