



Original Article

## Teachers' Assessment Practices in Implementing Competence Based Curriculum in Secondary Schools in Arumeru District of Tanzania

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Article DOI: <https://doi.org/10.37284/eajes.5.2.792>

Date Published: ABSTRACT

17 August 2022

Keywords:

Academic  
Performance,  
Assessment,  
Assessment Methods,  
Competence Based  
Curriculum,  
Learning Outcomes,  
Student Achievement.

This study investigated the teachers' use of recommended assessment methods in implementing the Competence Based Curriculum (CBC) in public secondary schools in Arumeru District of Tanzania. More specifically, the study sought to determine teacher training in and utilization of the recommended assessment methods implementing the CBC. Adopting the cross-sectional survey research design, the study targeted 35 co-educational public secondary schools in Meru Council of Arumeru District, Tanzania with a population of 1193 teachers. The study sample comprised 111 teachers drawn from nine secondary schools, which were sampled using stratified sampling to ensure proportional representation of rural and urban schools. Data were collected using a semi-structured questionnaire. The findings revealed that a majority of the secondary school teachers were not trained in the recommended assessment methods for implementing CBC, more so in the use of rating scales and rubrics, checklists, portfolios, practical task, and analysis of texts. The methods that were primarily used by teachers to assess student learning were oral examination, written tests, analysis of texts, and essays. On the contrary, portfolios, rating scales, and rubrics, checklists, projects, and practical task methods were rarely used in assessing student learning. The study, therefore, recommends that the Ministry of Education, Science and Technology should ensure that all secondary school teachers are trained in the use of the recommended assessment methods if the implementation of CBC were to be successful. In addition, the Ministry of Education, Science and Technology should closely and continuously monitor utilization of the different recommended assessment methods for effective assessment of learning outcomes in secondary schools

#### APA CITATION

Kigwilu, P. C., & Mokoro, D. K. (2022). Teachers' Assessment Practices in Implementing Competence Based Curriculum in Secondary Schools in Arumeru District of Tanzania *East African Journal of Education Studies*, 5(2), 324-333. <https://doi.org/10.37284/eajes.5.2.792>.

#### CHICAGO CITATION

Kigwilu, Peter Changilwa and Daniel Kosia Mokoro. 2022. "Teachers' Assessment Practices in Implementing Competence Based Curriculum in Secondary Schools in Arumeru District of Tanzania". *East African Journal of Education Studies* 5 (2), 324-333. <https://doi.org/10.37284/eajes.5.2.792>.

#### HARVARD CITATION

Kigwilu, P. C., & Mokoro, D. K. (2022) "Teachers' Assessment Practices in Implementing Competence Based Curriculum in Secondary Schools in Arumeru District of Tanzania", *East African Journal of Education Studies*, 5(2), pp. 324-333. doi: 10.37284/eajes.5.2.792.

#### IEEE CITATION

P. C. Kigwilu, & D. K. Mokoro. "Teachers' Assessment Practices in Implementing Competence Based Curriculum in Secondary Schools in Arumeru District of Tanzania", *EAJES*, vol. 5, no. 2, pp. 324-333, Aug. 2022.

#### MLA CITATION

Kigwilu, Peter Changilwa & Daniel Kosia Mokoro. "Teachers' Assessment Practices in Implementing Competence Based Curriculum in Secondary Schools in Arumeru District of Tanzania". *East African Journal of Education Studies*, Vol. 5, no. 2, Aug. 2022, pp. 324-333, doi:10.37284/eajes.5.2.792

## INTRODUCTION

The Competence Based Curriculum (CBC) for secondary education in Tanzania requires teachers to use various assessment techniques that probe students understanding, reasoning, and critical thinking rather than reproducing memorized material (TIE, 2013). Yambi (2018) asserts that well-designed assessment strategies play a critical role in, not only educational decision-making, but also, in the ongoing quality improvement processes at the lesson, course, or curriculum level. It is therefore expected that competences acquired would enable secondary school graduates engage in productive projects in the society for self-employment and development. The CBC document recommends several assessment methods for application in implementation of the secondary school curriculum. The recommended methods include use of portfolios, rating scales and rubrics, checklists, projects, practical tasks, analysis of texts and essays, and reports (TIE, 2013). However, the curriculum does not explain how these methods should be used by teachers in classroom, a scenario that is likely to lower teachers' confidence in using the methods. Stancescu Petrescu, and Draghicesu (2017) opine that teacher may feel insufficiently trained to use a wide range of strategies for assessing competency acquisition in order to provide positive feedback to all students as well as identify levels of student thinking.

## Statement of the Problem

Scanty evidence exists to demonstrate whether teachers effectively deploy the varied assessment methods in implementing the CBC in secondary schools in Tanzania. A majority of the studies have focused on teaching strategies, with less attention on the assessment methods. For instance, Hipolite (2019) explored teachers' strategies in addressing the challenges of implementing CBC in public secondary schools in Morogoro municipality. Still focusing on teaching strategies, Kafyulilo, Rugambuka and Moses (2012) examined the implementation of competency-based teaching approaches in Tanzania. The findings of the few studies conducted on assessment reveal a misconstrued role of assessment in and for learning. For instance, Sanga (2016) found that teacher educators in Tanzania perceived assessment as a one-shot activity in terms of tests and examinations. Therefore, the current study focused on the teachers' use of recommended assessment methods in implementing the CBC in public secondary schools in Arumeru District of Tanzania.

## Research Questions

The study sought to answer the following questions:

- To what extent are teachers trained in the use of the recommended assessment methods for

implementing the CBC in secondary schools in Arumeru District of Tanzania?

- How frequently are the recommended assessment methods used in implementing the CBC in secondary schools in Arumeru District of Tanzania?

## EMPIRICAL REVIEW

Formative assessment is important in learning institutions as it provides opportunity for dialogue, feedback, and breaks the linear transfer of knowledge from the teacher to students hence promoting deep learning. However, feedback is still merely conceptualized as a transmission process controlled by teachers who tell students what is right and wrong in academic work. This approach to feedback communication, however, hinders development of critical thinking skills among learners (Amua-Sekyi, 2016).

A study in Sudan by Umar (2018) established that using assessment for learning can significantly improve the level of student learning. The study found that teachers used different assessment tools such as portfolios, classroom observations, after class quizzes, and learning notebooks to assess learners. In consonance to the findings of the aforementioned study, Oyinloye and Imenda (2019) established that students instructed using the assessment for learning approach performed statistically higher than those taught under the normal classroom instruction. In the latter study, assessment for learning was associated with the use of the right tools such as scoring rubrics, self-assessment, peer assessment, and peer feedback, all of which contributed to improved learning.

In investigating teacher preparedness and implementation of the competency-based curriculum in public pre-primary schools in Nairobi City County, Kenya, Isaboke et al. (2020) established that majority (65.9%) of the teachers had not received any training on CBC. Further, the aforementioned study revealed significant relationship between the teachers' extent of training in CBC and their ability to implement the

curriculum with a significance value of  $p=0.000<0.05$ . In regard to the areas of training on assessment, 83.3%, 63.3%, and 6.6% reported to have been trained on how to use assessment rubrics, how to do summative, and formative assessments only. In effect, 51.7% of those who reported that they were not trained had difficulties in using assessment rubrics even with support. These findings bear resemblance with those of Waweru (2018) who, in interrogating the extent to which lower primary school teachers were trained to implement the CBC in Nyandarua North Sub-County, Kenya, established that 50% of the teachers face challenges in designing and using the assessment rubrics.

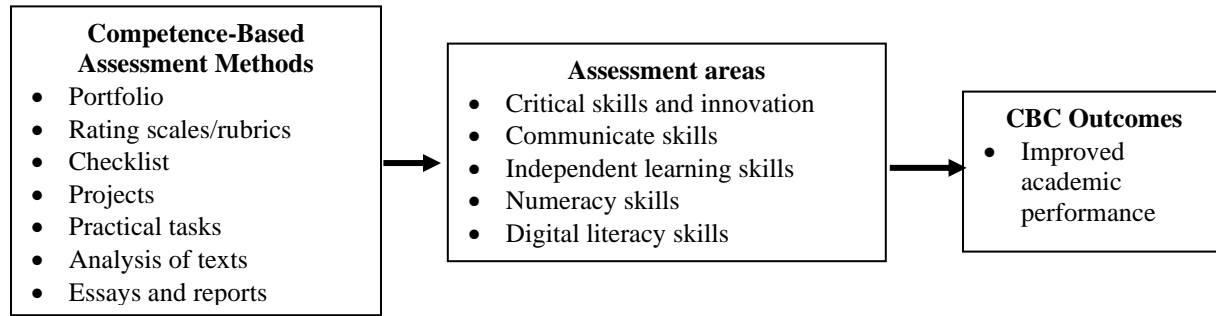
In Zambia, Kabombwe and Mulenga (2019) investigated teachers of History's implementation of the competency-based teaching approaches in the teaching and learning of History in Lusaka district, from the ten zones. The study revealed that teachers of History were not using the competency-based approaches to a large extent in the teaching and learning of the subject since they were not trained in competency-based approaches. Instead, they used such traditional methods of assessment as class exercises and tests and examinations. These traditional methods often tested ability to recall memorized facts, knowledge, and principles and were devoid of performance-based assessment.

Paulo (2014), in a study on pre-service teacher preparedness in integrating CBC in secondary schools in Tanzania, established that teachers were not trained on new assessment methods. Similarly, Muneja (2015) established lack of adequate knowledge on teaching and assessment methods as one of the challenges faced by secondary school teachers in implementing the CBC in Tanzania. This is likely to negatively impact teacher utilization of the recommended assessment methods for implementing the CBC in secondary schools.

## Conceptual Framework

The conceptual framework guiding the study is presented in *Figure 1*.

**Figure 1: Conceptual framework for the study.**



As shown in *Figure 1*, CBC implementation outcomes constitute the dependent variable. The improved academic performance is a function of the assessment methods employed in developing critical skills and innovation, communicative, independent learning, numeracy, and digital literacy skills in the learner during the CBC implementation. The competence-based assessment methods influencing the development of these skills are portfolios, rating scales/rubrics, checklists, projects, practical tasks, analysis of texts and essays, and reports. If the aforementioned methods are regularly applied by teachers in assessment of learning, they are likely to result in improved academic performance, an indicator of effective CBC implementation.

**MATERIALS AND METHODS**

The study adopted the cross-sectional survey design. Target population comprised 35 co-educational public secondary schools in Meru Council of Arumeru District, Tanzania. Out of these

schools, two were urban and 33 were rural. The population of teachers was 1193 comprising 529 females and 664 males. The study sample composed of 111 teachers drawn from nine secondary schools, which were sampled using stratified sampling to ensure proportional representation of rural and urban schools. Further, proportionate stratified sampling was used to select male and female teachers from the sampled schools. Data were collected using a semi-structured questionnaire that captured quantitative and qualitative information.

**RESULTS**

**Teacher Demographic Characteristics**

Teachers’ gender, level of education, teaching experience, and subjects taught were hypothesized to influence the utilization of recommended assessment methods in implementing CBC in secondary schools. The findings on these variables are presented in *Table 1*.

**Table 1: Demographic characteristics of teachers**

Variable		Rural		Urban		Total	
		N	%	n	%	n	%
Gender	Male	58	52.3	5	4.5	63	56.8
	Female	44	39.6	4	3.6	48	43.2
Level of education	Diploma	8	7.3	2	9.2	18	16.5
	Bachelor	85	76.6	5	4.5	90	81.1
	Masters	1	0.8	2	1.6	3	2.4
Teaching experience	Less than 1 year	2	1.8	1	0.9	3	2.7
	2-3 years	1	0.9	1	0.9	2	1.8
	4-5 years	36	32.6	2	1.6	38	34.2
	6 and above years	63	56.8	5	4.5	68	61.3
Teaching subjects:	Sciences	3	9.4	29	21.1	32	30.5
	Arts	6	8.2	67	61.3	73	69.5

### ***Gender of Teachers***

Table 1 shows that there were more male than female teachers in both sampled rural and urban secondary schools, which was in congruence to the sampling frame obtained from the Meru Council Education Office (2019). This shows male dominance in the teaching profession at the secondary level of education in both rural and urban schools.

### ***Teachers' Levels of Education***

Another variable of interest to this study was the level of education attained by the teachers. Teachers' level of education has been found to significantly influence curriculum implementation in schools (Kigwilu & Githinji, 2015). Table 1 shows that all the teachers had the minimum required education level to teach at secondary school level, with the vast majority (81.1%) having Bachelor of Education followed by the 16.5% and 2.4% who held a Diploma in Education and Master in Education qualifications respectively. The minimum qualification required to teach at secondary education ordinary level is Diploma in Education (Ministry of Education and Vocational Training & UNESCO, 2014). These teachers were, therefore, expected to effectively implement the curriculum in the schools. As noted by Onyekuru and Ibegbunam (2013), teachers' qualifications have significant influence on teaching effectiveness of the teachers.

### ***Teaching Experience***

The study also assessed the teaching experiences of teachers, as this was considered critical in influencing curriculum implementation in schools. It is observable in Table 1 that close to two thirds (61.3%) of the teachers had more than five years' teaching experience at secondary school level. It is also notable that the vast majority (95.5%) had taught for more than three years which were

considered adequate for them to reflect on their experiences in implementing the CBC. The mean length of the teaching experience was 4.5 years. This average teaching experience is within the one cycle of ordinary level secondary education which takes four years. Most teachers had, therefore, experienced CBC implementation for a reasonable number of years, hence they could confidently share their lived experiences about the implementation process. Studies have shown that teaching experience is positively and significantly associated with teacher effectiveness which is seen in students' achievement gains (Podolsky, Kini & Darling-Hammond, 2019).

### ***Teaching Subjects***

The study also captured the subjects the teachers taught which were clustered as Science and Arts. These are the common clusters of subjects taught in secondary schools in Tanzania. As shown in *Table 1*, there were more teachers of Arts subjects (69.5%) than there were teachers of science subjects (30.5%). The low proportion of teachers of science subjects may be a pointer to the shortage of these teachers in secondary schools in Tanzania, a scenario that is likely to undermine the development of science-based competencies in students. Lack of teachers of science compels schools to engage the services of unqualified teachers, which this leads to lower-attaining students and reduced recruitment to higher education (Kubilay & Ozden, 2012).

### ***Training of Teachers in Recommended Assessment Methods***

This study sought to find out whether teachers were trained in the CBC recommended assessment methods. The recommended assessment methods included portfolios, rating scales and rubrics, checklists, oral examinations, projects, practical tasks, essays and reports, and analysis of texts. The findings are presented in *Table 2*.

**Table 2: Training of teachers in assessment methods recommended in CBC**

Assessment methods	Trained		Not trained	
	n	%	n	%
Portfolio	40	39.6	61	60.4
Rating scale and rubric	23	22.8	78	77.2
Checklist	32	33.0	65	67.0
Oral examination	59	58.4	42	41.6
Project	49	49.0	51	51.0
Practical task	42	42.4	57	57.6
Essays and reports	51	50.0	51	50.0
Analysis of texts	45	45.5	54	54.5

The findings in *Table 2* show that a sizeable share of teachers received training in the use of oral examinations and essay and reports in assessing learning as reported by 58.4% and 50.0% of the teachers respectively. Training of teachers in use of oral examinations enables teachers to authentically assess knowledge and skills acquisition in aspects such as expression in learning, pronunciation, and oral communication. Benefits of oral examinations abound. For instance, findings by Rawls et al. (2015) show that students who took the oral exam scored an average of 4.5 points higher than their control group counterparts. Further, oral examinations enhance the development of oral communication skills, greater authenticity, and are more inclusive for students with learning disabilities (Huxham et al., 2012).

On the other hand, the essay and report method are relevant in assessing the students' skills in organizing and communicating their ideas through writing. The method enables students to demonstrate their understanding of concepts by writing in a systematic and logical way thereby enhancing their communication and presentation skills. As Scouller (1998) opines, students are more likely to employ deep learning approaches when preparing their assignment essays.

Of concern is the substantial share of teachers reporting that they were not trained in the use of rating scales and rubrics and checklists at 77.2% and 67.0% respectively. The low use of these methods of assessment is likely impact negatively on student learning outcomes. For instance, Wortham (2008) holds that checklists enable teachers to know the development of the learners and measure the

progress of their learning, in addition to providing the feedback to parents and the other teachers.

Equally worth noting is the close to two thirds (60.4%) of the teachers who reported not to use portfolio assessment methods. Yet the method is lauded for its potential to make students to take responsibility for their own learning, and yield detailed information about students' development in the learning process (Birgin & Baki, 2007). This is because, by assessing the students' work, teachers are likely to make informed decision on how best to guide the students according the skills and potentials possessed by the latter.

Close to a half (49.0%) of the teachers reported to use project method in assessing student learning. Previous studies reveal a relationship between project-based learning and learning outcomes. For instance, Nurbavliyev et al. (2021) established that students learned more, experienced an increase in learning motivations, and adopted more positive attitudes towards learning under the project-based learning compared to traditional learning methods. Therefore, learners taught by teachers who are not trained in the use of project method of assessment are likely to miss out on the said benefits.

Significant to note also, is the sizable proportion of teachers (57.6%) reporting to have no training in the practical task method of assessment. Lack of skills on practical tasks assessment is likely to negatively impact student acquisition of skills and overall learning. A study by Vidija (2015) revealed that student learning through the practical skills pedagogy that integrates observation, experimenting, drawing, and measurement had

superior mean scores in Biology than their counterparts.

The sizable share (54.5%) of teachers reporting to have been trained in how to assess using analysis of texts methods, which is critical in the development of critical thinking skills among students. Students who develop critical thinking skills often practice those skills well into latter life as they are likely to expand the perspectives from which they view the world and increase their ability to navigate the important decisions in learning and in life (Murawski, 2014).

The foregoing findings imply that, except for oral examinations, essays, and reports, more than a half of the teachers lacked training in three quarters of recommended assessment methods in CBC. They were thus not prepared for effective implementation

of CBC. The findings are in consonance with those of Makunja (2016) who found that lack of in-service training was one of challenges facing the implementation of CBC in public secondary schools in Morogoro and consequently limited the application of competence-based approaches in teaching. The findings also reverberate those of Kangalawe (2019) that the competency of teachers in assessing practical skills in CBC were low since they had not received an in-service training since its implementation in 2005.

**Utilization of Recommended Assessment Methods in Implementing CBC**

Teachers were asked to indicate the frequency of using the recommended assessment methods in CBC implementation. The findings are shown in *Table 3*.

**Table 3: Frequency of use of recommended assessment methods by teachers**

Assessment methods	Frequency of use							
	Daily		Sometime		Rarely		Not applicable	
	n	%	n	%	n	%	n	%
Portfolio	5	5.0	25	25.0	25	25.0	45	45.0
Rating scale and rubric	8	8.1	26	26.3	15	15.2	50	50.5
Checklist	16	16.2	39	38.4	8	8.1	36	36.4
Oral examination	46	45.1	29	28.4	12	11.8	15	14.7
Project	9	8.8	36	35.5	31	30.4	26	25.5
Practical task	21	20.6	42	41.2	15	14.7	24	23.5
Essay	27	27.0	41	41.0	14	14.0	18	18.0
Analysis of texts	30	30.6	26	26.5	19	19.4	23	23.5
Written test	41	41.0	34	34.0	9	9.0	16	16.0

*Table 3* shows that the most frequently used assessment methods (used daily) were: oral examination (45.1%), written tests (41%), analysis of texts (30.6%), essays (27%) as reported by 45.1%, 41.0%, 30.6% and 27.0% of the teachers respectively. The findings bear resemblance with those of Kangalawe (2019) which established that the most frequently used assessment methods were oral examinations, class exercises, homework, and quizzes. The oral examination method can effectively enable teachers to enhance students’ oral expressions, pronunciations, and articulation of words in verbal communication. The regular application of analysis of texts method is required to build students’ ability in critical analysis of information.

The methods that were never used by a majority of the teachers included portfolio, rating scale and rubric, checklists, projects, and practical task as reported by 45.0%, 50.5%, 36.4%, 25.5% and 23.5% of teachers respectively. This finding is in consonance with those of the study on the relationship between examination practice and curriculum objectives in Tanzania which established that portfolios, project work and practical tasks, and written reports were the least used assessment methods by teachers (Hakielimu, 2012). The study’s findings also support those of Sewagegn (2019) in Ethiopian who found that alternative assessment methods such as portfolio and project work were not commonly used by teachers in the studied secondary schools.

The findings imply that the variation of assessment methods in secondary schools is minimal yet the use of different methods of assessment makes the practice relevant and authentic for assessing the acquisition of various skills and competencies that learners are supposed to acquire. Moreover, through varied assessment techniques, teachers can identify areas where skills are not well developed hence provide learners with more learning experiences for skills development. As Paulo (2014) observed, the low adoption of the recommended assessment methods in the implementation of the CBC in secondary schools in Tanzania is still prevalent. This is a pointer to the teachers' conservative culture of sticking with the traditional assessment methods, a practice that is likely to impede the effective implementation of CBC in secondary schools in Tanzania.

## CONCLUSION

This study sought to find out extent to which secondary school teachers used various recommended assessment methods in implementing the CBC and whether they were trained in using the methods. Based on the foregoing, the study concludes that a majority of the secondary school teachers were not trained in the recommended assessment methods for implementing CBC. In particular, teachers had not received training in the use of rating scales and rubrics, checklists, portfolios, practical task, and analysis of texts. With these low levels of training in the recommended assessment methods, the effective implementation of the CBC was likely to be compromised. As regards the utilization of the recommended assessment methods, the study concludes that teachers primarily used oral examination, written tests, analysis of texts, and essays to assess student learning. On the contrary, portfolio, rating scale and rubric, checklists, projects, and practical task methods were rarely used. This minimal use of varied assessment methods is likely to impede the acquisition and development of the competences espoused in the CBC. The study, therefore, recommends that the Ministry of Education, Science and Technology should ensure that all secondary school teachers are trained in the use of the recommended assessment methods if the implementation of CBC were to be successful. In addition, the ministry should closely and

continuously monitor utilization of the different recommended assessment methods for effective assessment of learning outcomes in secondary schools.

## ACKNOWLEDGEMENTS

First, special thanks go to the Tanzanian National Commission for Science and Technology, for authorizing this study. Second, the administrative support from the Regional Education Officer-Arusha, the Meru Council District Executive Director and the District Secondary Education Officer is worth mentioning. Third, special appreciation goes to the teachers who took part in this study.

## DECLARATION OF INTEREST STATEMENT

The authors of this paper have no conflict of interest to declare.

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