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# Teaching Techniques Used by Secondary School Teachers During Implementing of the Competency-Based Curriculum in Namtumbo District Ruvuma Region

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#### **ABSTRACT**

This study investigates the teaching techniques used by secondary school teachers during implementing of the Competency-Based Curriculum in Namtumbo district. This study was carried out at Namtumbo district located in Ruvuma Region, Tanzania. This study used pragmatism paradigm since the study used mixed methods research approach where both qualitative and quantitative approaches was used. This study used convergent research design where quantitative and qualitative data was collected at the same time, analyzed separately. The study used a sample size of 152 informants from a population of 496. Qualitative data recorded from interview whose contents summarized in a narrative format while quantitative data analyzed using descriptive statistics. Finding show that, 87.9% a significant majority of teachers frequently use interactive techniques in implementing CBC such as group discussions, demonstrations, and question-and-answer sessions to inspire active learning and teamwork. Also, techniques like surveys, project, practical and lectures are less common used due to limited resource and time constraints. Moreover, study concluded that, in student's assessment, utmost 88.7% of teachers regularly use techniques such as quizzes and tests, while project-based and practical assessments is crucial for practical skill development are less often used in assessment due to inadequate teaching and learning resources. However, oral and practical assessments are common, demonstrating a balance among traditional and modern assessment approaches. Teachers' commitment to active student participation, evident from the high use of participatory techniques 97.2%, increases CBC's efficiency by encouragement an interactive, competency-focused learning setting where consistent response and guidance are integral, mainly in practical activities. Study recommend for schools to priorities time and learning and teaching resources for practical and project-based learning in order enhance resource allocation.

# INTRODUCTION

In Tanzania, soon after independence, the Tanzanian government developed to see education as an essential part of the nation's social and economic progress (Nkya et al., 2021). In Tanzania, the competence-based curriculum (CBC) has become an effective approach since 2005. Students with inquiry-based learning minds, creativity and employable abilities, and the capacity to handle a variety of tasks are the objective of the approach. The CBC offers a framework for integrating the changing concepts of education, learning, and assessment. Constructivism theory, a broad term for a discovery-oriented approach to education, is what CBC adheres to.

The beginnings of CBC in Tanzania date back to 1967, when the Education for Self-Reliance (ESR) a framework was introduced (URT, 2003). Among other things, ESR's primary objective were to prepare students to engage in Tanzania's current development issues in an active and innovative way and to deal with the country's obstacles in the years to come by growing fully self-sufficient (Nzima, 2016). It indicates that the educational philosophy put a strong emphasis on the need for curriculum reform that could integrate theory with the development of competences and the acquisition of real-world abilities (Mbirigenda, 2020).

Theory and practice integration were emphasized in the

revised curriculum, which transitioned from a content-based to a competence-based approach. It gives the student more opportunities to develop their knowledge and abilities in the disciplines they study. In the CBC, teachers serve as the facilitators. Competency-based teaching and learning give students the chance to conduct research, test theories, build their knowledge and meaning, and pose questions as developing social scientists. Teachers in Tanzanian secondary schools have not taken innovation seriously as a teaching method (Tilya & Mafumiko, 2010). Even though the Competency-Based Curriculum (CBC) is important, there are a number of issues with its use in teaching methods that reduce the efficacy of student-centered learning.

Teachers frequently lack CBC-specific professional development and thorough training, which results in uneven implementation of crucial strategies like collaboration and project-based learning (Komba & Mwandanji, 2022). Further, the utilizations of interactive techniques like group discussions and hands-on activities, which are essential to CBC's customized approach, are hampered by crowded classrooms and restricted access to instructional materials (Nyoni & Mumba, 2023). Active learning is made more difficult by time constraints, as educators find it difficult to strike a balance between interactive teaching methods and comprehensive

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curriculum content (Mwenda, 2022). Despite CBC encourages various types of assessments, traditional methods such as tests and quizzes are still widely used since there is a lack of resources and inadequate assessment training (Ogutu, 2023).

In addition, certain instructors are hesitant to switch from well-known lecture-based methods to interactive CBC strategies, which affect student participation and engagement (Mhlongo & Mahlangu, 2021). These problems are made worse by a lack of administrative assistance and follow-up, which leaves teachers without reliable direction (Mandari & Chuma, 2022). Furthermore, teachers frequently lack the resources necessary to provide tailored solutions to practical activities, which impede students' development of practical skills (Kanyonga & Bundala, 2022). Others who are used to passive learning find it difficult to adjust to the active involvement that CBC requires, and limited use of technology as a result of poor infrastructure affects the integration of digital tools essential for CBC (Achieng & Mbogo, 2023).

Despite the Tanzanian government's shift from a content-based to a competence-based curriculum (CBC) twenty years ago, CBC aimed at enhancing students' practical skills, critical thinking, and problem-solving abilities, evidence suggests that effective implementation remains a significant challenge in public secondary schools. According to Issa, Mwakapina, and Nyinondi (2024), the Competency-Based Curriculum (CBC) is being implemented at a minimal level, with teachers still depending on traditional, teacher-centered methods (Lukindo, 2018; Nkya et al., 2021; Kilipamwambu, 2021). Implementation of the Competency-Based Curriculum (CBC) in secondary schools is significantly hindered by multiple challenges, notably the severe shortage of ICT and art rooms; with only 10 schools have ICT facilities. This lack of infrastructure restricts students' access to practical, skills-based learning essential for developing 21st-century competencies such as digital literacy, leading to unequal learning opportunities and reliance on theoretical instruction.

Moreover, inadequate CBC-compliant learning resources, including a 4:1 student-to-textbook ratio and insufficient laboratory equipment, further obstruct effective curriculum delivery. Overcrowded classrooms, with many exceeding the Education Training Policy of 2014 guideline of 40 students per teacher, exacerbate the issue (Bakar & Mwila, 2022). Also, limited parental involvement—evident in low participation in school governance, teacherparent meetings, and support for learning activities at home—weakens the school-home partnership critical for CBC success (Yang et al., 2023). Collectively, these factors compromise the quality and intended outcomes of CBC implementation in the district.

Moreover, in Tanzania there is rising mismatch between classroom instruction and real-world demands as indicated by employer's report that graduates lack the practical skills needed for employment and self-reliance (Munishi, 2022; Mihyo *et al.*, 2021). Moreover, students fail in practical

valuations and fieldwork, while feedback from teachers and education stakeholders highlights limited capacity to evaluate competencies efficiently (Juma & Patel, 2024).

The implementation of CBC teaching methods in Namtumbo District is associated with unique possibilities and difficulties affecting its efficiency. Due to the CBC guidelines, teachers in the district use techniques like group discussions, project-based learning, and demonstration so as enhance students' abilities and competences as supported by Kanyonga & Bundala, (2022). Despite these expectations, inadequate access to resources, high studentteacher ratios, and gaps in professional development prevent the regular adoption of these strategies. Also, since of resource limitations and routine, teachers turn to more conventional approaches, such as lecture-based instruction, reducing the efficacy of CBC (Nyoni & Mumba, 2023). This study provides a foundation for examining the specific teaching techniques employed by secondary school teachers in Namtumbo District and understanding the extent to which these techniques align with CBC's objectives. Through this investigation, the study seeks to examine teaching techniques used by secondary school teachers during implementing of the Competency-Based Curriculum in Namtumbo district.

#### LITERATURE REVIEW

#### Theoretical Review

This study is guided by the social constructivism development theory established by Vygotsky's, (1978). Social constructivist theory essentially about how individuals socially construct knowledge. In this study, social constructivism development theory offers a strong underpinning for investigative teaching techniques employed in implementing the CBC due to its focus on social interaction, support, and collaborative learning. The theory highlights that cognitive development happens through social exchanges and interaction where students build knowledge jointly, mirroring CBC's promotion of interactive, student-centered learning environments. Thus, in the development of engagement among students and teachers, CBC inspires a supportive approach to skill gaining and comprehension, attracting the application and effectiveness of educational content (Kanyonga & Bundala, 2022; Mhlongo & Mahlangu, 2021). Vygotsky's idea of the Zone of Proximal Development (ZPD) also supports CBC's approach, permitting teachers to offer support that assist students progressively develop independence in learning; enhance both engagement and academic attainment (Nyoni & Mumba, 2023; Mwenda,

Moreover, orientation among social constructivism and CBC is also seen in the focus on active learning and the construction of knowledge over review, projects, and problem-solving. This theory views learning as an active, constructive process, which is central to CBC's goal of fostering meaningful and practical learning experiences for students. Studies reveal that by applying social constructivism, CBC allows students to apply



their knowledge in real-life circumstances, enhancing the noteworthy of education in a bigger social and cognitive situation (Njoroge & Achieng, 2023; Ogutu, 2023). Also, this theory focusses on advanced thinking line up with CBC's pledge to developed reasoning skills that extend beyond memorization learning to analysis and assessment. This joining supports CBC's aim to create students for enduring learning, preparing them with vital skills for navigating intricate difficulties (Mandari & Chuma, 2022; Achieng & Mbogo, 2023).

#### **Empirical Review**

Semle and Nassor (2023) from Tanzania examined the techniques used in teaching practical skills to lower secondary school students in Kondoa. Finding showed that the competency-based curriculum approach was used very little. As a result, the use of the teacher's concentrated approach dominated the teaching and learning sessions despite the use of demonstrations, simulation, group discussion and study tour learning tactics. Their study conducted in Kondoa district, but this study adds context research gap in Namtumbo district. Egodawatte (2013) from Sri Lanka conducted a study analysing the competency-based secondary mathematics curriculum. Their results showed that the subject contents and teaching methods which were presented in the curriculum were better but it was difficult to translate them into the teaching and learning process under the umbrella of competency-based approaches. This indicated that the new curriculum had not achieved its objectives since the introduction of a new mathematical curriculum in Sri Lanka. Nevertheless, none of these studies were conducted at Namtumbo District Council in Ruvuma region. Moreover, Lukindo (2016) Explored Competency-based Education (CBE) in rural secondary schools in Tanzania. Findings revealed that the respondents were not sure whether their teaching and assessment techniques were in line with competencebased education. Also, Kimario and Otieno (2022) from Kenya show that the use of different teaching and learning methodologies such as learner centred approach, discussions, exhibitions and practical activities were encouraged. Nevertheless, none of these studies applied theoretical review, thus this study add theoretical gap using social constructivism development theory.

Mtesigwa and John (2023) from Tanzania's revealed that English language teachers had inadequate understanding of CBLT; most teachers applied teaching methods which did not promote the language competence among learners. In a similar vein, Assey (2022) identifies that Tanzania successfully implement a CBC by implementing a number of strategies, including making sure that school heads receive regular pedagogical leadership training, enhancing in-service teacher training, improving school-based indoor training, hiring enough teachers, improving school infrastructure, providing enough teaching and learning materials, ensuring that parents and schools work together effectively, improving library services,

and enhancing information technology use. Mtesigwa & John (2023) and Assey (2022) studies does not applied theoretical review, thus this study add theoretical gap using social constructivism development theory with more sample size of 152 and study conducted carried out in Tanzania.

Kigwilu and Mokoro (2022) from Arumeru District established that, majority of secondary school teachers, lacked the necessary training to apply the suggested evaluation techniques for CBC, particularly with regard to the use of checklists, portfolios, practical tasks, rating scales and rubrics, and text analysis. Teachers primarily used oral examinations, written assessments, text analysis, and essays to gauge their students' learning. In contrast, student learning was rarely assessed using portfolios, rating scales, rubrics, checklists, projects, and practical task techniques. Also, Tumuheise et al. (2023) exposed that; competence-based curriculum was implemented using a shared set of teaching methodologies, including inquirybased learning, project-based learning, experiential learning, and collaborative learning, according to the findings. In addition, Kimario and Otieno, (2022) assess the effects of competence-based curriculum on students' education achievement in Kenya. Their study used convergent mixed methods design. Findings show that the use of different teaching and learning methodologies such as learner centred approach, discussions, exhibitions and practical activities were encouraged. Moreover, the study recommended that, CBC should be effectively implemented in all secondary schools for students to develop necessary skills needed for personal transformation. However; this implies that the use of different teaching and learning methodologies of teachers is crucial to conduct a new study for implementation of CBC which comes with new results.

In addition, Tumuheise et al., (2023) investigate and identify the instructional strategies employed in Kabale municipality secondary schools to implement competencybased curricula. Lev Vygotsky, a Russian psychologist, developed the social constructivism theory, which was applied in the study. Vygotsky holds that individuals actively create their own knowledge. Results show that, competence-based curriculum was implemented using a shared set of teaching methodologies, including inquirybased learning, project-based learning, experiential learning, and collaborative learning, according to the findings. Though insufficient to significantly affect the curriculum's implementation, instructional materials were discovered to be accessible. In order to provide teachers with the skills and knowledge they need to deliver highquality instruction and ensure that students obtain an excellent education, the study recommends that they be trained in a variety of teaching pedagogies through workshops and training programs hosted by education agencies. They should also be provided with sufficient resources and support to enable the competence-based curriculum to be implemented successfully.

Despite previous studies evaluating the implementation



of Competence-Based Curriculum (CBC) in various countries, including Tanzania, several critical gaps remain. Most existing research has focused on teachers' perceptions and challenges, with limited emphasis on the nature and adequacy of teacher training a key factor in the successful implementation of CBC. Studies like those by Li et al. (2024), Rogers (2021), and Namubiru et al. (2024) largely overlook the specifics of training teachers received before CBC implementation. While a few studies (Mokoro, 2020; Mwakyusa, 2020) acknowledged training, they failed to deeply assess its content, delivery methods, frequency, or classroom relevance. This study fills that gap by closely examining the techniques used in implementing CBC in Tanzania, mainly in the underexplored Namtumbo District of the Ruvuma Region. Unlike other well-researched areas such as Arumeru and Dar es Salaam, Namtumbo offers a new perspective within the country's unique socio-political and economic context.

Also, while Tanzania continues to undergo curriculum reforms to align education with modern demands, previous research across numerous regions for instance Arusha, Tanga, Iringa, Mwanza, Morogoro, and Rukwa consistently shows that teachers lack adequate CBC skills. However, no study has yet focused on Namtumbo District. Methodologically, earlier studies often employed small samples or limited research designs, as seen in Alemayehu et al. (2021) and Lukindo (2017). In contrast, this study adopts a convergent mixed-methods design involving 152 respondents through questionnaires, interviews, focus groups, and observations to ensure data validity and reliability. Additionally, previous research predates recent government initiatives like SEQUIP and EP4R, which aim to strengthen CBC through improved teacher training and infrastructure. This study seeks to provide updated, context-specific evidence to inform policy decisions and enhance support for CBC implementation in secondary schools.

#### MATERIALS AND METHODS

This study was carried out in the Namtumbo district located in the Ruvuma Region, Tanzania. The unit of analysis included secondary teachers, ward education officers, quality insurance officers, and district education officers found in the Namtumbo district. This study guided by pragmatic which intends to evaluate teaching techniques used by secondary school teachers during implementing of the competency-based curriculum in Namtumbo district. This study used pragmatism paradigm since the study used mixed methods research approach where both qualitative and quantitative approaches was used. This study used convergent research design where quantitative and qualitative data was collected at the same time, analyzed separately. In data collection, questionnaire used to quantify each teaching techniques used by teachers during implementing of the CBC and interview was used to obtain in-depth information. Also, there were 496 individuals in the study, who were divided

into 6 District Secondary Education Officers, 21 ward Educational Officers, 25 Heads of School, 10 District Quality Education Assurance Officers, and 431 Public Secondary School Classroom Teachers.

The study used a sample size of 152 informants from a population of 496. Among them were 141 secondary school teachers, three school heads, one district secondary education officer, six ward education officers, and one district quality assurance officer. The District education secondary officer, the District school quality assurance officer, the head of school, and the ward education officers were all involved in the sample selection process, which employed purposive sampling to gather informants about the implementation of CBC in public secondary schools. Further, 141 secondary school teachers were chosen for quantitative analysis using random selection. One (1) DSEO, one (1) DSQAO, and three (3) heads of schools were interviewed as part of the data gathering process. Moreover, a questionnaire was used in data collection where a total of 141 questionnaires were distributed to secondary teachers. Also, the study employed focus group discussions, which comprised of interviewing six Ward education officers, two from each zone such as Undendeule, Mkongo, and Sasawala zone. Further, study used focus group discussion (FGD), Documentary review and Classroom observation as others data collection methods. In this study, both quantitative and qualitative data analysis was used. Qualitative data recorded from interview whose contents summarized in a narrative format. Moreover, Quantitative data analysed using descriptive statistics such as frequency and percentage.

#### Findings

This section present results that aim to examine teaching techniques used by secondary school teachers during implementing of the CBC in Namtumbo district.

# Technique used in Implementing of the CBC

This section present results and discussion based on the techniques used in Implementing of the CBC. These included group discussions, lecture, survey, and demonstration technique, questions with answer, Project-Based Learning and case study.

#### Group Discussion

Table 1 revealed that 17 (12.1%) doesn't use group discussion as student-centered approach while (87.9%) of secondary school teachers used group discussion student-centered 17 (12.1%) don't use group discussion as a student-centered approach, while 124 (87.9%) of secondary school teachers use group discussion as student-centered approach/technique. The finding indicates that most the secondary school teachers used group discussion as a student-centered approach/technique. Group discussion is widely used, with the majority of teachers adopting it as a student-centered technique. This approach allows students to share knowledge, encourage critical thinking, and foster



collaboration. The high adoption rate shows that teachers value student interaction, peer learning, and engagement, which can enhance students' problem-solving skills and promote deeper understanding of the subject matter.

"Group discussion approach not only eases the sharing of knowledge amongst students but likewise meaningfully inspires critical thinking and teamwork. The uses of group discussions, instructors are efficiently enhance students' problem-solving skills and promoting a deeper empathetic of the subject matter".

Finding align with Kimario and Otieno (2022) from Kenya which show that the use of different teaching and learning methodologies such as discussions, exhibitions and practical activities that permits students to share knowledge, inspire thinking, and foster collaboration.

#### Question and Answer

Table 1 demonstrates that 103 (73.0%) of teachers in secondary schools employed question-and-answer sessions, while 38(27.0%) doesn't use question-andanswer. The majority of secondary school teachers, according to the findings, employed questions and answers as a student-centered method or technique. Most professors use one of the most common teaching methods, which is the question-and-answer format. This approach guarantees that students are paying attention to the course, promotes active engagement, and offers quick feedback. The fact that this method is so widely used indicates how valuable it is for encouraging communication between educators and students. It makes formative evaluation possible, aids in dispelling uncertainties, and guarantees that students are paying attention and exercising critical thought the entire class. ".... question-and-answer approach not only guarantees that students are energetically involved and pay attention but also enables instant response. .... this method increase communication amongst teachers and students since it's empowers formative evaluation, helps to explain uncertainties, and inspires thinking all over the module" Finding consistence with Tumuheise et al. (2023) which identify the instructional strategies employed in Kabale municipality secondary schools to implement competency-based curricula. Their results established that, competence-based curriculum was implemented using a shared set of teaching methodologies, including inquiry-based learning that guarantees students to keep attention and working out critical thinking during entire class section.

# Lecture

Table 1 indicates that 114 (80.9%) of secondary school teachers don't use lectures as a student-centered approach/technique, while 27 (19.1%) of respondents used a student-centered approach/technique. Finding implies that majority of secondary school teachers doesn't not used lecture as student-centred approach/technique. While lectures are often seen as a teachercentered method, 27 (19.1%) of teachers incorporate it in

a student-centered manner. This might involve interactive lectures where students are encouraged to participate actively. The low usage indicates that teachers are shifting away from passive learning techniques, focusing more on active learning methods. This suggests a growing recognition that student engagement leads to better comprehension and retention.

#### Survey

Table 1 demonstrates that, although 46 (32.1%) of respondents employed the practices survey as a studentcentered strategy or technique 95 (67.4%) of secondary school teachers did not use it. This suggests that the majority of secondary school teachers do not use surveys as a student-centered method or strategy. Teachers do not use surveys very often, as shown by the low percentage of teachers who use this method. Students learn research skills and critical thinking by collecting data or opinions and then analysing the material using a survey technique. One possible explanation for the comparatively low usage could be the time and resources needed to conduct surveys. But it's important because, properly applied; it can motivate students to take ownership of their education by including them in the gathering and analysis of real-world data.

### **Demonstration Technique**

Similarly, Table 1 showed that, although 81(57.4%) of respondents said they practice demonstration technique, 60 (42.6%) of respondents said they don't. Just slightly over half of the teachers employ demonstration in their lessons. Teacher that demonstrate a task to pupils, make learning more tangible and engaging. The popularity of demonstration reflects its success in helping students grasp complex concepts by presenting real examples. The method makes abstract concepts easier to understand visual learners. Qualitative results exposed that;

"Teachers who apply demonstrations in the seminar room meaningfully improve the learning experience for their students. The method efficiency in helping students grasp complex ideas through real-world examples. ...... this approach provides chiefly well to visual learners, making abstract concepts much easier to understand. ..... demonstrations not only simplify difficult topics but also substitute a more interactive and stimulating learning environment."

# **Project-Based Learning**

Table 1 indicates that 120 (85.2%) of secondary school teachers from Namtumbo district don't used Project-Based Learning while 21 (14.8%) of teachers used Project-Based Learning in the implementation of the CBC. Through an extended time of active exploration of real-world problems and difficulties, students participate in Project-Based Learning (PBL), an educational technique that finishes in the creation of a project or product that displays their understanding. PBL encourages experiential, student-centered learning over traditional approaches,



which focus on passive learning through lectures and tests. As students engage on projects that are important and pertinent to their communities or lives, this method fosters self-directed learning, critical thinking, problem-solving, and teamwork.

#### Case Study

Table 1 indicates that 88 (62.4%) of teachers from the Namtumbo district do not use case studies, while 53 (37.6%) use case studies as a Competence-Based Curriculum approach. This implies that most of secondary teachers from Namtumbo districts used case study as Competence-Based Curriculum approach.

In the context of the Competence-Based Curriculum (CBC), case studies are a teaching and learning technique intended to support students develop problem-solving, analytical and critical thinking skills by investigative real-world situations. They encompass comprehensive examinations of specific events, issues, or phenomena that require students to put on the knowledge and skills they have learned in the classroom to solve real problems. Numerous case study activities include group work, where students work together to examine the case and come up with solutions. This raises teamwork, communication skills, and leadership capabilities, which are important competencies in CBC.

**Table 1:** CBC Techniques Used (N=141)

| Technique              | Response | Frequency | Percent (%) |
|------------------------|----------|-----------|-------------|
| Group discussion       | No       | 17        | 12.1        |
|                        | Yes      | 124       | 87.9        |
| Lecture                | No       | 114       | 80.9        |
|                        | Yes      | 27        | 19.1        |
| Survey                 | No       | 95        | 67.4        |
|                        | Yes      | 46        | 32.6        |
| Demonstration          | No       | 60        | 42.6        |
|                        | Yes      | 81        | 57.4        |
| Questions and Answers  | No       | 38        | 27.0        |
|                        | Yes      | 103       | 73.0        |
| Project-Based Learning | No       | 120       | 85.2        |
|                        | Yes      | 21        | 14.8        |
| Case Study             | No       | 88        | 62.4%       |
|                        | Yes      | 53        | 37.6%       |

Source: Field Data, (2024)

# Usage of Assessment Method

Table 2 results indicate that 125 (88.7%) of secondary school instructors employ the assessment method to students as recommended in CBC, compared to 16 (11.3%) of teachers who do not use the approach. The results indicate that the majority of secondary school teachers from Namtumbo district implemented the CBC's instructions while using evaluation methods with their students. These assessment methods provide students several advantages, such as enhanced academic development by evaluating their understanding and expertise in specific subjects. Teachers adjust their teaching tactics to provide students with personalized learning support in response to assessment results. Students receive continuous feedback through formative assessments, which helps them monitor their progress and pinpoint areas for improvement while also keeping them engaged throughout the learning process.

Using CBC-aligned assessment methods also helps students develop their critical thinking and problem-solving skills, which help them, apply what they have learnt to real-world scenarios. Critical interpersonal skills are developed through student-centered practices that encourage active engagement and teamwork, such

as group projects and activities. By employing holistic evaluation, which surpasses traditional tests, educators can gain a comprehensive understanding of each student's abilities. Since they are aware that their efforts are constantly valued and encouraged as a result of this ongoing feedback, students gain confidence and are motivated to focus more on their academics.

Finding align with Egodawatte (2013) from Sri Lanka conducted a study analysing the competency-based secondary mathematics curriculum. Their results showed that the subject contents and teaching methods which were presented in the curriculum were better but it was difficult to translate them into the teaching and learning process under the umbrella of competency-based approaches. This indicated that the new curriculum had not achieved its objectives since the introduction of a new mathematical curriculum in Sri Lanka. Similarly, Kimario and Otieno (2022) assess the effects of competencebased curriculum on students' education achievement in Kenya. Their findings show that the use of different teaching and learning methodologies such as learner centred approach, discussions, exhibitions and practical activities were encouraged.



Table 2: Usage of Assessment Method

| Usage of Assessment<br>Method | Frequency | Percent (%) |
|-------------------------------|-----------|-------------|
| No                            | 16        | 11.3        |
| Yes                           | 125       | 88.7        |
| Total                         | 141       | 100.0       |

Source: Field Data, (2024)

#### Types of Assessment Method

This subsection presents the results related to types of assessment methods used secondary school teachers. These included quizzes, Practical Observation, Project Work, oral activities and Homework/Exercises as discussed below;

#### Quizzes/Tests

The findings indicate that exams and quizzes are a major component of the assessment strategies of 102 (72.35%) of secondary school teachers, indicating their efficacy in determining students' comprehension and memorization of the subject matter (Table 3). In the CBC tests and quizzes are very helpful since they offer a methodical approach to assess if students have mastered particular competencies. These evaluation instruments provide instantaneous feedback on a student's development and point out areas that could require more help. Tests and quizzes also help secondary students retain material over time, reiterate essential ideas, and develop consistent study habits. The following findings have been supported by an interview with the district education officer, headmaster, and district school quality assurance officer:

"...Our assessment method has been greatly aided by tests and quizzes, which provide us with an accurate picture of each student's comprehension. These assessments help students stay engaged with the material throughout the term and allow us to assess whether the skills set forth by the CBC are being satisfied."

#### **Practical Observation**

Table 3 show a significant 58 (41.1%) often used and 32 (22.7%) average used) number of teachers utilize practical observation as an assessment method, recognizing its critical role in evaluating students' handson skills and real-time performance, which are essential components of a competency-based curriculum. This approach enables teacher's to assess students in authentic contexts, allowing them to observe how well students apply theoretical knowledge in practical scenarios, such as laboratory experiments, fieldwork, or other interactive learning experiences. Usage of practical observation, teachers provide immediate feedback and support, which enhances student learning and promotes skill development. However, it is concerning that 42 (29.8%) of teachers don't employ this method at all, suggesting that there are underlying challenges that impede its broader adoption. These difficulties arise from a lack of sufficient resources, such as suitable facilities and

materials, inadequate training for teachers to carry out and evaluate practical observations, or even curriculum time limits that reduce the amount of time students have for hands-on learning.

Results supported with interview as follows;

"Practical observation is critical, especially for subjects like science and geography, where hands-on skills play a crucial role in understanding and applying theoretical concepts. In these subjects, students engage directly with experiments, field studies, and real-world applications to truly grasp the subject matter. These practical experiences not only enhance comprehension but also help develop problem-solving skills, critical thinking, and the ability to apply knowledge in real-life situations"

#### **Oral Activities**

Table 3 show that 60 (42.6%) of secondary school teachers often used while 68 (48.2%) of secondary teachers average use oral activities. Oral assessments are also a common practice, highlighting the importance of verbal communication skills in the CBC framework. This method enables teachers to assess students' understanding and articulation of concepts in a dynamic manner. The high percentage of teachers using oral activities suggests recognition of the need for diverse assessment strategies that cater to different learning styles. Likewise, 8 (5.7%) of secondary school teachers not used at all Oral Activities as assessments methods. There are several advantages to oral examinations, in particular when considering the CBC which emphasizes communication and verbal expression as critical skills. Utilizing this method, teachers evaluate a student's conceptual understanding in real time, providing them with quick feedback and encouraging critical thinking. Interview results exposed that;

".....Through oral examinations, our secondary students are able to express their learning in their own words. Those who may find it difficult to express their views in writing but have good oral communication skills would find it especially useful. We believe that this approach is quite beneficial for evaluating a variety of competencies in our school......"

#### Homework/Exercises

Homework remains a prevalent method of assessment, reinforcing learning outside the classroom. This approach allows students to practice and apply their knowledge independently, which is essential in a competency-based environment where continuous learning is emphasized. Table 3 shows that 86 (61.0%) of respondents suggested often used; 26 (18.4%) indicates average usage while 25 (17.7%) suggest not used at all. In the context of the CBC, homework assignments offer opportunities for students to deepen their understanding of competencies and to practice skills in a real-world context. Students reflect on what they have learnt, identify areas where they need further clarification, and prepare themselves for future lessons. Therefore, homework plays a critical role in reinforcing classroom learning by allowing students



to practice and apply concepts independently. Also, the use of homework also allows teachers to assess how well students can work independently and apply theoretical concepts in practical tasks. This align with interview as follows;

"Students apply their information in a variety of circumstances through homework, which is an extension of what they learn in the classroom. In a CBC, where practice and ongoing learning are important, it's tremendously crucial. The popular of educators in the district give homework on a regular basis, but the difficulty is in making sure children have the resources they need at home to finish it."

#### **Project Work**

Project work is less frequently utilized compared to other methods, with a significant portion of 50 (35.5%) of teachers not employing it at all. This indicate a need for more resources or support for implementing project-based assessments, which are vital for fostering collaboration and critical thinking skills among students. Overall, the assessment practices in Namtumbo district reflect a blend of traditional and innovative approaches, with a strong emphasis on quizzes and tests, complemented by practical observations and oral activities. Also, 41 (29.1%) and 17 (12.1%) of secondary school teacher often used and average use of project work as assessment methods. Finding align with qualitative finding as follows;

"....Project-based evaluations are an integral component of my instruction because I think it's critical that students apply what they learn in a real-world setting. This strategy enable student to acquire critical thinking, problemsolving, and collaborative skills—all essential for their overall development"

The CBC uses project work to foster critical thinking, problem-solving, and the practical application of information, all of which greatly improve teaching and learning experiences. It enables students to apply and analyses knowledge, interacts with real-world problems, and develop critical abilities like cooperation and teamwork. Students gain respect for different viewpoints and improve their communication skills through collaborative project work, which improves their capacity to work in groups. Moreover, project-based learning fosters creativity and innovation by giving students the chance to experiment with novel concepts and come up with creative solutions for assignments (Johnson, 2014). This method not only prepares students for issues they will face in the real world but also makes learning more meaningful and relevant.

Finding align with Smith and Brown (2017) which exposed that, project work also encourages independent learning by teaching students research techniques, selfmanagement, and accountability. It offers chances for continuous evaluation, which enables educators to give students continual assistance and feedback as they study. Students become more motivated and interested when project-based evaluations are incorporated because they make the connection between what they are learning and real-world scenarios, which increases engagement and enthusiasm as reported by Smith & Brown, (2017). In addition, finding align with Williams, (2019) which exposed that, the abilities acquired like creativity, critical thinking, and time management are vital for success in the contemporary workforce and lifetime learning. So, project work is a vital component of CBC that aids students in developing the skills they will need in the future.

Table 3: Types of Assessment Method

| Types of Assessment Method used | Response        | Frequency | Percent (%) |
|---------------------------------|-----------------|-----------|-------------|
| Quizzes/tests                   | Often used      | 102       | 72.3        |
|                                 | Average         | 17        | 12.1        |
|                                 | Lowly used      | -         | -           |
|                                 | Not used at all | 22        | 15.6        |
| Practical Observation           | Often used      | 58        | 41.1        |
|                                 | Average         | 32        | 22.7        |
|                                 | Lowly used      | 9         | 6.4         |
|                                 | Not used at all | 42        | 29.8        |
| Oral Activities                 | Often used      | 60        | 42.6        |
|                                 | Average         | 68        | 48.2        |
|                                 | Lowly used      | 22        | 15.6        |
|                                 | Not used at all | 8         | 5.7         |
| Home works/exercises            | Often used      | 86        | 61.0        |
|                                 | Average         | 26        | 18.4        |
|                                 | Lowly used      | 4         | 2.8         |
|                                 | Not used at all | 25        | 17.7        |
| Project work                    | Often used      | 41        | 29.1        |



|  | Average         | 17 | 12.1 |
|--|-----------------|----|------|
|  | Lowly used      | 33 | 23.4 |
|  | Not used at all | 50 | 35.5 |

Source: Field Data, (2024)

#### Frequently of Application of Participatory Methods

In analysis of examine teaching techniques used by secondary school teachers during implementing of the competency-based curriculum in Namtumbo district, respondents were asked to provide information on how often/frequently apply participatory methods during implementing of the competency-based curriculum. Table 4 revealed that, 97 (68.8%) of secondary teachers always apply participatory methods during implementing of the competency-based curriculum while 40 (28.4%) suggested sometimes applied participatory methods during implementing of the competency-based curriculum. In addition, 4 (2.8%) of secondary teachers weren't applying participatory methods during implementing of the competency-based curriculum. Finding consistence with Komba and Mwandanji (2015) which revealed that schools that implemented interactive teaching methods saw improvements in student outcomes, which is more evidence that these approaches foster deeper understanding and knowledge retention. However, as Paulo and Tilya (2014) imply, the (28.4%) of teachers who only occasionally use participatory methods may be dealing with issues including big class numbers, little resources, or inadequate training. In certain classes, these obstacles make it difficult to consistently implement interactive approaches.

Table 4: Frequently of Application of Participatory Methods

| Frequently Application | of | Frequency | Percent (%) |
|------------------------|----|-----------|-------------|
| Always                 |    | 97        | 68.8        |
| Sometimes              |    | 40        | 28.4        |
| Not at all             |    | 4         | 2.8         |
| Total                  |    | 141       | 100.0       |

Source: Field Data, (2024)

# **Innovative Teaching Practices**

This subsection presents the finding related to innovative teaching practices introduced by public secondary teachers from Namtumbo district in response to CBC demands. Finding revealed that 12 (8.5%) practices flipped classroom; 19(13.5%) practices role playing; 38 (27.0%) practices usage of local resources; 26 (18.4%) practices collaborative learning while 21 (14.9%) of secondary teachers practices outdoor and field-based learning. Findings imply most of public secondary teachers from Namtumbo district practices peer teaching and usage of local resources in response to CBC demands. For example, secondary teachers use technology to shift the delivery of training outdoor of class, where students

study over videos or reading materials at home, and spend class time on collaborating and hands-on activities. Finding exposed changing innovative teaching practices acquaint with public secondary teachers in Namtumbo district in response to the demands of the CBC it is clear that these innovations are vital substitutes to traditional teaching methods. Finding align with Beena (2024) which exposed that, the flipped classroom permits students to participate with learning content self-reliantly outside of class, encouragement self-discipline. Students apply their knowledge through problem-solving exercises and discussions, which improves their thinking skills after return to classroom as supported by Beena (2024).

Finding align with Wicaksono (2024) which established that, in a collaborative learning setting, students work in groups to solve problems, share concepts, and complete tasks. The active participation assistances students to take ownership of their learning, which is more attractive compared to passive listening in an old-style lecture-based class. In addition, practices for example outdoor and field-based learning, along with the use of local resources, permit students to spread over classroom knowledge to real-world circumstances, thus connecting the gap among theory and practice as argued by Wicaksono (2024).

Moreover, results consistence with Taranath (2024) from Nepal which exposed that, usage of local resources in teaching guarantees that learning is traditionally and contextually applicable to students survives, create education extra telling and applicable. For instance, results from observation revealed that, a teacher in a Geography class use local environmental challenges, especially deforestation and soil erosion in Namtumbo district, as examples in lessons. This makes the students to involve them in discussions about issues that directly distress their societies.

Table 5: Innovative Teaching Practices

| Innovative Teaching    | Frequency | Percent (%) |
|------------------------|-----------|-------------|
| Practices              |           |             |
| Flipped Classroom      | 12        | 8.5         |
| Role-Playing           | 19        | 13.5        |
| Peer Teaching          | 38        | 27.0        |
| Use of Local Resources | 26        | 18.4        |
| Collaborative Learning | 25        | 17.7        |
| Stations               |           |             |
| Outdoor and Field-     | 21        | 14.9        |
| Based Learning         |           |             |
| Total                  | 141       | 100.0       |

Source: Field Data, (2024)





#### **CONCLUSION**

This study concludes that, 124 (87.9%) a significant majority of teachers frequently use interactive techniques in implementing CBC, such as group discussions, demonstrations, and question-and-answer sessions to inspire active learning and teamwork. Also, techniques like surveys, projects, practicals, and lectures are less commonly used due to limited resources and time constraints. Moreover, study concluded that, in student's assessment, utmost 125 (88.7%) of teachers regularly use techniques such as quizzes and tests, while projectbased and practical assessments is crucial for practical skill development are less often used in assessment due to inadequate teaching and learning resources. However, oral and practical assessments are common, demonstrating a balance among traditional and modern assessment approaches.

#### Recommendations

In accordance to the study's conclusions, schools required to priorities time and learning and teaching resources for practical and project-based learning in order enhance resource allocation. These evaluations have significance for the acquisition of skills in the Competency-Based Curriculum (CBC). Increasing the availability of instructional resources, equipment, and training for teachers could make easier for teachers to incorporate these tests as well as enhance students' ability to apply their knowledge in real-life scenarios. Teachers might also be more capable to balance interactive methods and deal with resource restrictions if training programs were included to diversity teaching strategies. Teachers could make the most of little resources with professional development centred on effectively adopting a variety of approaches, includes surveys and handson demonstrations. Lastly, as participatory learning and practical assessments are essential to CBC, it is essential to enhance feedback systems in practical activities. In order to facilitate quick, helpful criticism, schools should set up organized feedback systems. This will support students to improve capacities and assist the ongoing enhancement of their critical and practical thinking abilities.

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