

Geography Teachers' Implementation of Competency-Based Teaching Approaches and their Impact on Students' Academic Performance

Mlelwa Edwin

Ruaha Catholic University, Iringa-Tanzania

Email: edwinmlelwa@yahoo.com

And

Makungu Bulayi

Ruaha Catholic University, Iringa-Tanzania

Email: bscit113@gmail.com

Abstract

The study assessed the Geography teachers' implementation of competency-based teaching approaches on students' academic performance at secondary level. Qualitative research approach with a case study research design was employed in this study. The target population of the study was geography teachers and students. The sample size was 66 participants (12 geography teachers and 54 students). Data were collected through interviews, focus group discussion and documentary review and analyzed through content analysis. The study findings revealed that, geography teachers implement competency-based teaching approaches through setting learning competencies and objectives that reflect competency-based teaching approaches, provision of constructive feedback, teachers' decision on student mastery learning and teachers assessment techniques. This study concluded that, effective implementation of competency-based teaching approaches have a contribution on students' academic performance. Generally, effective implementation of competency-based teaching approach plays a pivotal role on students' academic performance. The extent to which students are attaining low performance is associated with various challenges including teachers' qualification and their ability in the implementation of competency-based teaching approaches, students' commitment, large class size and lack of teaching and learning materials. It is recommended that the government should provide in-service training and other capacity building programs to teachers so that they can be capable in implementing competency-based teaching approaches.

Keywords: academic performance, competency-based teaching approaches, contribution, geography teachers, implementation

1.0 Introduction

Competency-based teaching approaches are educational strategies that focus on developing specific skills and competencies in students, rather than solely emphasizing the acquisition of knowledge (Komba & Mwandaji, 2015). According to Lopez, Patrick and Sturgis (2017) competency-based teaching approaches are designed to prepare students for real-world challenges by equipping them with practical skills and abilities that are relevant to their future careers and personal development. Competency-based teaching aims to ensure that students not only understand theoretical concepts but also have the practical skills to apply their knowledge effectively in various contexts. The most common competency-based teaching approaches used by teachers on the teaching and learning process are learner centered, networking, problem solving and experience based approach (Niemi, 2011).

Historically, competency-based teaching approaches began to be implemented as the introduction of competence based curriculum which was firstly introduced and implemented in USA in the early of 1970s (Kimario & Otieno, 2022). The purpose of implementing competency-based teaching approaches was to ensure that students are becoming creative and curious which could help students for world of work (Richard & Rogers, 2001). As stipulated by Kimario and Otieno (2022), South Africa was the first African country to adopt Competence Based Curriculum in 1998 following the acute shortage of professionals like engineers, technicians and artisans. Tanzania adopted competence based curriculum in 2005 with the aim of improving the quality of education and to make learners more competent through the acquisition of competencies as well as to improve their academic performance (Mwesiga, 2017).

On implementing competency-based teaching approaches as it involves the process of putting educational plan into effect, the Tanzanian government has made various efforts to ensure that competency-based teaching is well implemented (Mohamed & Karuku, 2017). Some of these efforts include seminars, on job training and the introduction of teacher education framework (MoEST, 2019). Apart from these efforts done by the Tanzania government to promote effective implementation competency based teaching, there are some challenges facing its implementation. For instance, there seem to be mismatch between policy and practices, lack of instruction materials, negative attitude by some teachers towards change whereby some are still

using content-based teaching approaches and encourage rote learning in assessment, and lack of competent teachers in using competency-based teaching approaches (Tarimo & Kimaro, 2021).

The challenges faced the implementation of competency-based teaching approaches in public secondary schools in Tanzania have serious implications on the academic performance of student in Geography subject. This has been evidenced in Certificate of Secondary Education Examination (CSEE) from 2018 to 2022 where 42.7% of Geography candidates failed by scoring F grade (NECTA, 2022).The teaching of Geography needs the creation of a dynamic and effective learning environment that not only enhances student understanding but also fosters a lifelong interest in the subject (Artivinil, 2015).

Despite the efforts made by the Tanzania government to improve and reform education system, including adopting competence based curriculum, the low performance in Geography is still an agenda of discussion among education stakeholders. The poor academic performance by majority of students in various subject areas is basically linked to application of ineffective teaching approaches by teachers to impact knowledge to learners and therefore teachers need conversant with numerous teaching approaches (Adunola, 2011). The questions raised are, ‘how geography teachers implement competency-based teaching approach? How does the implementation of those approaches affect students’ academic performance? Therefore this study was carried out to provide empirical evidence on how the geography teachers’ implement competence based teaching approaches and its impacts on students’ academic performance.

2.0 Materials and Methods

2.1 Research Approach and Design

In exploring geography teachers' implementation of competency-based teaching approaches and their impact on students' academic performance, a qualitative research approach was particularly fitting because it helped to gain in-depth understanding of complex phenomena. This approach enabled the researcher to gather rich, detailed insights into teachers’ experiences, perceptions, and the contextual factors influencing their teaching approaches. Qualitative data, such as interviews and focus group discussion, revealed nuances that quantitative methods overlooked, providing a more comprehensive view of how competency-based approaches were applied in real classroom settings.

The case study research design was also employed as it focused on a specific setting in this case, Iringa Municipality and examined the interactions within this particular environment. This design allowed for a thorough investigation of the teaching practices and their effects on student performance by considering multiple perspectives, including those of teachers, students, and possibly administrators. By concentrating on a single case, the researcher delved deeply into the local context, uncovering unique challenges and successes related to the implementation of competency-based teaching approaches. This holistic view was essential for understanding the intricate dynamics at play and informed broader educational strategies and policies.

2.2 Participants

In the study, the target population included all geography teachers working within the selected secondary schools in Iringa municipality and the students enrolled in their classes. A total sample size of 66 participants was determined, consisting of 12 geography teachers and 54 students. This sample size was chosen to ensure a diverse range of perspectives while maintaining manageability for in-depth qualitative analysis. The inclusion of both teachers and students was crucial, as it allowed for a comprehensive understanding of the teaching approaches and their effects on learning outcomes.

To select the sample, a purposive sampling technique was employed. This method was appropriate as it enabled the researcher to intentionally choose participants who were directly involved in the competency-based teaching approach. By focusing on those who have firsthand experience and relevant insights, the study aimed to gather rich qualitative data that would illuminate the practical implementation of these teaching strategies and their impact on students' academic performance.

2.3 Data Collection Methods

The methods for data collection included interviews with geography teachers, focus group discussions with students, and a review of relevant documentary evidence, such as lesson plans and examination results. Interviews were conducted with geography teachers to gather in-depth insights into their experiences, perspectives, and challenges related to implementing competency-based teaching approaches. This qualitative method allowed for semi-structured interview questions, facilitating rich, narrative responses that captured the complexities of their

teaching practices. Through these interviews, the researcher was able to explore the motivations behind their instructional choices, the perceived effectiveness of these approaches, and any barriers they encountered in the classroom.

Focus group discussions with students complemented the teachers' interviews by providing a platform for students to express their thoughts and feelings about the teaching methods they experienced. This method encouraged interaction among participants, allowing them to share and reflect on their collective experiences. The discussions aimed to uncover how students perceived the competency-based approaches, their engagement in the learning process, and the impact of these methods on their academic performance. By capturing diverse viewpoints, the focus groups enriched the data, revealing trends and common themes in student experiences.

In addition, a documentary review was conducted to analyze relevant documents such as lesson plans and examination results. This method provided objective evidence of the teachers' planned instructional strategies and the actual outcomes of student learning. By reviewing lesson plans, the researcher could assess how well the competency-based approaches were integrated into the curriculum. Examination results offered measurable indicators of student performance, allowing for a comparison between the intended learning outcomes and actual student academic performance. This triangulation of data from interviews, focus groups, and documentary evidence strengthened the validity of the findings and provided a holistic view of the implementation and impact of competency-based teaching in geography education. Together, these data collection methods created a rich, multifaceted understanding of the research topic, highlighting the interplay between teaching practices and student performance in a specific educational context.

2.4 Data Analysis and Ethical Considerations

In order for the raw data to make sense, data were analyzed through content analysis. Content analysis was preferred due to its flexibility that allowed the researcher to focus on the data in numerous different ways. The process started by selecting the content that was analyzed based on research questions, defining the units and categories of analysis, developing a set of rules for coding, coding the text according to rules, analyzing the results and drawing conclusions. Moreover, in order to ensure rigor or confidence and to avoid bias with the findings as the basic

for qualitative research, multiple criteria such as credibility, dependability, transferability and conformability was ensured.

Also, adherence to ethical considerations was paramount throughout the research process. Prior to data collection, an introductory letter was obtained from the office of the Director of Postgraduate Studies. This letter served as formal recognition, allowing the researcher to approach regional and municipal authorities with credibility. It facilitated access to the selected schools, ensuring that the study was conducted within a framework of institutional support and respect for local governance. During the data collection process, ethical issues were carefully addressed to protect the rights and well-being of the participants. Informed consent was sought from all respondents, ensuring that they fully understood the purpose of the study, their role in it, and their right to withdraw at any time without penalty. This transparency was crucial in fostering trust and promoting a respectful research environment. Furthermore, confidentiality was rigorously maintained; participants were assured that their identities and responses would be kept anonymous, which is essential for encouraging open and honest communication.

Ethical considerations continued during the data analysis phase, where the researcher was committed to relying solely on the findings derived from the collected data rather than imposing personal biases or interpretations. By focusing on the evidence gathered from interviews, focus groups, and documentary reviews, the analysis aimed to faithfully represent the perspectives and experiences of the participants. This commitment to ethical integrity ensured that the study's conclusions were grounded in the reality of the participants' experiences, contributing to the credibility and reliability of the research outcomes. Overall, these ethical practices not only safeguarded the participants but also enhanced the overall quality and legitimacy of the study, ensuring that it was conducted with respect and responsibility towards all stakeholders involved.

3.0 Findings and Discussion

The purpose of this study was to assess the Geography teachers' implementation of competency-based teaching approaches on enhancing secondary schools students' academic performance. Through interview for geography teachers and FGD to students, they were asked how geography teachers implement competency-based teaching approaches on enhancing students' academic performance. But also lesson plans, schemes of work, lesson notes and students examination

results were reviewed so as to obtain information that participants did not give through other data collection methods. The following are the obtained findings as presented and discussed here under:

3.1 Setting Learning Competencies and Objectives that Reflect Competency-Based Teaching Approaches

Through an interview findings revealed that geography teachers implement competency-based teaching approaches by defining competencies and learning objectives that students are expected to achieve after the completion of the learning process. Furthermore, the findings revealed that by defining competencies and learning objectives, it helps geography teachers on guiding instruction and assessment practice to both content knowledge (what students should know) and practical skills (what students should be able to do). One of the interviewed geography teacher had this to say:

Personally, before the teaching and learning process I create a roadmap (lesson plan) for effective instruction that enhances student engagement and achievement. This systematic approach ensures that all teaching and learning competencies and objectives are outlined in order to achieve the desired outcomes. (Interview with teacher₄, school C: 28th February, 2024)

Similarly the teachers' lesson plan as the reviewed teaching document revealed that geography teachers define competencies and learning objectives to be achieved by students before the actual teaching and learning process. This was evidenced by the reviewed lesson plan under the part of competence, main objective and specific in secondary school B, for instance one Geography teacher from secondary school B in his lesson plan stated that; *the students demonstrate the ability to critically examine environmental problem and take appropriate measures to solve them*. While on the part of specific objective stated that; *within 80 minutes students should be able to analyze the causes, extent and effects of environmental pollution and waste mismanagement*. Therefore, this implies that in order to achieve the intended teaching and learning outcome like ensuring students' academic performance geography teachers firstly define

the competencies and learning objective before the actual implementation of competency-based teaching approaches.

The intended student competence and learning objectives to be acquired usually are indicated on the teachers' lesson plan and scheme of work. Setting clear learning competencies and objectives is fundamental process that lies at the heart of effective teaching and learning process (Strong, 2021). The implementation of well-designed lesson plan which hold the competencies and learning objectives has a profound impact on student learning outcome. By setting well defined competencies and learning objectives it create purposively teaching that fulfill the needs of students leading to improved academic performance and heightened student engagement (Stender, 2014).

3.2 Provision of Timely and Constructive Feedback

The findings of this study revealed that geography teacher implement competency-based teaching approaches through provision of timely and constructive feedback to the students. Through an interview, it was found that provision of timely and constructive feedback allows students to understand their progress, identify areas of improvement and make necessary adjustment in their learning strategies. To substantiate this perspective, a teacher from school A expressed the following view:

During the teaching and learning process I always make assessment, it can be through observation, question and answer, quizzes, test or examination. CBC demands mastery learning, so usually I provide feedback which is specific, constructive and delivery shortly after the assessment or activity so that student can effectively use it to enhance their learning.(Interview with teacher₁, school A : 22ndFebruary, 2024)

Contrary, the findings of this study also showed that not all geography teachers provide timely and constructive feedback to students. This was revealed by the following argument from students in an FGD in secondary school C:

Provision of timely and constructive feedback is very necessary and it can help us to know our progress and to make more effort in learning. But here at our school we only get feedback from our teachers either in mid-term test or annual examination, this tendency really hinders our academic performance.

(Student₇ in FGD₁, school C: 28thFebruary, 2024)

In addition, another student added that:

Not all teachers provide feedback whether on assessment or our learning progress. And even few of them sometime when we do not perform well they use some statement which demoralize us.

(Student₈ in FGD₂, school A: 22ndFebruary, 2024)

Provision of timely and constructive feedback to students is among the way of implementing competency-based teaching approach, but it need teachers commitment so as to attain the positive outcome of it. Researches over the preceding decades suggest that giving constructive feedbacks to students is one of the most influential strategies which help them to boost their self-efficacy (Andrade, Wang & Akawi, 2009). But also according to Aslam and Khan (2020) timely feedback to students influences students' motivation for task value which ultimately helps students to achieve their learning outcomes improvement in academic performance.

3.3 Teachers Decision on Students' Mastery Learning

The findings of this study revealed that Geography teachers implement competency-based teaching approaches through application of mastery learning. Mastery learning is revealed by Geography teachers through ensuring students demonstration of proficiency or mastery in a particular skill or concept before moving on to more another topics or sub-topic. Mastery learning ensures students to have a solid foundation of knowledge before progressing to higher-level content in geography. Furthermore, geography teachers stated that the high number of students in the classroom and time limit at some point it hinder the effective implementation of

mastery learning. This was evidenced by the response from an interview with geography teacher at secondary school B as she said that:

Before moving to another concepts or topic, I usually make sure that my students achieve a high level of understanding so as to have a long-lasting understanding of the lesson. If the lesson was not understood to most of students I have to make revision of that concept, however at some point due to high number of student and time limit it is not possible to make follow up to all students so as to know if the lesson was understood or not.

(Interview with teacher₂, school C: 23rdFebruary, 2024)

Similarly, the finding from lesson plan as the reviewed teaching document showed that geography teachers ensure the mastery learning of their students through making revision before moving to other subtopic or new topic. This was evidenced by the reviewed lesson plan under the teachers' evaluation and remark in secondary school C, for instance one Geography teacher from secondary school C in his lesson plan remarked that; *I will repeat the taught sub-topic so as to make sure that all students were able to calculate mean, mode and median.* In the same column, B₂ in school B stated that; *90% of students understood well the lesson, 10% will be assisted during the remedial classes.* Therefore, in the Geography teachers lesson plan it clearly indicate the teachers application of mastery learning; where before proceeding with the next content he/she ensures that all students achieve the teaching and learning objective of the subject content.

Contrary, the findings from students through FGD showed that not all the time mastery learning is applied by their geography teachers. It was noted that most of the students agreed that mastery learning is useful in their academic performance, but the nature of teaching and learning environment, class size and teachers commitment impediment the achieving of mastery learning. As one student from secondary school A explained that:

Theoretically, our geography use mastery learning. But in reality we used to move from one topic to another without ensuring all students achieve the defined competencies before proceeding on the next concept/sub-topic or new

topic. In short what matters to our geography teacher is completing the coverage of the subject concepts only.
(Student₆ in FGD₃, school A: 22ndFebruary, 2024)

Basing on the finding of this study it implies that geography teachers implement competency-based teaching approaches through the use of mastery learning. Mastery learning has a positive impact on the students' academic performance as it emphasizes students to demonstrate a high level of understanding before moving on to more complex topics. Abakpa and Iji (2011) opine that mastery learning strategy can provide quality instruction, immediate feedback and remedial lessons for attainment of lesson objectives. Studies done by Oluwatosin and Bello (2015), Hussain and Suleman (2015) all affirm that mastery learning enhance students' academic achievements and retention in both social and science subjects compared to traditional learning approach. However, the current situation of poor academic performance of students in geography subject was because of ineffective use of mastery learning, nature of teaching and learning environment, class size and lack of teachers' commitment.

3.4 Teachers Assessment Techniques

During interview sessions with geography teachers the findings revealed that authentic assessment is a method used during the implementation of competency-based teaching approaches. As the methods of evaluating student learning, geography teachers emphasizes the application of knowledge and skills in real-world context through engaging students in tasks that mirror the complexities and unpredictability of real-life situations. Also the finding showed that authentic assessment aims to measure not just what students know, but how effectively they can apply their acquired knowledge in practical scenarios. This was evidenced in the interview with one the geography teacher from school B who said that:

On implementing competency-based teaching approaches, I usually incorporate measuring students understanding through realistic tasks that require them to apply their knowledge in meaningful ways. For example, giving group task to students to discuss and present ways on improving

waste management in their areas. (Interview with teachers₄, school B: 23rdFebruary, 2024)

Additionally, through focus group discussion with the students, it was revealed that geography teachers assess the understanding of students through tasks that requires students to contextualize and apply what they have learned. This encourages deeper understanding by connecting theoretical knowledge with practical application. However students' commitment affects the effective implementation and its intended outcome. In one FGD with students in school C, one student described how their Geography teachers emphasize the real-world skills in learning:

Our geography teacher guided us to discuss on how population increase in our local communities have an impact on climate change. By engaging us in this type of task, it fosters engagement and promotes higher-order thinking skills necessary for success beyond the classroom. This helps us much in improving our academic performance in general. (Student₈ in FGD₃, school C: 28thFebruary, 2024)

With regard to the findings of this study, it showed geography teachers implement competency-based teaching approaches through authentic assessment which enhances real-world relevance. Similarly, Deveci (2017) argued that teachers' emphasis on real-world skills plays a crucial role in helping students to understand the world around them, equipping students with the knowledge and ability they need to navigate an increasingly interconnected and complex world. Authentic assessment is an ingredient to improve students learning outcome and performance but only if both teachers and students are committed on using it (Muis & Edwards, 2009).

4.0 Conclusions

Based on the findings of this study, the following inferences were made; Geography teachers' implementation of competency-based teaching approaches has a contribution on students' academic performance. However, extent to which students are attaining low

performance is associated with challenges including teachers' qualification and their ability in implementing competency-based teaching approaches, students' commitment, large class size and lack of teaching and learning materials.

5.0 Recommendations

On the basis of the research findings and conclusion it is recommended that the government of Tanzania through the Ministry of Education, Science and Technology (MoEST) in cooperation with Tanzania Institute of Education (TIE) and other educational stakeholders should provide regular in-service training and other capacity building programs to teachers so that they can be capable in implementing competency-based teaching approaches effectively. Furthermore effort should be made by the government to ensure provision of enough teaching and learning materials, introducing series of strategic measures on enhancing engagement and accountability to both teachers and students and recruiting new teachers so as to have equal student-teacher ratio. Lastly, further study could be conducted in other subjects with low performance rate.

References

- Abakpa, B.O, & Iji, C.O (2011). Effect of mastery learning approach on senior secondary school students' achievements in geometry. *Journal of Science Technology Association*, 46(1), 165 – 176.
- Adunola, O.A (2011). The Impact of Teachers' Teaching Methods on the Academic Performance of Primary Schools Pupils in Ijebu-Ode Local cut Area of Ogun State. *World Journal of Education*, 12(1), 143 – 149.
- Andrade, H. L., Wang, X., & Akawi, R. L. (2009). Rubric- referenced self-assessment and self-efficacy for writing. *The Journal of Educational Research*, 102(4), 287-302.
- Artivinil, E. (2017). What is innovative Geography teaching? A Perspective from Geography teachers. *Journal of Education and Training Studies*, 5(6), 9-23.
- Aslam, R., & Khan, N. (2020). Constructive feedback and students' academic achievement: A theoretical framework. *New Horizons*, 14(2), 175–198.

- Deveci, H. (2017). Teachers' views on teaching current events in social studies. *Educational Sciences: Theory & Practice*, 7 (1), 417-451.
- Din, K. U., & Saeed, M. (2018). Relationship between University Students' English Proficiency, Academic Achievement and their Satisfaction on Teacher Feedback. *Bulletin of Education and Research*, 40(3), 129-143.
- Hussain, I., & Suleman, Q. (2016). Effect of Bloom's mastery learning approach on students, academic achievement in English at secondary level. *Journal of Literature, Language and Linguistics*, 46(1), 165 – 176.
- Kimario, T. T. & Otieno, K. O. (2022). Effects of competence based curriculum on students' Education Achievement: A study of secondary schools in Arusha City Council, Tanzania. *Journal of Research Innovation and Implications in Education*, 6(1), 201 – 210.
- Komba, S.C & Mwandaji, M. (2015). Reflection as the implementation of competence-based curriculum in Tanzania Secondary schools; *Journal of Education and Learning*, 4(2),73-80.
- Lopez N., Patrick S. & Sturgis C. (2017). *Quality and equity by design: Charting the course for the next phase of competency-based education*. Washington, DC: CompetencyWorks and iNACOL.
- Muis, K.R & Edwards, O. (2009). Examining the stability of achievement goal orientation. *Contemporary Educational Journal Psychology*, 34(4) 265 -277.
- Mwesiga, F. (2017). *Factors influencing students' poor performance in geography subject in Tanzania: The case of community secondary schools in Morogoro municipality*. Published Master Thesis, Mzumbe University.
- Niemi, H. (2011). Educating student teachers to become high quality professionals - A finnish case. *Center for Educational Policy Studies Journal*, 1(1), 43–66.
- Oluwatosin, O.B., & Bello T.O. (2015). Comparative effect of mastery learning and mind mapping approaches in improving secondary school students' learning outcome in ohysics. *Science Journal of Education*, 3(4), 78 – 84.
- Richard, J.C & Rogers, T.S(2001). *Approaches and methods in Language teaching*. New York: Cambridge University Press.
- Stender, A. (2014). Transformation of topic-specific professional knowledge into personal pedagogical content knowledge through lesson planning. *International Journal of Science Education*, 39(12) 1690 – 1714.

Strong, M. (2021). *The Art of Lesson Planning: Strategies for Effective Teaching*. New York: Routledge