

Competency-Based Teaching in Teacher colleges: Current Practices and Prospects

Abstract

This study sought to investigate the current practice and prospects of Competency-Based Teaching (CBT) in Tanzania Teacher colleges. Specifically, the study explored the expected competences in teacher education, examined the teaching and learning techniques to strategies used by tutors to implement CBT, and evaluated the assessment tools used by tutors to assess the mastery of competences. The study was conducted in two Teacher colleges in Mbeya Region. A mixed research approach with a concurrent-triangulation design was employed in the study. Data were collected through the use of questionnaires, semi-structured interviews, and focus group discussions and analysed by using Statistical Package for Social Sciences (SPSS) software version 20 to get frequencies and percentages for quantitative data, and content analysis for qualitative data. The result revealed that, there is a mixed understanding of the competences of the subjects they teach among tutors in teacher colleges. While 70.5% of tutors were revealed to have an understanding of the competences of the subjects they teach, nearly 25% of tutors teaching the same subjects were not aware of the competences and appeared to have no access to the subjects' syllabuses. This was noted to be one of the reasons for some of the tutors remain using teacher-centred approaches. It was shown further that, there was limited use of interactive teaching and learning techniques during teaching and learning as tutors employed very few teaching and learning techniques in teaching and learning processes. For instance, the findings demonstrated that, brainstorming (65.0%), organized classroom discussion (75.0%), and group work (80.0%) were the major teaching and learning techniques mostly used by tutors during teaching. This was said to be one of the factors that limit student-teachers understanding of the intended competences and the failure to use unfamiliar interactive techniques in the field of work. Moreover, the findings revealed that, though tutors were very familiar with multiple assessment tools but only opted to use group assignments (80.0%), individual assignments (75.5%), and classroom written assignments (50.0%) to assess students' mastery of the taught competence. This was opposed to CBT which emphasizes the use of multiple assessment tools as competences develop permanently once adequate assessment activities are carried out during the teaching and learning process. It is concluded that, the effective implementation of CBT in primary and secondary schools depends largely on how well student-teachers are prepared in both private and government Teacher Colleges.

Keywords: Competency-Based teaching, Teacher Colleges, and Current practice

Comment [Z11]: Whose competences are we referring to here? Can teacher education be the subject?

Comment [Z12]: Whose techniques are we referring to here?

Comment [Z13]: Precisely, what is this study objective all about

Comment [Z14]: Include a missing word

Comment [Z15]: Were the few used, CBT or teacher centered?

Comment [Z16]: Would you like to consider assessment as one of the key words?

1. Background to the problem

In a modern industrial society, education and professional qualifications can no longer be described according to a rigid standard of knowledge in a specific subject based from one generation to another (Hartig, Klieme, & Leutner, 2008). Thus, the shift from a Content-Based Curriculum to a Competency-Based Curriculum in Tanzania in the early 2000s can be described as a result of both national and global influences. Hartig, Klieme, and Leutner, (2008) maintain

that building competences have been identified as the main objective of education systems and are a driving force for the shift from knowledge acquisition to knowledge application. Knowledge acquisition focused on a narrow set of academic outcomes and fails to recognize that a student's success is dependent on a full range of foundation skills, including social-emotional and the application of skills; (Mosha, 2012, & Mkonongwa, 2018). In such a regard, the change from a content-based curriculum to a competency-based curriculum is thought to be more relevant to the current market demand (Mosha, 2012).

Studies (see for example Rutayuga, 2014) maintains further that, the competency-based curriculum is favored due to the claim that, it has significance in the development of science and technology specifically, in training students in aspects that are in line with occupational and job skills; hence, producing graduates who are more competent as per employer's requirement. This signifies that competency-based teaching emphasizes the development of competences to learners instead of grades and focuses on the real-world aspect of applying the knowledge rather than just on the ability to recall the knowledge (Drisko, 2014). Thus, it limits the traditional methods of teaching and learning and assessments, and the roles of teachers have changed to competency-based assessment in order to incorporate outcomes-based learning rather than a theoretical understanding of concepts (Hartig, Klieme, & Leutner, 2008; Kafyulilo, Rugambuka, & Moses, 2013; & Mkonongwa 2018).

Comment [Z17]: This sentence is too long for the reader to remain focused on the key idea/message you are talking about.

A study by Idrissi, Hnida and Bennani (2016), defined Competency-Based Assessment (CBA) as the measure of a learner's competency against a standard of performance. In other words, it is a process of collecting evidence of analyzes students' progress and achievement. In such regard, a competency-based curriculum requires multiple ways of assessing learners in order to determine their competences (Mkonongwa, 2018). To implement these changes, it is necessary that all teachers become knowledgeable and equipped with new alternative approaches to assessments as the implementation of a Competency-based curriculum, depends on the teacher's ability to prepare and carry out teaching-learning activities effectively; (Nzima, 2015 & Mkonongwa, 2018). Similarly, Mosha, (2012) contends that one of the criteria for a successful implementation of a competence baseds curriculum is qualified teachers with sufficient and appropriate knowledge and skills.

Comment [Z18]: Check to see if these were the words you intended to use.

Comment [Z19]: Double check for the what you wanted to share here.

It appears that the need for changes in the instructional and assessment approaches, calls for the need to equip teachers with the necessary competences for handling new teaching-learning processes (UNESCO, 2007). Teacher Colleges as training institutions responsible for preparing teachers should focus on learning outcomes to constantly improve the academic programs to meet the labor market demands. Thus, the assessments of students should focus on collecting evidence about the everyday progress of their learning and provide them with information about the teaching and learning processes (Ions, Cano & Cabrera 2016).

In this light, tutors should understand the competences intended to be developed for student-teachers, teaching and learning techniques as well as the use of different assessment tools necessary for teaching and learning processes to determine pre-service teachers' mastery of competences. Studies show further that students' mastery of competency needs to be assessed more than one time with the use of multiple assessment methods including multiple-choice, tests, papers, performance-based real-world assessments, portfolios, and projects (Drisko, 2014). In this sense, formative assessment is a key strategy for improving the quality of teaching and

Comment [Z110]: Are these forms/ types of assessments as well?

learning processes in Teacher Colleges since it allows student-teachers to be assessed as tutors continue to teach.

Furthermore, the use of multiple assessment methods allows student-teachers to reflect, regulate and monitor their learning progress, evaluate their own learning and get feedback (Losioki, 2018). In the same light, tutors need to consider students' assessment as an ongoing process in which their competences are continuously built and assessed, and are expected to be observed as employed. The ability of students to think and act in terms of relevant competences that are aimed at preparing students who are confident, critical, creative, and innovative thinkers depends largely on assessment methods employed by Tutors (Losioki, 2018). It appears that, classroom teaching should shift from **centred on lectures, pencils and paper tests** because what is important in the competency-based assessment is that, a learner should be practical and promote the subject of their own learning (Murioz & Araya, 2017).

Comment [Z111]: Double check and rewrite the sentence with accurate information

However, despite seventeen years of implementing a competency-based curriculum in Tanzania, recent pieces of literature (See for example Edson, 2016; Lupeja, 2021) state that the practice of learner assessment from primary to secondary schools has remained of passing examinations. Student assessment is still taken as the stepping stone for formal employment and not the means of equipping useful and applicable competences to a learner's life. It seems that till today, the focus of classroom teaching and learning processes remained the same, enabling students to memorize the facts taught and reproduce them in examinations to qualify for further studies and formal jobs. It has been observed further that, the majority of teachers have a narrow understanding of competency-based curriculum and poor pedagogical skills due to little or no training on competency-based curriculum, hence, the use of traditional methods of teaching and assessment is still dominant (Edson & Shawa, 2021; Lukindo, 2016; Komba & Mwandanji, 2015; Kafyulilo, Rugambuka & Moses 2013; Moshia 2012; and Wrag, 2004). This suggests that teachers in both primary and secondary schools are not implementing a competency-based curriculum.

Similarly, Nzima (2016) maintains that teachers' instructional practices can easily be described as teacher-centered, theoretical, and maintaining **instructions authoritarian** rather than the learner-centred character as the new curriculum emphasizes. He added that, the lecture method-dominated instructional characteristics by strong framing and classifications. The study by Makunja, (2015) notes that the majority of teachers lacked the requisite knowledge for implementing a competency-based curriculum during the teaching and learning process. Kafyulilo *et al.*, (2013) observed further that, pre-service teachers perceived their understanding and ability to implement competency-based teaching approaches as high, but during interviews, it was revealed that, they had difficulties in explaining some competency-based concepts. This gives the view that pre-service teachers had an inadequate understanding of the competence curriculum. Moreover, it was noted further that competency-based teaching approaches are not well implemented in Tanzania schools and more efforts need to be devoted to the development of teachers.

Comment [Z112]: Double check for the order of these words

A study by Rutayuga (2014) observed that the weakness of CBT in Tanzania is the competency of teachers. The preparation of teachers to take off this kind of system is not adequately done. He added that the way teachers teach and assess the competences of their students is problematic as they teach somehow competence-based and somehow knowledge-based; so, it is confusing. This infers that, though teachers who are the key implementers of curriculum seem to have inadequate

knowledge and skills in competency-based curriculum and assessment. Consequently, it can be interpreted that, the teaching is teacher-centered thus, students are not engaging in learning activities. It is likely that teachers are not practicing for students' assessment as opposed to social constructivism learning theory. As long as Teacher Colleges prepare both primary and secondary school teachers, this paper seeks to investigate the current practices and prospects of competency-based teaching in Tanzania Teacher Colleges.

What is the context of teacher education in Tanzania?

2. Theoretical Underpinning

The change from traditional teaching to competency-based teaching meant that teachers must make important paradigm shifts in their views of knowledge and learning, and re-think their current teaching strategies in light of these new ideas (Bada 2015 & Berry, 2005). In this regard, the current study is guided by the social constructivism learning theory that insists students to engage in the process of teaching and learning and construct their own competences. Berry, (2005), states that, for students to be actively engaged in creating their own understanding, they must learn to be critical assessors who make sense of information, relate it to prior knowledge, and use it for new learning. Woolfolk (1993:485) as cited in Tam, (2000), the key idea of constructivism is that, students actively construct their own knowledge: the mind of the student mediates input from the outside world to determine what the student will learn. Similarly, Tam (2000) ~~urges-argues~~ further that, constructivism assessment gives students' ownership of what they learn, since learning is based on students' questions and explorations, and often the students have a hand in designing the assessments as well. To improve the teaching-learning process, tutors should use formative assessments to provide frequent feedback to both tutors and students. Therefore, a competency-based curriculum has created room for active learning that requires the use of formative assessment in which both the assessment methods and the teaching strategies are student-centred to enable them to construct their understanding.

3. Material and Methods

The study employed a **mixed research approach** with the use of a concurrent-triangulation design of data collection. Thus, the study contained both **quantitative and qualitative data** which were collected, analyzed, and presented at the same time with the purpose of validating the findings generated by each method (Kroll & Neri, 2009). A total of **fifty (50) participants** from two Teacher Colleges were involved in the study and were purposely selected given the reason that the implementation of competency-based teaching and learning is greatly stimulated by their participation and efforts. The data were collected through questionnaires that were administered to **thirty (30) tutors specifically, (09 tutors for Computer Science Pedagogy, 05 tutors for Communication Skills, and 16 tutors for Education studies)** and **twenty (20) students**. Similarly, a semi-structured interview was scheduled with Academic Coordinators and Quality Assurance Coordinators, and a focus group discussion was held with **students** to get more insights on the implementation of Competency-based teaching in Teacher Colleges. Finally, quantitative data were analyzed through the use of Statistical Package for Social Sciences (SPSS) software version 20 to make frequencies and percentages and content analysis accompanied with verbatim quotes for qualitative data.

Comment [Z113]: If you truly used mixed methods, did you test any hypotheses in your study? If yes, which hypotheses did you measure?

Comment [Z114]: Which data was collected quantitatively and which one was collected qualitatively?

Comment [Z115]: How statistically significant is this sample?

Comment [Z116]: Why did you have differing numbers of participants for each of the categories that participated in the study?

Comment [Z117]: How many students participated in the FGD and how many students constituted each FGD?

Comment [Z118]: Are these students part of the other 20?

How did you take care of ethical issues in your entire study, pay more attention to the data collection stage.

UNDER PEER REVIEW

4. Findings and Discussion

The findings and discussions are presented based on the specific objectives of the study as indicated below:

5.1 Tutors' understanding of Competences in Teacher Education

The study explored tutors' understanding of the competences as described in the syllabus of some subjects' taught in Teacher Colleges including Computer Science Pedagogy, Communication Skills, and Education Studies syllabus. Data were collected from tutors (n=29) through questionnaires and as shown in Table 1 below.

Table 1: Tutors' understanding of competences of the respective subject (n=29)

<i>Competences (Computer Science Pedagogy)</i>	<i>Frequency and Percentage (%)</i>		
	Disagree	Undecided	Agree
Analyze and interpret correctly ICS curriculum materials for teaching and learning in ordinary-level secondary schools	1(11.1)	1(11.1)	7(77.7)
Apply learner-centred approaches, strategies, and techniques in teaching and learning ICS to learners including those with special needs	1(11.1)	1(11.1)	7(77.7)
Use ICT resources and technology for effective teaching and learning of ICS	-	2(22.2)	7(77.7)
Use appropriate assessment tools for effective assessment of students' performance in ICS;	2(22.2)	1(11.1)	6(66.6)
<i>Competences (Communication Skills)</i>	<i>Frequency and Percentage (%)</i>		
	Disagree	Undecided	Agree
Interpret written and spoken discourse	-	1(25.0)	3(75.0)
Make effective oral presentations	-	2(50.0)	2(50.0)
Use study skills to gather information	-	1(25.0)	3(75.0)
Write good essays, letters, CVs, minutes, memos and reports	-	2(50.0)	2(50.0)
<i>Competences (Education Subject)</i>	<i>Frequency and Percentage (%)</i>		
	Disagree	Undecided	Agree
Apply knowledge of basic concepts in psychology, educational psychology, guidance and counselling in teaching and learning;	-	3(18.8)	13(81.2)
Apply curriculum theories in planning, implementation and evaluation of school curriculum;	-	2(12.5)	14(87.5)
Translate philosophical contributions of distinguished philosophers into day-to-day educational professional practices; and	-	5(31.2)	11(68.8))

Comment [Z119]: What message do you really need the reader to take home by using this verb? To what extent do the constructs presented in Table 1, help you measure this variable?

Comment [Z120]: May be guide your readers by rewriting the actual opening question/ sentence or instructions that guided respondents to choose appropriate alternatives for Table 1 responses.

Comment [Z121]: What is the sample against which you got these statistics? If it is 29 as indicated above, what explanations do you have for the low response rate of participants in returning your research instruments?

Comment [Z122]: To what extent do constructs of analyze, use, and apply measure your variable of understanding?

Demonstrate organizational, leadership, and management skills in educational training	-	4(25.0)	12(75.0)
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The analysis of the finding in Table 1 indicates that the majority of tutors had an understanding of the expected competences as described in the syllabus based on the respective subjects they teach. For example, nearly 74.9% of tutors teaching Computer Science Pedagogy subject and 62.5% of tutors teaching Communication Skills seem to have an understanding of competences. It was observed further that, 78.1% of tutors demonstrated an understanding of the competences taught in Education Subjects.

Tutors' understanding of the competences taught to the specific subjects was further confirmed by tutors' comments in the questionnaires as one the tutor teaching Computer Science pedagogy commented that:-*'other competences taught in this subject include; student-teachers ability to use computer knowledge and skills in preparing lessons and apply it in teaching and learning process....use computer tools to keep students' records and personal learning'*. Another tutor of Education subject added that:-*"Apart from that, other competence we develop to our students is to apply curriculum and teaching knowledge and skills to prepare and use various teaching and learning methods and assessment tools in teaching and learning"*.

The quote above justifies that tutors were not only able to rate the competences as shown in table 5:1 but also mentioned other competences taught to the subjects they teach. This demonstrates that; tutors had an understanding of the competences taught in Teacher Colleges as described in the syllabus of the respective subjects. In researchers' own views, tutors' understanding of the competences appears to be one of the crucial factors in implementing a CBT. Understanding the competences provides a great opportunity for tutors to select appropriate teaching and learning techniques and assessment tools that engage students in the learning process.

Similarly, the findings in table 1 indicate further that 11.8% and 13.8% of tutors teaching Computer Science Pedagogy disagreed and were undecided towards the described competences, while 37.5% of tutors of communication skills and 21.9% of tutors teaching education subjects were undecided with the competences to the subjects they teach. This show that, some tutors were not aware of the competences of the subject they teach and it seems that they had no access to the subject syllabus. This was also observed in one of the tutors' comments on other competences of the subjects when one of the tutors mentioned; *"Remembering, understanding, applying, evaluating and creating"* as other competences for communication skills....and another tutor mentioned *'cooperative learning, collaborative skills, affective domain and, the cognitive domain'* as other competences of education studies.

Comment [Z123]: Why do you have this assumption?

The mentioned competences were contrary to what has been described in the syllabus of the particular subjects. The findings imply that despite the majority of tutors having an understanding of the subjects they teach, ~~but~~ few were not aware of the competences taught in different subjects they teach. This can be described as one of the reasons for some of the tutors to remain using teachers-centred approaches in teaching and learning processes as opposed to the current emphasis of CBT.

Comment [Z124]: Isn't this a baseless allegation? What evidence did you get from the field that communicates this position?

The findings on tutors' lack of understanding of the competences of subjects they teach are in line with Rutayuga (2014) who asserts that, the way teachers teach and assess the competences of their students is problematic as they teach somehow competence-based and somehow knowledge-based; so, it is confusing. For effective implementation of CBT tutors should understand the competences of the subject they teach as described in the syllabus. This will help them to have a clear link among the competences taught, proper use of teaching and learning techniques, and the selection of suitable assessment tools that measure the intended competency skills and knowledge of the specific subject.

4.2. Teaching and learning Techniques used by Tutors to implement CBT

The current study also examined the teaching and learning techniques used by tutors to implement CBT in Teacher Colleges. The data were obtained from both tutors and students. The analysis of the findings revealed that sometimes tutors use lectures (70.0%) and punctuated lectures (60.0%) in the teaching and learning process as shown in Table 2

Table 2 Tutors' responses on Techniques frequently used to implement CBTL (n=30)

Techniques	Frequency and Percentage (%)		
	Never	Sometimes	Always
Individual assignments	-	1(3.3)	29(96.7)
Group work	-	5(16.6)	25(83.3)
Lecture	1(3.3)	21(70.0)	8(26.7)
Role-play	3(10.0)	18(60.0)	9(30.0)
Library search	-	14(46.7)	16(53.3)
Punctuated lecture	1(3.3)	18(60.0)	11(36.7)
Think-Ink-Pare-Share	1(3.3)	9(30.0)	20(66.7)
Case Studies	1(3.3)	18(60)	9(36.7)
Organized classroom discussions	-	10(30.3)	20(66.7)
Gallery walk	1(3.3)	10(33.3)	19(63.4)
Brainstorming	-	2(6.7)	28(93.3)

Comment [Z125]: What are these ones?

Comment [Z126]: What is a punctuated lecture? Did all respondents understand this technique of teaching?

Comment [Z127]: Could this be part of this technique?

The findings in Table 2 indicates further that, though case studies (60.0%) and role-play (60.0%) were sometimes used by tutors in teaching, the majority of tutors seem to use interactive teaching and learning techniques including individual assignment (96.7%), brainstorming (93.3%), group work (83.3%), think-ink-pair-share (66.7%), organized classroom discussions (66.7%), gallery walk (63.4%) and library search (53.3%) in teaching and learning. The use of multiple learners-centred approaches implies that students were actively engaged in the learning process throughout the session.

Comment [Z128]: Is this really necessary here?

A subsequent interview with Internal Quality Assurance Coordinators on the use of teaching and learning techniques confirmed further that tutors used activities-based teaching and learning techniques such as group work, discussion, and presentations that put students at the centre of learning and inform students about the competency intended to be learned. He reported further that students were assigned to read textbooks and prepare their own learning materials through portfolio collection and the role of the tutor was only to guide and assist students learning. Similar findings on the use of interactive teaching techniques were also reported in a subsequent interview with one of the Academic Coordinators who commented that "In most cases, tutors use

various teaching methods like debate, interview *me* technique, jig saw, inside and outside the circle, and songs which are among of the best interactive methods of teaching and learning that develops discovery learning, creativity, innovation and create confidence to students”.

Comment [Z129]: Is this part of this technique?

The assertion above suggests that the majority of tutors use teaching and learning techniques that encourage interaction between tutors and students in building the intended competency of students. The quotes also give the view that the role of tutors in Teacher Colleges seems to be that of creating a friendly classroom learning environment that emphasizes collaboration and allows students to learn by sharing their ideas and experiences through reading books, discussion, and presentation. The findings concur with the study of Mkonongwa (2018), who observed that competency-based teaching should be shifted to a learner-centred approach in which the learner takes control of the learning process while the teacher becomes a facilitator of the learning process. This implies that implementing CBT requires the use of multiple interactive techniques including project work, group work, and presentation that engage many students in learning and make it easy to observe the students learning outcomes.

However, the student’s responses on techniques of teaching and learning were a little bit contrary to that of the tutors. The analysis of the findings suggests that tutors always used group work (80.0%), brainstorming (65.0%), and individual assignment (50.0%) in classroom teaching as revealed in table 3.

Comment [Z130]: From whose perspective?

Table 3 Students’ responses on Techniques T/L frequently used by Tutors (n=20)

Strategies	Frequency and Percentage (%)		
	Never	Sometimes	Always
Individual Assignments	-	10(50.0)	10(50.0)
Group work	-	4(20.0)	16(80)
Lecture	4(20.0)	8(40.0)	8(15.0)
Role-play	5(25.0)	12(60.0)	3(30.0)
Library search	8(40)	8(40.0)	4(30.0)
Punctuated lecture	6(30.0)	12(60.0)	2(10.0)
Think-Ink-Pare-Share	1(5.0)	11(55.0)	8(40.0)
Case Studies	7(35.0)	10(50)	3(15.0)
Organized classroom discussions	-	5(25.0)	15(75.0)
Gallery walk	1(5.0)	12(60.0)	7(35)
Brainstorming	-	7(35.0)	13(65.0)

The students’ responses in table 3 demonstrate further that, tutors sometimes used gallery walk (60.0%), think-ink-pair-share (55.0%), and individual assignments (50.0%) were not always used by tutors in teaching and learning as opposed to tutors’ responses in table 2. Students reported further that, punctuated lecture (60.0%), role play (60.0%) and case studies (50.0%) also were sometimes used in classroom teaching while some students reported that library search (40.0%), case studies (35.0%) and punctuated lecture (30.0%) had never been used during teaching and learning process.

Comment [Z131]: As a researcher, did you take the effort to explain to participants what these teaching techniques implied?

This implies that, though tutors seem to be familiar with different teaching and learning techniques, ~~but~~ very few techniques were always used during the teaching and learning processes. The use of few teaching and learning techniques can limit student-teachers

understanding of other interactive techniques required in implementing CBT. This might be one of the reasons many student-teachers do not apply multiple teaching and learning techniques in both primary and secondary schools.

Comment [Z132]: Could this be relevant here? Or the most appropriate interpretation of the data presented?

However, the use of a syllabus that is knowledge-based as reported by one of the academic coordinators, seems to be a reason for the partial implementation of CBT in Teacher Colleges as most tutors seem to remain in the old fashion of teaching. The use of interactive teaching and learning techniques not only makes students understand the intended competency but also familiarises the student-teachers with different teaching and learning techniques as are expected to apply them in schools.

Comment [Z133]: How is it possible that the same education system, is implementing two teacher education curricula?? What is the Ministry of Education's stand on this issue?

Conversely, the emphasis on using interactive teaching and learning techniques were also confirmed by students during focus group discussion in which the majority (almost 80.0%) of students reported that the use of interactive teaching and learning methods like the jig-saw method whereby they are divided into small groups and discuss the work given to them and then sharing what they have discussed to another group, make them easy to understand the competency of the subject taught. Similar comments, emphasizing the use of interactive teaching and techniques were also reported by the other students, who argued that: -*"The use of interactive methods in teaching and learning like demonstration methods is also favorable in developing competences to students because the involvement of students helps to understand and gain knowledge through their sense organs such eyes, and ears from the experienced person...."*

Comment [Z134]: 80% of how many participants?

Another quote was given by one of the students in the focus group discussion who reported: -*"The use of debate, field practice ~~and as well as~~ question and answer ~~techniques~~ encourage us to participate in learning and help us to develop critical thinking and increase confidence to us as we learn by doing or observing real things"*. Similarly, another student was quoted that: -*"In developing competence in students the use of lecture method denies students participation in classroom learning and make students ~~claim-cram~~ the concept taught instead of understanding it"*.

The above interview quotes suggest that despite tutors employing few teaching and learning techniques, ~~but~~ students are aware of other collaborative teaching and learning techniques that are essential in enhancing students' participation in learning. This was demonstrated by students' ability to mention various collaborative techniques and demonstrate how they can be used for teaching and learning in building the intended competency to students.

Notwithstanding, the findings are contrary to a study by Kafyulilo et al, (2013) who observed that; pre-service teachers perceived their understanding and ability to implement competency-based teaching approaches as high, but during interviews, it was revealed that they had difficulties in explaining some competency-based concepts. In researchers' own view, less use of multiple teaching and learning techniques by tutors may cause some student-teachers to have a narrow understanding of competency-based concepts. Thus student-teachers may lack the ability to select appropriate teaching and learning techniques in building the intended competency skills and knowledge as described in the syllabus.

Similarly, inappropriate training for tutors, tutor-student ratio, and shortage of teaching and learning facilities were mentioned by nearly 65.0% of participants that, were some of the causes that hinder the implementation of CBT in Teacher Colleges. This implies that there is irregular training for tutors on CBT especially for private Teacher Colleges as the majority of tutors had

never attended any training on Competency-Based Education and Training, hence they lack appropriate skills for implementing CBT. Likewise, the student-tutor ratio, and teaching and learning facilities should be improved to provide a smooth implementation of CBT in Teacher Colleges.

4.3. Assessment tools used by Tutors to assess the mastery of competences

Finally, the study evaluated assessment tools used by tutors to assess students' mastery of the intended competency. The data in Table 4 indicates that tutors always use multiple assessment tools including classroom tests (86.7%), group assignments (93.3%), classroom presentations (76.7%), individual assignments (83.3%), research work projects (63.4%) and classroom written assignments (76.7%) to assess students' mastery of the taught competency. The analysis of findings shows further that tutors use weekly tests (63.3%), terminal examinations (86.7%), and final examinations (90.0%) in assessing students learning as shown in Table 4.

Table 4: Tutors' responses on assessment methods frequently used to assess students (n=30)

Methods	Frequency and Percentage (%)		
	Never	Sometimes	Always
Classroom Tests	1(3.3)	3(10.0)	26(86.7)
Group assignments	-	2(6.7)	28(93.3)
Classroom presentation	-	7(23.3)	23(76.7)
Individual assignment	-	5(16.7)	25(83.3)
Research work project	2(6.6)	9(30)	19(63.4)
Classroom written assignments	3(10.0)	4(13.3)	23(76.7)
Observation Checklist	4(3.3)	12(40.0)	14(46.7)
Oral tests	6(20.0)	15(50.0)	9(30.0)
Weekly tests	7(23.3)	10(33.3)	13(63.3)
Terminal Examinations	-	4(13.3)	26(86.7)
Final examination	-	3(10.0)	27(90.0)

It appears from the findings that the majority of tutors seem to use multiple interactive assessment tools that make students perform and demonstrate the taught competency of a specific subject. Similarly, the findings indicate further that tutors also preferred most the use of terminal and final examinations to assess students' understanding of the taught competence.

Similarly, a subsequent interview with Internal Quality Assurance coordinators confirmed further that, in most cases, tutors use individual assignments, group assignments, midterm tests, and examinations to assess students' learning. However, it was reported that the use of multiple assessments in teaching and learning was not used by all tutors. Some tutors were reported to be not exposed to several assessment tools and for them, teaching and learning were no longer collaborative, and less use of multiple assessment tools in assessing students learning progress.

This was also observed in previous studies such as a study by Forsido (2019) who maintains that there was a huge difference among teachers teaching the same subject in assessing students' performance and the validity of the whole assessment falls under question. Being not cemented, this can cause ineffective assessment of the indented competency to students learning. In the researchers' own view, the lack of exposure to other assessment tools by some tutors may be due

Comment [ZI35]: How does classroom written assignments differ from classroom tests?

Comment [ZI36]: What is the difference between terminal and final examinations?

Comment [ZI37]: How are these two different?

Comment [ZI38]: Did you try to find out why they lack this exposure?

Comment [ZI39]: Did you want to mean intended?

to the reason that not all tutors had a chance to attend training on Competency-Based Education and Training (CBET) thus they still rely on traditional assessment methods.

Comment [Z140]: Why were some tutors trained and others left out?

Furthermore, with regard to students' responses on assessment tools used to assess students' mastery of the intended competency the analysis of the findings suggest that the majority of them had a varying response to those of tutors as depicted in Table 5 below.

Comment [Z141]: Whose?

Table 5. Students' responses on assessment methods frequently used (n=20)

Strategies	Frequency and Percentage (%)		
	Never	Sometimes	Always
Classroom Tests	2(10.0)	12(60.0)	6(30.0)
Group assignments	-	4(20.0)	16(80.0)
Classroom presentations	10(50.0)	7(35.5)	3(15.5)
Individual assignments	-	5(25.0)	15(75.0)
Research work project	11(65.0)	6(30.0)	3(15.0)
Classroom written assignments	3(15.0)	7(35.5)	10(50.0)
Observation Checklist	9(45.0)	6(30.0)	5(25.0)
Oral tests	13(65.0)	5(25.0)	2(10.0)
Weekly tests	7(35.0)	8(40.0)	5(25.0)
Terminal Examinations	-	2(10.0)	18(90.0)
Final examinations	-	1(5.0)	19(95.0)

Data in table 5 suggest that group assignments (80.0%), individual assignments (75.0%), classroom written assignments (50.0%), terminal examinations (90.0%), and final examinations (95.0%) were reported by students that were the dominant assessment tools always used by tutors to assess student's mastery of the intended competency. The findings in addition indicate that sometimes tutors used classroom tests (60.0%) while research project work (65.0%) had never been used by tutors to assess students learning.

The findings suggest that, though tutors seemed to be familiar with multiple assessment tools, ~~but~~ always opted for group assignments, individual assignments, and classroom written assignments. This was opposed to CBT which emphasizes regular student assessment with the use of multiple assessment tools in teaching and learning to foster students' mastery of the intended competency. The mastery of competences develops permanently once adequate assessment activities including classroom tests, classroom presentations, research work projects, oral tests, and classroom written assignments, and exercises are offered and students are given enough time to practice knowledge and skills learned throughout the learning process.

Unlike monthly tests, terminal and final examinations give a general feedback on students' learning and understanding of the competences taught in a month, a term, or after the end of the course. In addition to that, during an interview with one of the Academic Coordinators, it was suggested that the use of the final examinations was noticed to have some weaknesses that questions in the final examination, as they do not reflect the competences stipulated in the syllabus. He gave an advise that NECTA which is the assessment body should assess the mastery of competences by setting the examination questions that measure the intended competency skills and knowledge.

Comment [Z142]: What is this in full?

In researchers' own understanding, depending much on the terminal and final examinations in assessing students' learning may discourage students' self-assessment and denies immediate feedback to students learning and could have negative consequences on students' mastery of the intended competency. Competences such as "make an effective oral presentation and write good essays, letters, CVs, minutes, memos and reports" as described in a syllabus of Communication skills subject need to be assessed during the learning process with the use of oral tests, classroom presentation and classroom written assignments rather than terminal or final examinations as need to be observed and practiced by students during the learning processes.

Comment [ZI43]: I think these are the same,

Comment [ZI44]: What is this?

As was mentioned by one of the Academic Coordinators that tutors' and students had the mindset that, the purpose of using mid-term, terminal, mock, and pre-national examinations was of preparing students to perform well in the final examination, this should be changed to formative assessment and focus on assessing students' daily mastery of the intended competency during teaching and learning. This will improve students learning as the purpose of assessment should be of knowing students' abilities in demonstrating the mastery of the learned competency, check their learning progress, and giving instant feedback to both tutors and students about teaching and learning processes. Hence producing competent graduates who fit and can compete in the current labour market demand.

Comment [ZI45]: Are all these forms of assessment conducted in Teachers' colleges?

Comment [ZI46]: Kindly, provide a section on the context of teacher education in Tanzania

In addition to that, it must be taken into account that, teacher colleges prepare teachers who must be competent enough in both, the subject competences and the use of assessment tools in teaching and learning, thus tutors' use of multiple assessment tools gives student-teachers an opportunity to be familiar with and become competent enough and apply appropriate assessment tools in the real world of work and improve the quality of teaching and learning in primary and secondary schools.

Comment [ZI47]: Could this be part of what you found out? If not, provide references

The use of multiple assessment tools has been emphasized in many previous studies including a study by Drisko (2014) who observes that learners' mastery of competence needs to be assessed more than one time with the use of multiple assessment methods including multiple-choice, tests, papers, performance-based real-world assessments, portfolios, and projects. Similarly, a study by Forsido (2019) maintains that using a variety of assessments allows a teacher to determine which instructional strategies are effective and can be modified during teaching and learning processes and improve classroom practices by assessing one's own teaching practice. Thus, tutors should consider students' assessment as an ongoing process in which their competences are unceasingly constructed and assessed, and are expected to be observed as employed.

Comment [ZI48]:

6.0 Conclusion and Recommendations

The study focused on examining the practice of competency-based teaching in Teacher Colleges in Mbeya Region. The analysis of the findings indicates that there was the implementation of CBT in Teacher Colleges as some tutors demonstrated an understanding of the intended competences as described in the syllabus to the subjects they teach. As long as effective implementation of CBT in primary and secondary schools depends largely on how well student-teachers are prepared in both private and government Teacher Colleges, tutors understanding the intended competences provide a great opportunity for tutors to select appropriate teaching and learning techniques and assessment tools that engage students in the learning process. This is in line with the theory underpinning the current study which insists students engage in teaching and

Comment [ZI49]: How this was demonstrated is still debatable, kindly respond to comments on Table 1.

learning processes and construct their own competences. However, it was observed that factors such as tutors' mindset on the use of summative evaluation, inappropriate training ~~to~~ of tutors, tutor-students ratio, and shortage of teaching and learning facilities were mentioned as some of the hindrances to effective implementation of CBT in Teacher Colleges. Therefore, there is a call for the Government through the responsible Ministry to put much effort on dealing with the mentioned challenges so that to create a friendly teaching and learning environment in Teacher Colleges for smooth implementation of CBT. In the light of the findings and conclusion of the study, another study should be carried out to assess the ability of tutors and teachers to construct the competency based items/questions that measure the intended competency skills, knowledge and attitude of the taught competency.

Comment [Z150]: Which table reported about these key findings?

7.0 References

- Bada SO, Olusegun S. Constructivism learning theory: A paradigm for teaching and learning. *Journal of Research & Method in Education*. 2015 Nov; 5(6):66-70.
- Brooks JG, Brooks MG. In search of understanding: The case for constructivist classrooms. Ascd; 1999.
- Berry R. Rethinking assessment with purpose in mind. 2005
- Care E, Griffin P, McGaw B. Assessment and teaching of 21st-century skills. Dordrecht: Springer; 2012.
- Drisko, J.W. (2014). Competences and their assessment. *Journal of Social Work Education*, 50(3) 414-426.
- Edson, V., & C. K. Shawa, M, Perceptions and Factors Influencing Teaching and Learning in Kyela Secondary Schools in Tanzania. *Asian Journal of Education and Social Studies*, 25(3), 17-28. <https://doi.org/10.9734/ajess/2021/v25i330601> 2021
- Forsido D.M. Practices and Challenges in Implementing Continuous Assessment in Teaching English at Grade 11 in Alamura and Tabor Preparatory Schools, Hawassa City Administration. A Thesis. Hawassa. 2019 Jun.
- HakiElimu. (2009). The Significance of quality Teacher training for the development of quality education: Preparing Teachers for the ever-changing world. Dar es Salaam.
- Hartig J, Klieme E, Leutner D, editors. Assessment of competencies in educational contexts. Hogrefe Publishing; 2008.
- Idrissi MK, Hnida M, Bennani S. Competency-based assessment: from conceptual model to operational tool. In *Learning and performance assessment: Concepts, methodologies, tools, and applications 2020* (pp. 108-129). IGI Global.
- Ion G, Cano E, Cabrera N. Competency assessment tool (CAT). The evaluation of an innovative competency-based assessment experience in higher education. *Technology, Pedagogy and Education*. 2016 Oct 19;25(5):631-48.

- Kafyulilo AC, Rugambuka IB, Moses I. Implementation of competency-based teaching in Morogoro teachers' training college, Tanzania. *Makerere Journal of Higher Education*. 2013 Jul 3; 4(2):311-26.
- Komba SC, Mwandangi M. Reflections on the implementation of the competency-based curriculum in Tanzanian secondary schools. 2015
- Kroll T, Neri M. Designs for mixed methods research. *Mixed methods research for nursing and the health sciences*. 2009 Jan 2; 31.
- Losioki, B.E. (2018). Principles for assessing competence-based teaching and learning. The 10th Quality Education Conference
- Lukindo JJ. Exploring Competence Based Education (CBE) in Rural Secondary Schools in Tanzania: English Language Teachers' Conceptions and Experiences. *Journal of Education and Practice*. 2016;7(29):62-7.
- Lupeja T, Komba S. Implementation of competence based curriculum in the context of colonial education system in Tanzania. *International Journal of Research Studies in Education*, 2021, 10(5) 33-43.
- Makunja G. Adopting competence-based curriculum to improve quality of secondary education in Tanzania: "is it a dream or reality"? 2015
- Mkonongwa LM. Competency-based teaching and learning approach towards quality education.
- Tam M. Constructivism, instructional design, and technology: Implications for transforming distance learning. *Journal of Educational Technology & Society*. 2000 Apr 1; 3(2):50-60.
- Tanzania, Miburani: Dar es salaam University College of Education (DUCE). 2018; 12.
- Mosha, H. J. (2012). A case study of learning materials used to deliver knowledge and skills– or competency-based curricula (in Tanzania) ADEA. Working Document, Doc 1.5.05
- Munoz DR, Araya DH. The challenges of competence-based assessment in the educational field. *Educação e Pesquisa*. 2017 Jul 27; 43:1073-86.
- Nzima I. *Competency-based Curriculum (CBC) in Tanzania: Tutors' Understanding and Their Instructional Practices* (Doctoral dissertation, Linnaeus University Press). 2016
- Rieckmann M, Hericks N. Competencebased Education and its Contributions to Quality Enhancement in Higher Education. In Conference: International Consortium for Educational Development (ICED) and HELTASA Joint Conference. Cape Town, South Africa 2016 Nov 23.
- Rutayuga AB. *The emerging Tanzanian concept of competence: conditions for successful implementation and future development* (Doctoral dissertation, Institute of Education, University of London).
- Tanzania Institute of Education. Syllabus for diploma course in secondary teacher education for Computer Science Pedagogy. Dar es Salaam; 2020
- Tanzania Institute of Education. Diploma in teacher education syllabus for communication skills. Dar es Salaam; 2019

Tanzania Institute of Education. Education syllabus for educational research, measurement and evaluation subject. Dar es Salaam; 2019

Tanzania Institute of Education. Diploma in teacher education syllabus for education subject. Dar es Salaam; 2019

United Nations Educational, Scientific, and Cultural Organization, Paris (France). Education for All by 2015: Will We Make It?. ERIC Clearinghouse; 2007.

Wragg, E.C. (2001). *Assessment and learning in secondary schools*. London: Routledge Falmer.

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