INSTITUTE OF ADULT EDUCATION

Journal of Adult Education in Tanzania
JAET June 2023, Vol. 25, Issue 1 pp. 56-73
eISSN:2961-6271 (Online)
DOI: https://doi.org/10.61408/jaet2023v25i01.04

Tutors' Understanding of Competence-Based Education and Training in Tanzania: A Case of Morogoro Ardhi Institute and Tabora Ardhi Institute

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Abstract: *This study aimed at examining examine tutors' understanding of competency-based education and training in Tanzania at the tertiary level. To achieve this objective, three research questions were designed and worked on: what is the level of tutors' understanding of competence-based curriculum (CBC) and its objectives? Are the tutors well prepared to implement CBC in the institutes? And what challenges are faced in using CBC among tutors? A convergent mixed methods research design guided the study. Purposive sampling technique was used to select a sample of 25 respondents. Data were collected using questionnaires and focus group discussions (FGDs). Quantitative data were analysed using descriptive statistics whereas qualitative data were analysed using thematic analysis. The study found out that 42.4 % of tutors had satisfactory level of understanding of CBC and its objectives. The findings also revealed that majority of tutors (72%) agreed that they were well prepared to implement CBC at their workplaces. Moreover, it was found out that lack of flexibility among tutors to adopt CBC, inadequate teaching and learning facilities, overloaded curriculum, overcrowded classrooms, and tutors' limited knowledge about competence-based teaching were the key challenges facing tutors in implementing CBC. It was therefore concluded that majority of tutors understand the concept and the objectives of CBET curriculum. Based on the findings and conclusion made, it is recommended that frequent training on CBC among tutors be provided on regular basis to keep them abreast of ever-changing education sector. It is also recommended that institutions should ensure availability of teaching and learning materials and infrastructure.*

Key words: *Curriculum, Competence, Tutors, Tertiary education, Tanzania*

Introduction

Competency-based Education and Training (CBET) is a practical approach to education where emphasis is placed on the acquisition of skills (Miseda, & Kitainge, 2021). CBET involves training individuals to perform tasks to the standards required in employment, in an agreed range of contexts, repeatedly over time. It is designed to meet demands of the industry and business. Successful implementation of CBET has the potential to improve productivity, increase access to employment opportunities and raise the standard of living. Countries globally, have endeavoured to reform their training approaches from ones that over emphasize content, recall and examinations to ones that emphasizes the trainees' ability to perform tasks according to set standards. According to Deißinger and Hellwig (2011), CBET is the specification of knowledge and skill and their application to the standard of performance expected in the world of work. Similarly, Anane (2013) noted that CBET focuses on demand driven (outcomes-based) education and training programme based on well-defined industry generated standards (occupational standards). Anane further states that these industry standards are the basis upon which teaching and learning materials and assessment methods are designed and developed. Programmes developed under CBET approach tend to focus on what the trainee's expected ability to perform in the workplace as opposed to just having theoretical knowledge. It is therefore an approach which ensures that learners gain the necessary knowledge, skills and attitudes or values to be successful in the working environment.

In recent decades, drastic changes have occurred in education policy and practice, both in developed and developing countries. Most countries have embarked on curriculum reforms based on the widely shared view that education and the economy are inextricably linked. For example, a global education policy that has been circulating between, and transformed and/or borrowed by countries has emphasized concepts such as 'competence' and 'standards' (Sundberg & Wahlström, 2012). Consequently, many countries have reformed their curricula to be based on standards, outcomes, and competence. Competence-Based Curriculum has attracted huge research attention in educational sector in both developed and developing countries (Jin & Li, 2011; Makeleni, 2013). As in other Sub-Saharan African countries, the global educational vocabulary of the 'knowledge economy' has also affected Tanzania (Kahangwa, 2018) and thus necessitated changes in the curriculum.

In Tanzania, CBET was introduced in the early 2000s following complaints from many employers (both public and private) that the education and training system had failed to produce graduates with adequate competences to undertake diverse work activities (Mkonongwa, 2018). It was perceived that among observable and measurable competences (skills, knowledge, and attitudes), the skills component lacked among majority of graduates. It was further argued by Mkonongwa (2018) that training institutions delivered content-based curricula with an emphasis on theory/knowledge. Lack of appropriate skills among the Tanzanian workforce became more apparent after the country liberalized its economy in the 1990s with a consequent increase in private sector investment. The private investors from local and international firms demanded an education and training system capable of improving Tanzania's skills level and international competitiveness. In the early 2000s, Tanzania reformed her curricula at primary, secondary and teacher education levels in order to provide education that could prepare individuals to fit into the world of work and to cope with the rapidly growing socio-economic, scientific, and technological sectors taking place at global, regional and national levels (MoEVT, 2007).

The movement of education policy from content-based curricula to competence-based curriculum (CBC) in Tanzania has been influenced by external and internal forces. External forces include the international education policy discourse, transnational organizations, and agreements such as the Organization for Economic Cooperation and Development (OECD), UNESCO, Education for All (EFA) goals and the 2000 Millennium Development Goals (MDGs) (Exley et al., 2011). Internally, the most critical internal forces for change from content-based curricula to competence-based curriculum was centrally initiated and mandated. This means that the 'what' and 'how' were contested and negotiated within the state arena and distributed via regulations and syllabuses (Nzima, 2016). Evidence shows that there was little or no involvement of important stakeholders, such as teachers and tutors during the curriculum making process (MoEVT, 2011). Studies suggest that ever since CBC was officially introduced, little training has been given to tutors, let alone to college tutors who are responsible for teacher training (Nzima, 2016; Tilya & Mafumiko, 2010). Therefore, it is important to find out, how educational change agents such as tutors' good understanding of CBET is vital.

Theoretical Framework

This study was guided by the constructivism theory of learning which has its roots from famous theorists like Jean Piaget (1964), Vygotsky (1978) and Jonassen

(1991). Epistemologically, constructivism is learning or meaning making theory that explains the nature of knowledge and how human beings learn. The theory capitalizes on learner's abilities to construct viable knowledge and fosters discovery learning (Hartfield, 2010 in Kantar, 2013). A core notion of constructivism is that individuals live in the world of their own personal experiences (Karagiorgi & Symeou, 2005). Hence, individual learning experiences play a vital role in construction of knowledge because knowledge cannot live in its physical form and out of specific entity (Qiong, 2010). Knowledge is acquired through involvement with the content instead of imitation or repetition.

The goal of instructing should be to portray how to perform tasks instead of defining how to learn or to do the task. According to constructivist theory, micromanagement of students is not an effective means of instilling learning. Effective teaching involves engaging the student with real-world applications of how to use a tool instead of simply giving a list of prescribed instructions. A good constructivist teaching style involves presenting information in a variety of different ways by revising the content at different times and applying it to different purposes and contexts.

A competency-based curriculum focuses on a targeted learning process that identifies specific competencies in students. This enables learners to develop mastery of each of these competencies at their own pace. Besides offering a more personalized path to the course completion, the competency-based approach is also structured to demonstrate learning in clearly articulated competencies. It emphasizes authentic assessment to evaluate what the learner knows and can do through real-life projects. A competency-based training curriculum primarily emphasizes on what learners are expected to *do* rather than simply focusing on what they are expected to *know*.

Literature Review

Orodho et al. (2013) who examined curriculum for Kenyan public primary schools noted some challenges affecting curriculum implementation. These challenges included inadequate teachers, inadequate teaching materials, insufficient focus on the learner and lack of motivation among teachers. Similarly, Sikoyo (2010) conducted a study in Uganda on the contextual challenges of implementing learner-centred pedagogy. The findings indicated that, teachers had quite varied understanding of the curriculum that affected the implementation as well. Bizimana and Orodho (2014) conducted a study on curriculum implementation in Rwanda

and it revealed that implementation of CBET was affected by lack of effective teaching methods and resources.

More literature including UNESCO-UNVOC (2013), and Zinn (2019) have shown that for CBET to be implemented effectively it requires adequate training and learning resources including machines, books, and other teaching tools to facilitate a learner in mastering application skills. The availability of resources for implementing the CBET curriculum includes both human resources, which imply the provision of tutors and teaching and learning facilities that include farm as practical sites, laboratories, workshops, library, and classrooms with necessary equipment. Kufaine and Chitera (2013) found that effective implementation of CBET requires lots of teaching and learning materials since it emphasizes practical and immediate assessment. Furthermore, CBET implementation requires up-to-date teaching and learning aids as technology keeps on changing. CBET approach's emphasis on using updated materials for teaching so that graduates could have competences relevant to the employers need and labour market (Kufaine & Chitera, 2013).

Likewise, in Tanzania, Makunja (2016) reported challenges facing curriculum implementation to be, lack of sufficient in-service training to teachers on CBC; insufficient teaching and learning resources, overcrowded classrooms, and students' readiness to accept CBC. Furthermore, Komba & Mwandaji (2015) reported that the majority of the interviewed teachers (86%) did not have proper understanding of the objectives of competence-based curriculum. In addition, the majority (78%) of reviewed lesson plans did not reflect the qualities of competence-based lesson plans. Moreover, the involvement of students in classroom activities by the teachers who were observed was very low. A study conducted by Muneja (2016) reported that teachers were experiencing multiple challenges, the key ones being lack of participation in curriculum design, lack of quality textbooks and lack of motivation of implementing the competence-based curriculum.

Methods

The participants under this study were tutors from Ardhi Institute in Morogoro and Ardhi Institute in Tabora. The two selected institutes were purposely chosen for being the oldest and prominent tertiary training institutes and they have been using CBET curriculum for years, compared to other tertiary institutes. The study adopted a convergent mixed method design whereby the researcher collected and analysed qualitative and quantitative data at the same stage of the research process. Later, the researcher combined both categories of data to make a single interpretation.

A total of 25 tutors were involved in the study (18 from Ardhi Institute Tabora and 7 from Ardhi Institute Morogoro). The participants were purposively selected. Questionnaires and focussed group discussions (FGDs) were used to collect quantitative and qualitative data, respectively. Questionnaire validation was performed by literature review and pilot test. To ensure that the questionnaire covered all of the required components, the researcher used content validity by reviewing previous studies and assess the adequacy and accuracy of instruments with the assistance of field experts. Reliability was determined using test-retest technique and reliability index, was obtained by using Cronbach Alpha Method. Qualitative data were analysed thematically and presented in narrative forms whereas quantitative data were analysed using descriptive statistics using the Statistical Package for Social Science (SPSS) version 20.0 and results were presented in tables of frequencies and percentages.

Results

Tutors' level of understanding of competence-based curriculum and its objectives

Tutors were asked to comment on their level of understanding of competence-based curriculum and its objectives. Their responses are summarized in Table 1.

Table 1: Tutors' level of Understanding of the Concept and Objectives of competence-based curriculum

S/N	CBET Curriculum:	SA	A	U	D	SD
1.	Is based on need assessment	12(48%)	7(28%)	1(4%)	3(12%)	2(8%)
2.	Is based on task analysis	10(40%)	8(32%)	2(8%)	1(4%)	4(16%)
3.	Is focused, goals and outcomes oriented.	14(56%)	8(32%)	1(4%)	1(4%)	1(4%)
4.	Is based on available & adequate resources	8(32%)	6(24%)	3(12%)	4(16%)	4(16%)
5.	Consists of strategies to achieve curriculum goals and objectives	6(24%)	7(28%)	1(4%)	5(20%)	6(24%)
6.	Is based on assessment of media, modules, learning environment, teaching strategies and learning experience	7(28%)	6(24%)	2(8%)	4(16%)	6(24%)
7.	Develops skills for learning, skills for life and skills for work	13(52%)	8(32%)	1(4%)	2(8%)	1(4%)
8.	Is well-organized so that students learn and develop through a variety of contexts within both the classroom and other aspects of school life.	11(44%)	6(24%)	1(4%)	4(16%)	3(12%)
9.	Responds to individual needs and support particular aptitudes and talents.	9(20%)	6(24%)	3(12%)	2(8%)	5(20%)
10.	Provides a coherent experience	11(44%)	7(28%)	2(8%)	2(8%)	3(12%)
11.	Is based on reality of work place	13(52%)	5(20%)	1(4%)	3(12%)	3(12%)
12.	Helps students to see the value of what they are learning and its relevance to their lives, present and future	8(32%)	11(44%)	3(12%)	1(4%)	2(8%)
13.	Course contents, activities, and assessments are explicitly designed to develop the skills, understanding, and knowledge required by state standards	14(56%)	4(16%)	1(4%)	4(16%)	2(8%)
14.	Successfully balance the progressive development of knowledge and skills with labour-market requirements	11(44%)	8(32%)	3(12%)	2(8%)	1(4%)
15.	Enables learners to perform quality activities in the world of work	12(48%)	10(40%)	1(4%)	1(4%)	1(4%)
16.	Adequately prepare individuals for employment	7(28%)	8(32%)	2(8%)	3(12%)	5(20%)
17.	Is oriented towards both process (experiences and activities in the school settings) and product	13(52%)	7(28%)	1(4%)	2(8%)	2(8%)
18.	Operation is as intended	10(40%)	9(36%)	1(4%)	3(12%)	2(8%)
	Average	42.4%	29.0%	6.6%	10.4%	11.6%

Source: Field Data (2021)

Key: SA for (strongly agree) = 1, A (Agree) = 2, U (undecided) = 3, D (disagree) = 4 and SD (strongly disagree) = 5

As it can be seen in the Table 1, majority of the respondents (42.4%) strongly agreed with most of the statements on the level of understanding of the concept and objectives of CBET. Majority of tutors (56%) indicated that CBET curriculum is focused or goals and is outcomes oriented. 52% of participants designated that it develops skills for learning, skills for life and skills for work. 52% also showed that CBET is based on the realities of workplace and it helps students to see the value of what they are learning. Thus, it is relevant to their present and future lives. It is only 11.6% of the participants who strongly disagreed with most of the statements on the level of understanding CBET curriculum and its objectives, with the view that CBET curriculum is not aligned with the desired competencies whereas 6.6% of them were undecided on the question of the items.

Qualitative results of tutors' level of understanding of the CBET and its objectives

Majority of tutors indicated to have some level of understanding on competence-based curriculum by using words and phrases such as participatory learning, student-centred approach, skilful students after the completion of their studies. For example, one participant stated on his understanding of CBET that, 'CBET curriculum prepares students to be competent after completing their studies.' Another participant described CBET as a learner-centred approach whereby the student is supposed to be assisted. On the same note, another participant claimed that 'This is a full participation of students in learning and teaching process. Another participant gave an elaborate understanding of CBET, 'It is the involvement of students in learning and teaching process. In this process, the teacher or tutor acts as a facilitator; the student is expected to be self-directed. However, few respondents showed limited understanding of the concept of CBET curriculum. For example, during interview, one tutor commented:

> "To be frank I don't understand it clearly, but if I have to be trained, probably I can understand it''... (Abdalah, Focus Group Interview, Ardhi Institute, 19th November, 2021).

From this excerpt**,** lack of training is likely to affect tutor's competency in implementing the CBET curriculum.

Tutors' preparedness in implementing CBET curriculum

The study found out that majority of tutors were prepared to implement CBET curriculum as indicated by 72% of the tutors as presented in Figure 1.

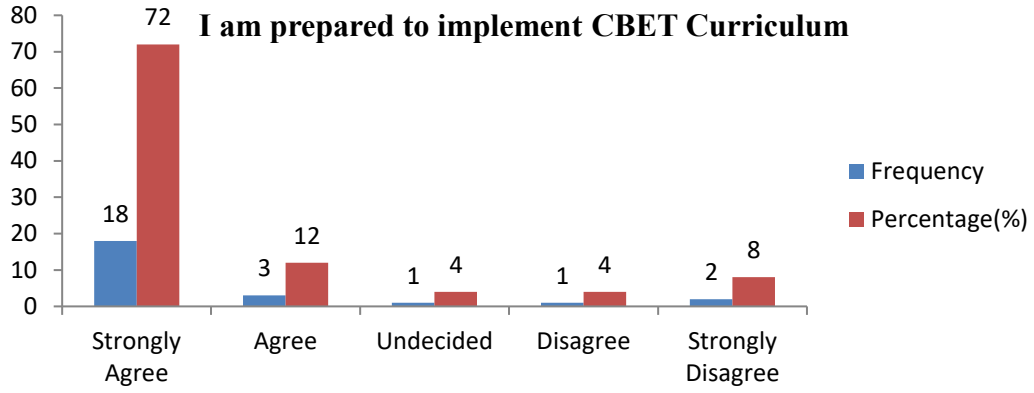

Figure 1: Tutors preparedness in implementing CBET curriculum
Source: Field Survey (2021)

Findings presented in Figure 1 on whether tutors were well prepared to implement CBET curriculum indicates that 72% of tutors strongly agreed that they were ready to implement the competence-based curriculum, 12 % of tutors agreed that they were well prepared. However, 8% of tutors strongly disagreed that they were equipped with regard to the implementation of CBET.

Qualitative results of tutors' preparedness to implement CBET curriculum

The findings presented in Figure 1 on tutor's preparedness to implement CBET curriculum was high. This statement was further supported by the tutor's argument, who said:

> "Tutors in our institute have improved in methods of teaching, for instance, our lesson preparation follows the competence-based curriculum and the teaching methods that we use are consistent with the competence-based curriculum. Tutors also use the question-and-answer techniques, demonstration, scaffolding, group discussions, problem-solving, problem trees, study tour or field trips, role play methods based on real life situations, case studies and work simulation activities when teaching. This has led to confidence among the students." (Baraka, Focus Group Interview, Ardhi Institute, 19th November, 2021).

From this excerpt, it can be stated that tutors have improved and adapted the preparation of teaching and learning basing on the CBET curriculum. This was further clarified by another tutor, who said:

> "I am conversant in using varieties of CBET teaching methods effectively in the class. I design teaching activities aimed at developing the key competencies. For me, I don't have any problem.'' (Rehema, Focus Group Interview, Ardhi Institute, 19th November, 2021).

For successful implementation of CBET curriculum delivery approach, tutors should be contented with the philosophy of CBET and strongly believe the potential of the CBET approach on its ability to boost employability and self-employment to students. The tutors should be open-minded about pushing ahead into CBET curriculum success hence tutors positive perception towards any educational approach is important for its successful implementation.

Challenges facing implementation of CBET in Tertiary Institutions

The data collected through and questionnaires and FGDs show that the challenges facing the implementation of CBET curriculum in tertiary institutions are as indicated in Figure 2.

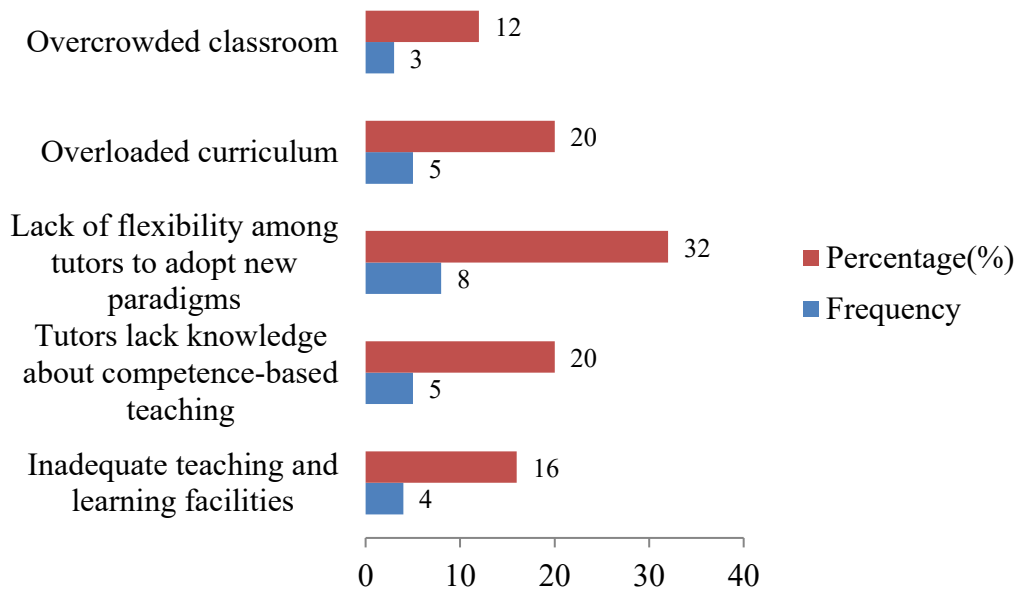

Figure 2: Challenges facing implementation of CBET in Tertiary Institutions

Source: Field Survey (2021)

The findings presented in Figure 2 reveal various challenges, including lack of flexibility among tutors to adopt new paradigms (32%), overloaded curriculum

(20%), overcrowded classrooms (12%), lack of knowledge about competence-based teaching (20%) and inadequate teaching and learning facilities (16%).

Tutors' little knowledge on competence-based curriculum

The analysis of data showed that 20% of the tutors felt that the limited knowledge about CBET curriculum was one of the challenges that affected their teaching practices. According to some tutors' little knowledge on competence-based curriculum, it could be attributed to lack of training on the CBET curriculum. Tutors considered this as a constraint because, as educators, they had little knowledge, competence, and confidence to implement CBET. The following quotes exemplify the tutors' claims:

> At our workplace, we are encouraged to use CBET approach when teaching students, but we do not have training. Therefore, we fail even how to help our students on this matter… we lack confidence of talking about CBET curriculum. The big problem is that most of us, our knowledge ends on preparation of competence-based lesson plans only" (Robert, Focus Group Interview, Ardhi Institute, 19th November, 2021).

Another Tutor, just like his colleagues, stated that:

> "It is believed that tutors know everything about CBET curriculum. But tutors who are here know very little on CBET Curriculum. We are doing things of which we are unsure. Knowledge is still low; we need to be trained more" (Benard, Focus Group Interview, Ardhi Institute, 19th November, 2021).

Overloaded curriculum

The findings indicated that 20% of respondents felt that overloaded curriculum was a challenge. -Issues like a heavy workload, large class size, low provision of teaching and learning resources were also mentioned. One tutor made the following comment:

> "If you decide to follow the Competence Based Curriculum procedures as it is supposed to be, you will find yourself the whole day teaching. It consumes a lot of time, and it is tough. Indeed, it is so complicated" (Grace, Focus Group Interview, Ardhi Institute, 19th November, 2021).

Inadequate teaching and learning facilities

The findings also indicated that there was insufficient teaching and learning facilities like textbooks, computer laboratories, classrooms and so on. Out of 25

tutors who filled the questionnaires, 4 tutors (16%) noted that there was insufficient teaching and learning facilities to enhance CBET implementation. Insufficient teaching and learning facilities hinder effective implementation of CBET and students cannot develop the independent learning skills, problem solving and inquisitive minds, thus depriving them the opportunity to become competent.

Lack of flexibility among tutors to adopt CBET curricular

Furthermore, the findings revealed that, 32% of respondents had mixed feelings on their readiness to adopt competence-based curriculum. Some of tutors indicated that they received the change positively and they were trying to cope with it, while others seemed not willing to adopt the change. Those who were reluctant to accept the change indicated that they continued to employ teacher-centred approaches. According to the findings, this challenge was common among tutors of all age groups and experiences. The following quotation exemplifies what the tutors said regarding this issue:

> "The feelings on tutors' readiness to adopt competence-based curriculum for most tutors are mixed. There are those who are ready to change and those who are not ready to change. It is like half by half. There are those who are ready because now it is CBET Curriculum, so every tutor is supposed to prepare activity plan and assessment plan based on CBET format. And there are those who are not ready" (Marko, Focus Group Interview, Ardhi Institute, 19th November, 2021).

Another tutor stated that:

> "How can I teach without being trained? How do you expect me to do this task? It is difficult to teach without being made aware on the issue. Normally, we teach the way we know. For instance, I have not enough knowledge to practice this curriculum, then what do you expect?". (Moses, Focus Group Interview, Ardhi Institute, 19th November, 2021).

Discussion

This study concludes that tutors' level of understanding of CBET is high though at varied levels. The impact of minimum understanding of CBET is often reflected in the classroom teaching practice. As other studies have indicated that it is convenient for teachers who are the main implementers of the curriculum, to become cognizant

with basic understanding of CBC (Komba & Mwandanji, 2015; Komba & Sigala, 2015).

The majority of tutors in this study are prepared to implement the Competence-Based Education Curriculum. This is in contrary to findings from Tilya & Mafumiko (2010) and Mosha (2012) who argued that in reality, many teachers are not prepared to implement the competency-based curriculum in Tanzania. Although teachers are central in the implementation of competence-based curriculum, some studies conducted in other countries which examined the curriculum reforms in promoting competence-based learning indicated inconsistent findings. For example, in China, it was found that teachers were not key implementers of the curriculum (Jin & Li, 2011). Although teachers were very autonomous in the classroom, they have trouble in implementing the new curriculum because they were not involved in its development process. In China, which is the biggest education system in the world, the implementation takes place at all three levels: national, provincial/prefecture/city and school (Tan & Reyes, 2016). Similarly, Makeleni (2013) found that, teachers in South Africa were inadequately implementing outcome-based curriculum, due to factors related to financial support to teachers.

Challenges facing CBET implementation in this study were inadequate preparation in establishing CBET curriculum, lack of awareness among tutors, limited understanding on implementation and inadequate teaching and learning materials (Kanyonga et al., 2019). Msuya (2016) commented that application of CBET curriculum has been facing many challenges such as insufficient teaching and learning resources, equipment and information and communication technology (ICT) facilities. Other challenge to CBET curriculum is that it focuses on employers' immediate desires and thus limits the flexibility of learning in future context. Therefore, it is objective oriented and disregards the social learning contextual environment (Bates, 2014).

In general, the study found that, there were challenges that affected the effective implementation of the CBET curriculum. The major challenges found by the study were insufficient teaching and learning materials as well as inadequate training. Furthermore, the other identified challenges include big numbers of students in classrooms, teaching and learning materials in the colleges are not provided on the right time, inability of students to learn using learner-centred teaching methods and substantial number of modules or courses. These challenges are in line with those found by Rutayuga (2012) who found that, CBET was challenged by many factors

the major ones being financial, physical, and human resources as well as outdated equipment and lastly most of trainers are not teachers by profession. Studies conducted in Tanzania showed that the implementation of (CBC is faced by many challenges including teachers' reluctance to shift to the new paradigm of teaching, lack of in-service training to teachers regarding the CBC, lack of knowledge and proper understanding of the CBC among teachers, lack of teaching and learning resources to implement the CBC and poor language proficiency on the part of some teachers and most students (Komba & Mwandanji, 2015; Makunja, 2016; Nyoni, 2018, Miseda & Kitainge, 2021).

From the findings of the study, it can be concluded that: majority of the tutors understand CBET curriculum and its objectives, majority of tutors are prepared to implement the competence-based education curriculum, and effective implementation of CBET curriculum is curtailed by a number of challenges which need to be addressed.

Recommendations

Based on the findings and the conclusion made, the following recommendations are made:

Tutors should be given frequent professional development programmes that conform to the CBET curriculum. This will enable them to be efficient in terms of what they teach in the curriculum. Secondly, the goal of competence-based curriculum design is to ensure that learners are able to demonstrate their learned competences after they have acquired a necessary combination of knowledge, skills, and abilities. Students acquire these competences through learning activities. These learning activities must be related to the contents of the subjects or courses undertaken. Thirdly, policymakers, curriculum developers and other stakeholders need to put in place practical guidelines on how to use CBET curricula in teaching and learning process in tertiary institutions.

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