

The Alignment/Linkage of Students' Academic Competence Experienced in Secondary Schools and Universities. A Case Study of Competence-Based Curriculum Implementation in Tanzania



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ABSTRACT: Many developing countries have been working hard towards achieving quality education. This endeavour provides a high-quality combination of curriculum, assessment, and training that makes graduates capable of being socially effective and economically productive. The education systems have been implementing the Competence-based curriculum to improve the teaching, learning and competence of the students. The greater attention has focused on the ability of students to carry out and demonstrate the competence they have acquired from the educational institutions. Implementing the Competence-based curriculum in Tanzanian secondary schools has not been impressive. The execution encounters various challenges that have been affecting teachers, students and the system of education. This paper explores the alignment/linkage of competence experienced in secondary schools and universities. The purpose is to explore whether the competence acquired in secondary schools enables students to link to the anticipated competence at the universities. The study found that students and teachers lack an understanding of the Competence-based curriculum. Due to the lack of clear understanding then educational practices are conducted inappropriately according to the Competence Based Curriculum. Often competencies presented in the educational documents remains fully unrealized in the secondary schools despite the plethora of educators providing some strategies for improving the acquisition of secondary school competence. It is suggested that the quality of education needs to be improved and the education system produces graduates with appropriate knowledge, skills and competence. The foregoing will make graduates acceptable and recognized nationally, regionally and internationally.

INTRODUCTION & BACKGROUND

Competence-based curriculum was introduced in schools to cater for the demand of employers to have skilled and competent employees who could be competent in the workplace and world market. The Competence-based curriculum represents a person's ability to do their job and duties. The research findings showed significant efforts from governmental, institutional, and individual initiatives towards Competence-based curriculum implementation. It is believed that a Competence-Based Education programme will not only make students more competitive in the national and global markets but will also effectively promote competitiveness, and innovation and will facilitate the acquisition of 21st Century skills among students (Anyango et al., 2020). The Competence-based curriculum attempts to improve the quality of education that enables students to develop competence relevant to life (Komba & Mwandanji, 2015). It includes competence that may enable students to make advancements in science and technology and to contribute to a well-functioning society (Kimaryo, 2011; TIE, 2005). The curriculum was structured to produce graduates with employable knowledge, skills, and attitudes (Paulo, 2014; TIE, 2005; TIE, 2009).

Efforts have been made in the provision of education to facilitate the improvement of the implementation of the Competence-based curriculum. The curriculum reform reflects different demands that occur in society at various times. These claims need to be reflected in the curriculum. It is established that all activities in the school are well-stated and organized in the curriculum. The curriculum should change according to various innovations taking place in education, politics, economy, science and technology. Therefore, to ensure students receive a quality education, teaching should be organized in the curriculum. Some drastic changes were introduced in the education system and curriculum in 1967 when the Ministry of Education introduced the Education for Self-Reliance policy which redefined the purpose of education in the country. It highlighted the meagerness of the inherited education system and suggested several necessary reforms (Mushi, 2009). The policy aimed to develop an inquiring mind, the skill to learn from others, to make relevant judgments on what to adopt or adapt, to think critically and to develop confidence and

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mental liberation. It was designed to produce students who are more confident, curious, and inquisitive and with critical, liberated minds (URT, 2014).

The Presidential Commission on Education (Makweta Commission) in 1982 provided the recommendations that necessitated the government to take initiatives to improve policies and programs of education. One of them was the Education and Training Policy (URT, 1995). It outlined a vision of education to enable students to develop self-confidence, inquiring minds, and the skills necessary for improving the quality of life. According to the National Development Vision of 2025, the education and training sector is expected to bring about the rapid development of human resources by preparing an adequate number of educated Tanzanians eager to educate themselves more to enable the Nation to become a competitive medium-income economy country by 2025. To attain this goal, the education and training structure in use in the country must provide enough opportunities for the people to educate themselves. This structure must provide quality education and training acceptable and recognized nationally, regionally and internationally (URT, 1999; URT, 2014).

Nevertheless, the National Development Vision 2025 (URT, 1999) insisted on the structuring of the education system and curriculum. It influenced the introduction of a Competence-based curriculum in the year 2005 that guides the development of competence during the teaching and learning process. In connection with the same perspective, there were some initiatives towards quality education. It includes (a) a Shift from teacher-centred to learner-centred approaches to teaching. A shift from teaching to learning to enhance thinking and reflection among learners and to use learners' prior knowledge and experiences. (b) Shift from Content-Based Curriculum to Competence-based curriculum. Response to societal needs advances in technology and globalization. Competence is the combination of a person's knowledge, skills, attitudes, abilities and behaviours attained by the learner after the learning process. Teaching and learning activities become a means of arriving at the development of competence. Furthermore, the Tanzania Development Vision 2025 (URT, 1999) suggested that there is a need to improve university education in the sense that it would sustain effectively the generation of knowledge, skills and competence to enable the country to transit into the middle-income status by 2025. The vision is intended to equip people with knowledge, skills, and attitudes to improve productivity and competitiveness. It influenced the Competence-based curriculum which emphasizes the outputs from schools and universities to have the appropriate knowledge, skills, attitudes and competence applied in socioeconomic development. The Competence-based curriculum stimulated and emphasized the acquisition of 21st-century skills among students. 21st Century skills are increasingly recognized as key competencies for today's young people to develop so that they can effectively participate in the global knowledge economy, thrive in an increasingly diverse society, use new technologies effectively, adapt to change and uncertainty, and continue to engage in lifelong learning. The curricula need to integrate 21st-century competence in the context of particular content knowledge and to treat both as equally important. The 21st-century skills refer to a broad set of knowledge, skills, work habits, and character traits that are believed to be critically important to success in today's world. Some of the 21st-century skills are: Critical thinking, Communication skills, Collaboration, Creativity, Problem-solving, Technology skills, social skills, Literacy skills, social responsibility, Innovation skills, and Thinking Skills (Central Board of Secondary Education, 2020; Kopwel, 2014; Foster and Piacentini, 2023; Senjiro and Lupeja, 2023).

The experiences from the implementation in Tanzania unveil poor implementation of the curriculum (Kafyulilo et al., 2012; Kimaryo, 2011; World Bank, 2008). Studies on learner-centered practices revealed that teachers have been trained to conduct teaching and learning through the use of these practices (Wangeleja, 2003, Msonde, 2011). However, the actual interactions in the classrooms showed that teachers still prefer teacher-centred practices (Kafyulilo et al., 2012; Paulo, 2014). Likewise, the studies by the World Bank (2008) and Kimaryo (2011) comment on the practices conducted in the classrooms, stating that they did not differ from the practices used during the implementation of the previous curriculum. This confirmed that teachers continued to implement the curriculum based on the transmission of content and at the same time they expected students to gain knowledge and skills and demonstrate the stipulated competence. Students in such classes were found to learn the content passively and it was difficult for them to develop a good understanding of the subject matter. This is to say that the teaching methods were dominated by rote and transmission of facts (Hardman et al., 2009). Furthermore, Schweisfurth (2013) observe the classes that make use of traditional seating arrangements where students' desks are facing the chalkboard. It causes contradiction to the learner-centred teaching prescribed by the Competence Based Curriculum. This structure is common to many national and cultural contexts that implement learner-centered teaching. Teachers do not show any effort to organize students for effective interactions as they compromise with traditional seating arrangements due to several challenges in the learning environment. Teachers perceived that an interactive seating plan might be impossible.

Sumra and Katabaro (2014) disclose that teachers lack motivation, competence, and an understanding of the policy requirements. Komba and Mwandangi (2015) found that a majority of teachers were not aware of the matters accompanied by the Competence-based curriculum. Their practices in the classroom did not show that they implemented effectively the operating curriculum. The study by Komba and Nkumbi (2008) reports a serious shortage of qualified teachers with the competencies required to guide students' learning through learner-centered practices. In connection to the foregoing ideas, teachers were reported to lack a good understanding of the curriculum requirements because they were not fully involved in the development of

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the new curriculum. Teachers just received decisions and directives made by experts to be implemented by them. To deal with this challenge, HakiElimu (2013) wanted teachers to be involved in developing the Competence Based Curriculum. Also, Schweisfurth (2013) observes that teachers in Sub-Saharan Africa were not improving their teaching skills. This deficiency was caused by the lack of chances teachers obtain to attend professional development training programs. These programs are crucial for informing and educating teachers on the requirements of the new curriculum and thus implementing it effectively.

The study conducted in Zambia investigated teachers of History's implementation of the Competence-based teaching approaches in the teaching and learning of History subjects. The findings revealed that 67% of the teachers of History did not understand the concept of the Competence Based Curriculum. Teachers of History were not using the Competence-based curriculum to a large extent in the teaching and learning of History because they did not have the knowledge and skills of the Competence-based approaches (Kabombwe and Mulenga, 2019). The research report by Nkya et al. (2021) uncovers that most teachers have positive perceptions of the shift from content-based to competence-based curriculum with a mean of 4. However, the majority of the teachers indicated a less capacity to implement a Competence Based Curriculum. More than 60% of teachers cannot prepare teaching and learning activities as required by the Curriculum.

Assey (2022) identifies several strategies that can be used in Tanzania to successfully implement Competence-based curriculum to ensure that heads of schools regularly receive pedagogical leadership training, improve in-service teacher training, improve school-based indoor training, employ enough teachers, improve school infrastructure, provide enough teaching and learning materials, ensure effective partnership between schools and parents improve library services and improve the use of information technology, improve school-based assessment procedures and establishment of school-based quality assurance department. In Kenya, there has been an outcry from different education stakeholders concerning the school's preparedness to effectively implement the Competence Based Curriculum. Private primary schools tend to have adequate school resources compared to public primary schools, hence were able to implement Competence-based curriculum programs in their schools effectively. Public and private primary school teachers have the right attitude toward Competence-based curriculum programs and their implementations. However, they were not adequately trained for optimal Competence-based curriculum implementation in their respective schools (Owuor, 2022).

Generally, various challenges occur during the implementation of a Competence-based curriculum, particularly in secondary schools in Tanzania which this paper makes explicit. These could be described as weaknesses in the education and training structure; shortage of teachers; lack of readiness for teachers in attitudes, knowledge, and understanding on the implementation of curriculum; poor teaching and learning infrastructure, shortage of teaching and learning materials such as books, laboratories, libraries and classrooms; shortage of science teachers; deterioration of morale among teachers because of unsatisfactory benefits and difficult working environment; poor recognition of students with special needs and poor learning environment; lack of any procedure for recognizing and promoting students with talents; little use of Information and Communication Technology (ICT) in the provision of education and training. These challenges have contributed to deteriorating the quality of education and training in Tanzania. Therefore, educators must know what is taking place in institutions concerning educational practices and competence alignment during the implementation of a Competence Based Curriculum.

RESEARCH PROBLEM STATEMENT

The education system in Tanzania guides and manages the educational practices in various institutions where teachers and students execute practices to accomplish the objectives and competencies stated in the curriculum. Students must demonstrate the competencies they have acquired while implementing a Competence-based curriculum, particularly in the workplace and world market. However, implementing this type of curriculum has not been impressive as evidenced by the massive failure of students to carry out and demonstrate the competence acquired from secondary schools. Given this setting, various educational reforms and efforts have been undertaken to improve the Competence-based educational provision. Despite the existing reforms and efforts set to implement the Competence-based curriculum, the students enrolled at the university level cannot demonstrate the 21st-century competence acquired in the secondary education system as most Lecturers have been complaining about increasing students' academic incompetence. Henceforth, this research explored the alignment/linkage of 21st-century competence experienced in secondary schools and universities in Tanzania as it remains imperative.

General objective

This study explored the alignment/linkage of 21st-century competence experienced in secondary schools and universities in the context of Tanzania.

Specific Objectives

The specific objectives of this inquiry were to;

- i. Explore the understanding of students and teachers on Competence-based curriculum in secondary schools.
- ii. Assess the educational practices conducted according to the Competence-based curriculum in secondary schools.

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- iii. Examine the missing teachers and students 21st-century competencies in secondary schools
- iv. Determine strategic measures to improve the acquisition of 21st-century competencies in secondary schools.

Research questions

1. What do students and teachers understand about the Competence-based curriculum in secondary schools?
2. How the educational practices are conducted according to the Competence-based curriculum in secondary schools?
3. What 21st-century competencies have been missing for teachers and students in secondary schools?
4. What are the strategic measures to improve the acquisition of 21st-century competencies in secondary schools?

RESEARCH METHODOLOGY

Research approach

This article explores the implementation of a Competence-based curriculum in secondary schools. The data were collected in the school setting where teachers implement the Competence-based curriculum. This study intended to divulge a detailed understanding of what is taking place in the implementation of this curriculum. Conducting research in the school milieu calls for an appropriate research approach that enables the researcher to explore the educational practices of implementing the Competence-based curriculum comprehensively. Based on the foregoing facts, this research adopted a qualitative approach as it facilitates gaining a detailed understanding of the individual's social reality of the inquiry subject in complex situations. The qualitative approach enabled the study to extract a detailed understanding of the stakeholder's attitudes, beliefs, and practices on the implementation of the Competence-based curriculum in secondary schools (Mason, 2006; Prill-Brett, 2005) in complex contexts (Flick, 2009).

Sampling techniques

Scholars describe sampling techniques in various ways. This study considered the sampling process as a crucial aspect as the objectives and questions that guide the research study depend much on the sample (Mertens, 2010, p.309). Therefore, this study adopted non-probability sampling particularly the purposive sampling technique to select a few teachers as a sample that 'met the criteria for inclusion' (Kothari, 2004, p.55) as the key practitioners in teaching, learning and research activities from the visited schools (Cohen et al., 2007). In the purposive sampling process for data collection, five (5) District Secondary Education Officers as a sample of district overseer of secondary education, five (5) heads of schools, five (5) teachers and five (5) students of the Mvomero, Karatu, Mpanda, Kakonko and Mbinga districts were selected from various schools across the country Tanzania based on the initial conversation with the researchers to demonstrate that they have attended learner-centred educational programs. The twenty (20) participants were selected because they undertake day-to-day instructional supervision and classroom practices under the requirement of the current secondary school curriculum and syllabus.

Therefore, through their participation in the teaching and learning process, teachers confirmed to have the broad knowledge, skills, and understanding needed to fulfil the purpose of this research. The researchers viewed that to conduct research properly and produce trustworthy and credible results it needed an appropriate sample. The researchers intended to work intimately with few teachers and acquire deep information about learner-centred teaching practices. They were considered the main source of information as they plan, prepare, execute the lesson, organize the learning environment, and facilitate students to acquire knowledge and skills prescribed in the curriculum. Nevertheless, teachers know the challenges and obstacles that hinder the effective implementation of these practices according to the nature of our classrooms. Scholars confirmed the importance of selecting teachers for the studies addressing the implementation of the curriculum in classrooms. Research findings by Stringer et al. (1997) divulge that the problems of teaching and learning might have been revealed more effectively by carefully examining the real-life experience of teachers in educational contexts as well as focusing on the quality of teaching practices in the classrooms.

Data collection methods

The researchers requested permission from the local government authority, and heads of selected schools and sought the consent of the research participants who then visited the schools. The researchers carried out semi-structured interviews, documentary reviews and participant observation to explore various attributes, and they stayed fully in the school environment and classrooms. These methods facilitated the gaining of a detailed understanding of the actual educational practices employed in the classroom during the lesson development as the researchers listened and observed teachers. Of note, the methods enabled participants to discuss interpretations of the world and express how they regard situations from their opinions (Cohen et al., 2007). The methods furnished a chance for teachers to provide their perspectives freely about the educational practices (Mertens, 2010) on their terms (Merriam, 2002).

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Data analysis

The data analysis and presentation depend on the researchers' outlook on what suits the purpose of the qualitative study (Saunders et al., 2009). The study drew on thematic analysis to analyze the data as this technique allowed the researchers to analyse and extract emerging key themes within the data collected from the field. This analysis technique seems a useful research tool as it provides a rich, purely qualitative and detailed, yet complex account of the data (Braun & Clarke, 2022; Ryan & Bernard, 2003). The data were compiled and presented by the following stages (Braun & Clarke, 2022; Creswell, 2009; Cohen et al., 2007) that researchers used to analyze the data from schools:

- i. Prepared and organized raw data to familiarize with them: The researchers prepared and organized raw data from the secondary schools in a manner that they could be read to examine what was therein and how they relate or reflect the Competence-based curriculum practices in teaching and learning practice. At this stage, researchers organized the data to produce different types of information depending on the sources from which they occurred and captured from the visited schools (Creswell, 2009).
- ii. Read thoroughly the data from the fieldwork and formulated transcripts/texts: After becoming familiar with the collected data, the researchers re-read the entire field notes thoroughly. Also, they repeatedly listened to the audiotapes and watched the videotapes to get a full understanding of the information on the subject of the Competence-based curriculum practices collected from all sources in the field, and transcribed to form transcripts/texts.
- iii. Coded the transcripts/texts and formulated the themes: Transcripts/texts were coded to filter crucial information, concepts, and ideas that respond to the research questions guiding this study. Thus, researchers extracted all facts linked to the Competence-based curriculum practices in various stages of teaching and learning practices.
- iv. Interpreted the meaning given by the themes: This study interpreted the teachers' perceptions and understanding of Competence-based curriculum as Interpretivism fits into the qualitative design, and it is viewed as a set of interpretive practices that help to make the world more visible (Della-Porta & Keating, 2008). This study adopted interpretivism under qualitative design because it takes subjective meaning or the meaning from inside the participants' lived experiences (Della-Porta & Keating, 2008; Prill-Brett, 2005) as the centre in generating new knowledge (Ritchie et al., 2013; Anderson-Levitt, 2000).

FINDINGS OF THE STUDY AND DISCUSSION

This section presents the study findings from the responses to the research questions accompanied by the discussion to show the significance of findings in relation to what remained already known about the research problem explored. Also, it unveils the new insights emerging from this research.

Teachers and Students understanding of the concept Competence-based curriculum

Tanzania introduced Competence-based curriculum which encouraged a student to master knowledge, skills and abilities. However, Teachers A, B, and C explain that the curriculum stimulates students to learn actively and gain an appropriate understanding of the subject matter. It emphasises on students' understanding of the concepts, ideas, and information taught by the teacher in the classroom. Therefore, the teacher remains an important component that develops good knowledge of the subject matter in such a way that can transfer information appropriately to students. Likewise, teachers argue that "... Competence-based curriculum implies that students achieve higher grades A and B and more students get division One and few Two while eliminating Division Four and Zero..." (says Teacher C). Hence, the majority of teachers insist that students should take up and learn the subject matter and act in response to the examinations as most teachers aim to prepare, guide students in the classroom and make sure they pass the final examinations. Yet, the grades students get in various subjects are the ones that are looked at by the system of education looks at the performance grades that students achieve in various subjects. Reflecting on fact, one participant explicates that;

"... Normally in implementing the Competence-based curriculum, we teachers tend to provide knowledge and skills to students and they receive it accordingly. Henceforth, the students can use such information to answer the questions in the examination and be able to pass and succeed in the system of education..." (Teacher A).

On the other hand, another teacher divulges:

"...What I know about the Competence-based curriculum is that it guides students and teachers in performing various practices that facilitate understanding of the subject matter. These practices will make students improve their academic performance in the national examination..." (Teacher B).

Reflectively, the quotes above unveil teachers' limited understanding of the concept of Competence-based curriculum one of the heads of schools adds; "...What I know, is the Competence-based curriculum guiding teachers and students covering the syllabus and ensures all topics are covered accordingly for students to do the exam excellently..." (Head of School B). The majority of participants define this type of curriculum based on the content stipulated in the syllabus that should be taught and examined to allow students to move to the next academic level. In this case, One elucidates that; "...all in all, under Competence Based

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Curriculum, education system, students and teachers should work together and authenticate an assurance that syllabus is taught and covered before the end of school term..." (Teacher C).

The provision of competence-based education rests on teaching and learning practices that identify the competence that students must master in a long-lasting transformative education (Ritchie et al., 2013). Nevertheless, it ensures students develop the appropriate competence needed in the industry and society and offers personalized pathways so that students can take the time they need to fully demonstrate mastery of competence. Thus, lack of adequate understanding of Competence-based curriculum may have a far-reaching impact as teachers engage students in daily school life (Assey, 2022) as often reflected in classroom teaching practices. It remains convenient that teachers as the main implementers of the curriculum become acquainted with a basic understanding of the Competence-based curriculum (Komba and Mwandanji, 2015). In this viewpoint, teachers should be well prepared through refresher seminars and workshops to equip them with a detailed understanding of the Competence-based curriculum as they need more re-training in their various subject areas. MoGE (2013) emphasises that Competence-based curriculum requires teachers to have clarity of focus, reflective designing, and set high expectations for all learners (MoGE, 2013). Teachers should have knowledge and skills in conducting assessments, integrating assessments into teaching, and using effective approaches, techniques, and strategies to improve students' competence (McMillan, 2000).

Educational practices conducted under the Competence Based Curriculum

Teachers as the key implementers of competence-based curriculum undertake the teaching and learning process under the guidance of the subject syllabus as One participant emphasises; "...We normally prepare notes, and we used effective methods to teach concepts and ideas and provide questions for students to answer. However, the methods facilitate students learning and become engaged, motivated, valued and achieve the lesson objectives..." (Teacher D). In line with Teacher D, another colleague explicates; "... In implementing the Competence-based curriculum, I present information in the classroom and students write some notes that help them for revision and I organize and show them how they can utilize the teaching and learning materials given..." (Teacher A). Most participants in this study emphasizes that at the end of classroom sessions, teachers give students "assignments and they submit answers before the next period for teachers to assess and provide feedbacks to students. Nevertheless, One participant makes it clear that:

"...I normally prepare myself, with teaching and learning materials and resources that specifically represent the concepts/ideas that I have been teaching. Finally, I give students exercise, assignments so that they can find answers and submit to me as their teacher... that's how I make my students competent..." (Teacher C).

Interestingly, not the study participants have incorrect understanding of the exact meaning of the Competence-based curriculum in practice as very few unveil their limited understanding and practice of the Competence-based curriculum as One elucidates:

".....The Competence-based curriculum provides some instructions on how to carry out various classroom activities that engage students to understand the subject matter and improve their academic performance in the national examination....." (Teacher A).

Most of the interview quotes above uncover no correspondence between the existing teaching and learning practices and how the Competence-based curriculum instructs. The essence of this setting remains a research agenda. Nevertheless, research report by Komba and Mwandanji (2015) unveils the missing link between the way teachers are prepared in teachers' training institutions and the actual competence-based pedagogical implementation in schools that may be one among the sources of this setting. In this viewpoint, on top of Muneja's (2016) emphasis that such missing linkage results in most teachers facing difficulties in implementing Competence-based curriculum in secondary schools, ignored effective parental involvement for collaboration in this role remains an issue as well (Marion, 2020). Reflecting on this context, One participant affirms; ".....I as the head of the school and am sure all teachers in this country, no one is ever involved in any curriculum design and development as a key stakeholder and implementor. As a result, no one has a clear knowledge of what the Competence-based curriculum mean, instructs enables us to operationalize it" (Head of School E). Nonetheless, another participant divulges "... shortage of quality textbooks, and lack of enthusiasm to execute the Competence Based Curriculum. Teachers' comprehension of the material seems a common issue..." (Teacher D).

However, all teaching and learning materials must be fully available and teachers must be effectively acquainted with all about the Competence Based Curriculum. According to Branyon (2013), Competence-based curriculum can be interpreted as a curriculum that emphasizes the development of the ability to do (competence) tasks with certain performance standards, so that the results can be felt by students in the form of mastery of a particular set of competencies. Therefore, Competence-based curriculum develops the knowledge, understanding, abilities, values, attitudes, and interests of students to be able to do something in the form of skill, accuracy, and success with full responsibility (Mokoro, 2020). This setting implies that teachers must facilitate

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competence-based teaching and learning practices with greater emphasis on integrating skills that can help students be ushered into the competitive world. This requires effective use of information and communication technologies for teaching and to engage more in planning within evaluative and accountability frameworks (Pena-Lopez, 2009). In this study, findings reveal that project-based learning, experiential learning, inquiry-based learning, and collaborative learning endure the common teaching approaches used in the implementation of the Competence-based curriculum (Tumuheise, 2023).

Nonetheless, the Competence-based curriculum enables an individual to perform practically and measurably by using a set of knowledge and skills acquired through effective training. In this viewpoint, Sudsomboon et al. (2007) elucidate seven elements that realize a competence-based education: (i) learners acquire experience and knowledge in their lives, (ii) the curriculum designer provides an experience that will tap learners' values and ideas, (iii) learners experience new situations and match new experience with previous learning, (iv) learners distil new values and new knowledge; (v) learners try out new behaviours and acquire new experiences and knowledge in both simulated and "real world" environments (vi) learners continue to process experience and knowledge as the basis of original knowledge and experience and (vii) learners apply new behaviour in real-world environment (Sudsomboon et al., 2007). Of note, students who study through a competence-based approach often have higher levels of engagement and motivation, which subsequently contribute to improved academic performance (Van den Berg et al., 2006).

The 21st-century competencies missing in secondary school students and teachers

The concept 'Competence' rests on a complex set of behaviours built on the components of knowledge, skills, attitudes and competence as the personal ability to take action. The concept 'Competence' refers to the skills, and knowledge of the learner after the teaching and learning process. Thus, effective implementation of Competence-based curriculum develops students' ability to recognize problems and find solutions in different situations or contexts. Such competence rests beside the following further characteristics of student's competence as a research report by Nessipbayeva (2012) explicates that it; (i) consists of one or more skills whose mastery would enable the attainment of the Competence, (ii) relates to all three of the domains under which performance can be assessed: knowledge, skills and attitude, (iii) possesses a performance dimension, competencies are observable and demonstrable, (iv) measurable and observable and may be assessed through teachers' performance. In this setting, it requires equal amounts of knowledge, skill and attitude.

However, teachers and students must be well acquainted with a detailed understanding of the nature of the Competence-based curriculum as Wangeleja (2010) emphasizes: (i) Knowledge is constructed, not transmitted (ii) Prior knowledge impacts the learning process (iii) Initial understanding is local, not global (iv) Building useful knowledge structures requires effort and purposeful activity (v) Students enter classrooms with an established worldview formed by years of prior experience and learning (vi) Students are emotionally attached to their worldviews and will not give them up easily (vii) Challenging, revising and constructing a person's worldview requires much effort (viii) Teaching practice is based on constructivist principles which change the role of the teacher from a dispenser of information into someone who structures activities that challenge students' preconceived notions and helps them revise their worldviews.

For instance, the European Union in 2006 for example developed a framework for key lifelong learning skills which has eight main competencies that member states must adopt to their education system that Tanzania can implement as; (i) Mother-tongue communication (ii) Foreign language communication (iii) Mathematical skills (iv) Virtual and ICT skills (v) Innovative Technical, electric and Agro-industrial skills (vi) Social skills and civic skills (vii) Entrepreneurship (viii) Cultural expression. One of the main aims of these key skills is to ensure that initial education and training programs provide the foundation for further learning and working life for children and young adults (Pepper, 2011). Equally, In Rwanda, the Ministry of Education (2015) stated the Basic competence based on expectations and aspirations reflected in the national policy documents. It is based on descriptors of these competencies that the learners' profiles in each level of education, subjects to be taught and learning areas, broad subject competence and key competence are built. Basic competencies are listed as Literacy; Numeracy; ICT; Citizenship and National identity; Entrepreneurship and Business Development; Science and Technology; and Communication in the official languages.

In connection with the provision of quality education, Tanzania started to implement Competence-based curriculum in 2005. Competence-based teaching and learning provide an opportunity for students to carry out investigations, test their ideas and construct their knowledge and meaning as well as make inquiries as growing social scientists (Tilya & Mafumiko, 2010). Teaching practices adopted through the curriculum of 2005 necessitate that learners participate in classroom activities, become more involved in the learning process and take responsibility for their learning. Both teachers and learners are required to focus on predetermined outcomes that should be achieved during or at the end of each learning process (Kahwa, 2009). Furthermore, the education system in Tanzania states competence that Secondary Education can impart to students (TIE, 2005, TIE, 2010, TIE, 2019). Thus, by the end of the program, the students should be competent and have the knowledge and skills to do some practice successfully. This fact sits in line with One participant's emphasis in this study;

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"...What I know is the Competence-based curriculum enables students to develop and grow based on their ability to learn or master a skill at their own pace irrespective of the environment....." (District Secondary Education Officer 3).

The quote above implies that the curriculum helps to improve students' learning outcomes and fulfil different learning abilities. However, One participant put it clearly;

"...What we are missing is the competence that we highly need that can enable us to easily connect when we join University education as: Critical and creative thinking and problem solving, decision making and appropriate choices of our future and effective Communication skills...." (Student from school D).

In concomitant to the interview extract above on teachers' and students' missing competence, a student colleague participant adds;

"...Similarly, we as secondary school students and our teachers as well are missing the Innovative Technical skills, literacy and numeracy, personal and social values and personal well-being, independent learning, digital literacy and online safety. This situation worries us on how we can cope with university education when we join there...." (Student from school A).

Despite the Macro, Meso and Micro level government leaders affirm that the Competence-based curriculum has been instructed and implemented during the educational provision at all education levels in Tanzania, research findings unveil too many content-based teaching and learning practices in schools. A plethora of research results show that teachers and students competence have not been reflected in the system of education and not observed, even not maintained accordingly. Of interest, the participants in this study insist that they need the currently missing competence namely; learning, assessing, problem-solving, calculating values, teamwork, organization, management, marking, providing feedback, language, disciplining students, and presenting information to students. These competencies can be working in the classrooms; however, some do not reflect effectively the competence stated in the curriculum and education system. It's like our learning environment does not connect or link to the competence suggested by educational experts. Therefore, this study's findings illuminate the following missing teachers' and students' competence and 21st-century skills anticipated for teachers and students to have at the university level (Pepper, 2011; TIE, 2009).

Communication: Teachers and students should be trained and demonstrate the ability to communicate effectively using different methods of communication. The message should be clearly understood by the receiver because it is sent in an effective manner of communication.

Collaboration: Teachers and Students should be trained and demonstrate the ability to collaborate in mutually respectful ways to minimize conflict, and work together with each other to accomplish a task to achieve the common goal.

Self-Efficacy: Teachers and students should be trained and demonstrate the ability to set personal, educational, financial, and family goals and deal with issues in the curriculum because they are equipped with knowledge on how to handle those issues. Students have confidence in themselves to perform a given task. This student's competence deals with how the student thinks, feels, and behaves when faced with a challenging situation.

Critical Thinking and Problem Solving: Teachers and students should be trained and demonstrate the ability to use systematic methods to analyse data provided to give an objective judgment of the situation. Critical thinking doesn't limit a person to only one way of doing things. They should be trained and demonstrate the ability to use other alternatives to solve the same problem. Learners can see situations from different perspectives.

Creativity and Imagination: Teachers and students should be trained and demonstrate the ability to visualize ideas or items that are not physically present. After creating the image students can creatively assemble and create a physical object. Creativity and imagination bring about innovation of new principles and new ways of doing things.

Citizenship: Teachers and students should be trained and demonstrate the ability to know and work on their rights, privileges and duties of a citizen. They should beware of the limitations of those rights as the world remains a complex community that has many interactions at different levels. Students should learn that each community has different laws that govern them and that they should be respected.

Digital Literacy: Teachers and students should be trained and demonstrate the ability of digital literacy competence should ensure that students can use the variety of digital gadgets and technology available for a better life. The technology can include mobile phones, the internet, computers, and different software. Students should learn about security issues, cyber security, privacy, laws that govern information and data, and how to protect themselves online.

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Learning to Learn: Teachers and students should be trained and demonstrate the ability to learn, unlearn, and relearn every day. Every day new knowledge is coming up, old knowledge is becoming obsolete, and new theories are being made. Students should be able to adopt a way of lifetime learning.

Improvement of the acquisition of secondary school 21st-century competencies

Most participants in this study allude to strategies for improving the attainment of teachers' and students' competencies as described in the curriculum through various teaching and learning practices taking place during the teaching and learning process. Such strategies include: competence-based teaching and managing the classroom effectively, discussing with teachers on competence-based teaching methods, building the interest of students in the classroom, guiding students in practicing science, attending to professional development for teachers, utilization of teaching and learning materials for practices, learner-centered practices, giving feedbacks. In line with these strategic competencies, Assey (2022) maintains that competence acquisition can be improved by considering the following strategies: Ensuring teachers receive regular pedagogical leadership training; Employing enough teachers; School infrastructure improvements and repairs; Provision enough instructional and studying materials; Encouragement of productive collaboration between parents and schools; Establishing and utilizing ICT (information and communication technology) equipment; Effective information exchange between different parts/components; Developing efficient school-based assessment procedures; Designing an effective school-based quality assurance department; Active participation in Competence-based curriculum educational workshops; Professional development on competence-based education; Students should be committed and dedicated to practical contents of the programme; Teachers should be trained and retrained so that they will update knowledge and skills.

SUMMARY AND CONCLUSION

The research topic "The alignment/linkage of competence experienced in secondary schools and universities" guides this article. The study intended to review whether the competence gained in secondary schools has been helping students to engage and practice properly when they are admitted to universities. Specifically, it aimed to explore the foregoing issues focusing on the following questions: What do students and teachers understand about the Competence Based Curriculum? What educational practices are conducted according to a Competence-based curriculum? What competence has been missing from secondary school students and teachers? What competence acquired in secondary school competence can be improved? The study findings confirm that secondary school students and teachers lack a clear understanding of the Competence Based Curriculum. Not only they do not know what exactly the curriculum requires them to do, but also, they do not practice it all due to the lack of clear understanding of the Competence-based curriculum. The classroom practices are not implemented effectively. Likewise, various competencies stipulated in the Competence-based curriculum remain not observed in secondary schools. Furthermore, the educators provided some strategies for improving the acquisition of secondary school competence. When this competence is gained effectively, the student's competence will be linked properly to another level and study successfully. On this basis, this study recommends all the educational stakeholders to work effectively to align the competence at various educational levels effectively.

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