



# Exploring Pedagogical Practices in Tanzanian Secondary Schools: A Systematic Review of Empirical Evidence

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**Abstract:** This study explored pedagogical practices in Tanzanian secondary schools through a systematic review of empirical evidence published between 2020 and 2025. The study aimed to examine teaching approaches, learner participation, classroom interaction, assessment practices, ICT integration, and challenges affecting the implementation of competency-based pedagogy in secondary education. The review was guided by Constructivist Learning Theory, which emphasises active learner participation, collaboration, and knowledge construction through social interaction. A systematic review design guided by the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) framework was employed. Relevant studies were obtained from academic databases, including Google Scholar, ERIC, ResearchGate, Science Direct, and Springer. A total of 168 studies were initially identified, and after screening and eligibility assessment, 28 empirical studies were included in the final synthesis. Data were analysed using thematic synthesis techniques. Findings revealed that teaching in Tanzanian secondary schools remains predominantly teacher-centred, despite curriculum reforms that promote learner-centred and competency-based pedagogy. Most teachers continue to rely on lecturing, note dictation, memorisation, and examination-oriented instruction, while participatory teaching approaches are inconsistently implemented. The review further identified overcrowded classrooms, inadequate teaching resources, insufficient teacher preparation, limited ICT infrastructure, and examination pressure as major barriers affecting effective pedagogical implementation. The study concludes that successful implementation of competency-based pedagogy requires strengthened teacher professional development, improved educational infrastructure, assessment reforms, enhanced ICT integration, and supportive learning environments. The study recommends increased investment in educational resources, continuous teacher training, reduction of class sizes, and alignment of assessment systems with competency-based educational goals.

**Keywords:** Pedagogical practices, learner-centred pedagogy, competency-based curriculum, secondary schools, Tanzania, systematic review.

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## 1. Introduction

Education systems around the world are evolving from teacher-centred to learner-centred, competency-based pedagogical approaches that emphasise critical thinking,

creativity, communication, collaboration, and problem-solving. This shift is linked to the growing need for quality education that enables students to cope with the social, economic, and technological changes of the twenty-first century (UNESCO, 2021). As a result, countries have made

many efforts to change curricula and pedagogical approaches to enhance students' competencies and learning outcomes. In Africa, for example, Tanzania, educational reforms have focused on reorienting teaching and learning toward active student participation rather than passive knowledge reception (URT, 2023).

Secondary education reforms in Tanzania have been geared towards enhancing competency-based teaching and learning to improve the quality and relevance of education. Teachers are expected to develop a teaching-learning process that is interactive and learner-centred through the use of group discussions, collaborative learning, enquiry-based learning, problem-solving, projects, classroom presentations and continuous assessment based on the Competency Based Curriculum (CBC) (Komba & Jonathan, 2021). Further, the education reform in these schools promotes the use of Information and Communication Technology (ICT) and inclusive pedagogical approaches to improve student engagement and learning outcomes (Mtebe & Gallagher, 2022). Although these reforms have been implemented, empirical research suggests that some secondary schools in Tanzania are still struggling to fully implement pedagogical approaches grounded in learner- and competency-based education. Studies show that teacher-centred teaching strategies, such as lecturing, note-taking, memorisation, and examination-oriented teaching, remain the main strategies in classrooms (Nyamubi, 2021; Mwakalinga, 2023). Overcrowded classrooms, a lack of teaching and learning materials, pedagogical inadequacy, limited access to ICT facilities, and pressure to finish the syllabus before national exams are among the challenges teachers face (Mosha & Komba, 2022). As a result, students are not active learners, even though they are expected to be active learners in the curriculum.

In addition, empirical research carried out in Tanzania has yielded contradictory results, as it has focused on aspects of pedagogy related to competency-based teaching, classroom interaction, assessment practices, the integration of ICTs, and learner participation. While these studies offer valuable perspectives on classroom practices in secondary schools, the evidence is not synthesised to provide a comprehensive understanding of classroom pedagogy that is being utilised by teachers in all secondary schools in Tanzania, and how classroom practices have changed with the implementation of the educational reforms in the country (Mwambela & Mwakapina, 2024). There is a lack of empirical evidence, which makes it difficult for policymakers, curriculum developers, teacher educators, and educational stakeholders to understand the process of pedagogical implementation, its realities, and the problems encountered in secondary education. Hence, this study is a review of empirical evidence on pedagogical practices in Tanzanian secondary schools, providing a synthesis of current knowledge on pedagogical approaches, classroom

interaction, learner engagement, assessment practices, and the challenges encountered in implementing effective pedagogy. The study should provide a general picture of classroom teaching practices in Tanzanian secondary schools, informing the formulation of educational policy, teacher training, and curriculum development.

## 1.2 Statement of the Problem

Although competency-based curriculum reform has been introduced in Tanzania, teaching in many secondary schools has remained traditional, with teachers dominating and learners as passive recipients of knowledge; this is contrary to what is advocated in the educational policies. Tomorrow's research is not the same as that of yesterday (Robb, 2009); empirical studies of recent years show that teaching and learning in classrooms are still dominated by lecturing, note dictation, memorisation, and examination-oriented teaching, which stifles students' active participation, creativity, critical thinking, and competence building (Nyamubi, 2021; Mwakalinga, 2023). Despite the adoption of an interactive approach to teaching and learning, which involves group discussions, collaborative learning, inquiry-based learning and continuous assessment, teachers still encounter challenges such as overcrowded classrooms, inadequate teaching and learning materials, lack of pedagogical training, lack of ICT integration, and the pressure to teach the syllabus before the national examinations (Mosha & Komba, 2022; URT, 2023). Thus, there is an uncertainty about the effective implementation of competency-based and learner-centred pedagogical practices in Tanzanian secondary schools.

Although competency-based curriculum reforms have been implemented in Tanzania, many secondary schools still use traditional teacher-directed approaches to teaching rather than the learner-centred pedagogy envisioned by the curriculum policies. In recent years, empirical research has shown that classroom instruction remains largely dominated by students' passivity, the memorisation of facts, examination-oriented teaching and note dictation, which contributes to the lack of participation, creativity and critical thinking skills on the part of the students in the classroom (Nyamubi, 2021; Mwakalinga, 2023). While the curriculum is being based on interactive teaching methods like group discussions, collaborative learning, inquiry-based learning, continuous assessment, teachers are still experiencing some challenges, such as overcrowded classrooms, inadequate teaching and learning resources, lack of pedagogical training, limited use of ICTs and pressure to cover syllabi before the national examinations (Mosha & Komba, 2022; URT, 2023). Thus, the extent of implementation of competency-based and learner-centred pedagogical approaches remains unclear in Tanzanian secondary schools.

## 2. Literature Review

### 2.1 Conceptual Foundation

Pedagogical practices are the approaches, strategies, techniques, and processes teachers use to support classroom teaching and learning. Pedagogical practices encompass classroom interaction, teaching practices, engagement with learners, assessment practices, classroom management, the use of instructional materials, and the incorporation of technology in teaching (UNESCO, 2021). In today's educational systems, effective teaching methods include a focus on learner-centred approaches that engage students in building knowledge, problem-solving, working collaboratively with peers, and applying what they have learned to solve real-world problems. Based on the context of secondary education in Tanzania, pedagogical practices are related to the implementation of the Competency Based Curriculum (CBC) that focuses on the ability of the learners to gain knowledge, skills, attitudes, values and competencies that are necessary for self-reliant and resourceful lives as well as national development (URT, 2023). In competency-based education, the teacher should move from a traditional teacher-centred approach to participative, interactive teaching, including group discussions, inquiry-based learning, collaborative learning, projects, presentations, demonstrations, and continuous assessment. The approaches are designed to facilitate students' critical thinking, creativity, communication, and problem-solving skills (Komba & Jonathan, 2021).

Empirical studies in Tanzania, however, show that the application of learner-centred pedagogical practices varies across secondary schools. There are problems such as overcrowding in classrooms, a lack of teaching materials, inadequate teacher training, and insufficient ICT facilities, which have forced many teachers to rely on traditional pedagogical methods, such as lectures, rote learning, and examination-based instruction (Moshia & Komba, 2022; Mwakalinga, 2023). Hence, this study views pedagogical practices as the actual classroom practices and interactions used by teachers in Tanzanian secondary schools when implementing CBE. The teacher's competence, the availability of teaching and learning resources, the classroom environment, assessment approaches, curriculum demands and educational policies are all interrelated and are important factors that influence effective pedagogical practices conceptually. This study investigates pedagogical practices regarding teaching approaches, learner participation in teaching and learning, classroom interaction, assessment practices, the integration of ICTs in teaching, and the challenges of effectively implementing learner-centred pedagogy in Tanzanian Secondary Schools.

## 2.2 Theoretical Foundation

This study is based on the Constructivist Learning Theory of Lev Vygotsky, supported by Jean Piaget's ideas. Constructivist theory states that learning results from the learner's active construction of knowledge through interaction with their environment, experiences, teachers, and fellow learners, rather than from the transmission of knowledge by the teacher. The theory focuses on the role that active learning, collaborative learning, inquiry, problem-solving and social interaction play in effective learning (Schunk, 2020). Constructivist views hold that teachers should act as facilitators of learning rather than as transmitters of knowledge. Students should be actively involved in classroom discussions, group work, investigations, projects, presentations, and problem-solving. The Zone of Proximal Development (ZPD) also serves as an explanation of Vygotsky's theory, which states that when students are supported in instructional interaction with teachers or peers, they learn best. Likewise, Piaget highlighted the importance of learners' understanding through exploration and adaptation to new experiences (Woolfolk, 2021). Constructivist theory is relevant to this study because it is grounded in pedagogical practices that are encouraged in Tanzanian secondary education, such as competency-based pedagogies and learner-centred approaches. The Competency-Based Curriculum (CCB) fosters active learning, critical thinking, creativity, communication, and competence-building among learners (URT, 2023). Thus, the constructivist theory is suitable for studying the level of implementation of the learner-centred education approach in classroom instruction in Tanzanian secondary schools. Nevertheless, empirical evidence indicates that many teachers still practise teacher-centred approaches that constrain learners' participation and interaction (Nyamubi 2021; Mwakalinga 2023). The theory, therefore, explains the gap between curriculum expectations and actual curriculum practices by determining whether the teaching methods employed in secondary schools are effective in promoting active knowledge construction and learner engagement, as advocated by constructivist principles.

## 3. Methodology

### 3.1 Research Design

The design of this study was a systematic review to synthesise and collate empirical evidence on pedagogical practice in Tanzanian secondary schools. This was deemed appropriate for a systematic review design, as it allows the researcher to identify, assess, and synthesise results from multiple empirical studies in a clear, structured, and sound manner (Snyder, 2019). The design enabled this study to build a holistic picture of learning approaches, learners'

engagement, classroom interactions, assessment practices, and the problems with their implementation in Tanzanian secondary schools. The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines were used to ensure the systematic identification, screening, eligibility and inclusion of relevant studies for review.

### 3.2 Sources of Literature

Secondary data were used from published empirical studies on pedagogical practices in Tanzanian secondary schools. A search of the relevant studies was conducted across academic databases and search engines, including Google Scholar, ResearchGate, ERIC, Taylor & Francis, Springer, and ScienceDirect. Complementing the empirical evidence, government reports, policy documents and publications on competency-based teaching and learning in Tanzania were consulted.

### 3.3 Search Strategy

The literature search used key terms and Boolean operators to identify relevant studies. Search terms included "pedagogical practices," "teaching approaches," "learner-centred pedagogy," "competency-based teaching,"

"classroom practices," "secondary schools," and "Tanzania." Boolean operators such as AND and OR were used to combine keywords during the search process. For example, searches included phrases such as "pedagogical practices AND secondary schools AND Tanzania" and "competency-based teaching OR learner-centred pedagogy AND Tanzania." The search focused on studies published between 2020 and 2025 to ensure inclusion of recent empirical evidence.

### 3.4 Inclusion and Exclusion Criteria

The inclusion and exclusion criteria for this review were systematically defined to ensure rigour and relevance. Specifically, the study incorporated empirical works published between 2020 and 2025 that examined pedagogical practices or teaching approaches in Tanzanian secondary schools, employing qualitative, quantitative, or mixed-methods designs, and appearing in peer-reviewed journals, dissertations, or official educational reports. Conversely, studies were excluded if they focused on primary schools, colleges, or universities, lacked empirical evidence, were published before 2020, or did not directly address classroom pedagogy or teaching practices in secondary education. The detailed breakdown of these criteria is presented in Table 1.

**Table 1: Inclusion and Exclusion Criteria**

Criteria	Inclusion Criteria	Exclusion Criteria
<b>Geographical Scope</b>	Studies conducted in Tanzania	Studies conducted outside Tanzania
<b>Level of Education</b>	Studies focusing on secondary schools	Studies focusing on primary schools, colleges, or universities
<b>Focus of Study</b>	Studies addressing pedagogical practices, teaching approaches, learner-centred pedagogy, competency-based teaching, classroom interaction, learner participation, assessment practices, or ICT integration	Studies unrelated to classroom pedagogy or teaching practices
<b>Type of Study</b>	Empirical studies employing qualitative, quantitative, or mixed-methods approaches	Conceptual papers, opinion articles, editorials, and non-empirical studies
<b>Publication Period</b>	Studies published between 2020 and 2025	Studies published before 2020
<b>Publication Sources</b>	Peer-reviewed journal articles, dissertations, theses, conference papers, and official educational reports	Unpublished documents without clear academic or institutional credibility
<b>Language</b>	Studies published in English	Studies published in languages other than English
<b>Availability of Full Text</b>	Studies with accessible full-text content	Studies without accessible full-text versions

Criteria	Inclusion Criteria	Exclusion Criteria
<b>Relevance to Study Objectives</b>	Studies directly addressing pedagogical practices in Tanzanian secondary schools.	Studies with insufficient relevance to the objectives of the review

Source: Researcher (2026)

### 3.5 Procedure for Selection of Studies

This study used the PRISMA framework (Page et al., 2021) to identify, screen, assess eligibility, and include empirical studies on pedagogical practice in Tanzanian secondary schools. We initially identified 168 studies by searching for relevant literature in databases, including Google Scholar, ERIC, ResearchGate, ScienceDirect, Springer, and Taylor & Francis Online. Searched ' and reference lists; conducted manual searching of government educational reports. Excluded 32 duplicates after identification; as a result, 136

studies were included for screening by title and abstract. Based on the screening phase, 79 studies were excluded because they did not focus on Tanzanian secondary schools, were not relevant to pedagogical practices, or were non-empirical. Consequently, 57 full-text articles were assessed for eligibility. During the eligibility assessment, 29 studies were excluded for insufficient empirical evidence, focus on other educational levels, publication outside the 2020–2025 period, or lack of methodological clarity. Finally, 28 empirical studies met the inclusion criteria and were included in the systematic review and thematic synthesis, as shown in Table 2.

**Table 2: PRISMA Flow Procedure**

PRISMA Stage	Number of Studies	Description
Identification	168	Studies identified through databases and other sources
Duplicate Removal	32	Duplicate records removed
Screening	136	Titles and abstracts screened
Excluded During Screening	79	Studies excluded due to irrelevance or non-empirical nature
Eligibility	57	Full-text articles assessed for eligibility
Excluded During Eligibility	29	Studies excluded for failing inclusion criteria
Included Studies	28	Final empirical studies included in the review

Source: Researcher (2026)

Table 2 shows that the PRISMA process enabled the researcher to systematically identify and select relevant empirical studies related to pedagogical practices in Tanzanian secondary schools. The procedure ensured transparency, minimised selection bias, and enhanced the credibility of the review findings. Through systematic identification, screening, eligibility assessment, and inclusion procedures, only studies with relevant empirical evidence and methodological rigour were included in the final synthesis. This strengthened the reliability and trustworthiness of the conclusions drawn from the review.

### 3.6 Data Extraction and Analysis

Relevant information from selected studies was systematically extracted and organised by study objectives, methodology, sample size, key findings, and conclusions related to pedagogical practices. The extracted data were analysed using thematic synthesis, whereby similar themes and patterns across studies were identified, compared, and synthesised (Thomas & Harden, 2008). Major themes included teacher-centred teaching, learner-centred pedagogy, classroom interaction, learner participation, assessment practices, ICT integration, and challenges

affecting the implementation of competency-based teaching were identified and analysed in relation to study objectives and theoretical alignments

### 3.6 Quality Assurance and Trustworthiness

To ensure credibility and reliability of the review findings, the study considered only studies with clear methodological procedures and relevant empirical evidence. The PRISMA framework was used to improve transparency in study selection and reporting processes. Furthermore, inclusion and exclusion criteria were consistently applied during screening and analysis to minimise bias and enhance the trustworthiness of the synthesised findings.

### 3.7 Ethical Consideration

This study observed ethical principles relevant to systematic reviews and academic research. Since the study relied entirely on secondary data obtained from published

empirical studies, no direct interaction with human participants was involved. Therefore, issues related to informed consent, confidentiality, and participant anonymity were not applicable at the primary data collection level. Nevertheless, the study maintained academic integrity by ensuring that all sources of information were properly acknowledged and cited in accordance with APA referencing style, thereby avoiding the misrepresentation of authors' ideas. Furthermore, the study ensured transparency and objectivity throughout the literature search, screening, selection, and synthesis. Inclusion and exclusion criteria were consistently applied to minimise selection bias and enhance the credibility of the findings. The PRISMA framework guided the systematic identification and selection of relevant empirical studies to ensure the rigour, trustworthiness, and replicability of the review process. In addition, only credible, scholarly sources, such as peer-reviewed journal articles published between 2020 and 2025, were included in the review. The researcher also ensured the accurate interpretation and presentation of the findings from the reviewed studies, without distorting, fabricating, or falsifying information. All reviewed studies were used solely for academic purposes related to understanding pedagogical practices in Tanzanian secondary schools. Therefore, the study adhered to accepted ethical standards governing systematic reviews and educational research.

## 4. Results and Discussion

This section presents a synthesis and discussion of findings from the 28 empirical studies included in the systematic review on pedagogical practices in Tanzanian secondary schools. The discussion is organised around the major study objectives: teaching approaches used in secondary schools; learner participation and classroom interaction; assessment practices; ICT integration; and challenges affecting effective pedagogical implementation. The discussion further relates empirical findings to Constructivist Learning Theory and the practical realities of Tanzanian secondary schools.

### 4.1 Teaching Approaches Used in Tanzanian Secondary Schools

The reviewed studies consistently found that teaching in Tanzanian secondary schools remains predominantly teacher-centred, despite curriculum reforms that emphasise learner-centred, competency-based pedagogy. Most studies indicate that teachers continue to rely heavily on lecture methods, note-taking, memorisation, question-and-answer techniques, and examination-oriented instruction (Nyamubi, 2021; Mwakalinga, 2023; Moshia & Komba, 2022). These findings suggest that many teachers still perceive teaching as the transmission of knowledge from

teacher to learner rather than as the facilitation of active learning. The dominance of teacher-centred pedagogy reflects a contradiction between educational policy expectations and classroom realities. The Competency-Based Curriculum (CBC) introduced in Tanzania expects teachers to use participatory and interactive approaches that promote critical thinking, communication, collaboration, creativity, and problem-solving skills among students (URT, 2023). However, empirical evidence from the reviewed studies demonstrates that implementation remains partial and inconsistent across schools. Teachers frequently combine learner-centred activities with traditional lecturing because teacher-centred approaches are perceived as easier for syllabus coverage and classroom control, especially in overcrowded classrooms.

These findings support Constructivist Learning Theory, developed by Lev Vygotsky and Jean Piaget, which emphasises that learners actively construct knowledge through interaction with teachers, peers, and learning experiences. According to constructivist principles, effective teaching should involve inquiry-based learning, collaboration, classroom discussion, and learner participation rather than passive memorisation (Schunk, 2020). However, the reviewed studies indicate that many Tanzanian secondary school classrooms continue to position students as passive recipients of information instead of active constructors of knowledge. The persistence of teacher-centred pedagogy can further be understood within the socio-economic and institutional realities of Tanzanian secondary schools. Many public secondary schools operate under conditions of inadequate teaching resources, overcrowded classrooms, a shortage of qualified teachers, and limited teaching facilities. In some schools, one teacher handles classes with more than 70 students, making it difficult to implement effective learner-centred instruction. Under such conditions, teachers often prioritise classroom control and syllabus completion over interactive teaching.

Moreover, the reviewed studies showed that national examinations strongly influence classroom pedagogy in Tanzania. Teachers frequently focus on preparing students to pass examinations rather than developing practical competencies and higher-order thinking skills. This examination-oriented culture encourages rote learning and memorisation because academic success is largely measured through written examinations rather than practical competence. Consequently, although competency-based education emphasises skill development, actual classroom instruction often remains examination-driven. The findings also revealed differences in pedagogical implementation between urban and rural secondary schools. Urban schools were found to use learner-centred methods and ICT-supported instruction more than rural schools, which continue to face severe shortages of educational resources and infrastructure.

These disparities suggest that pedagogical implementation in Tanzania is influenced by unequal distribution of educational opportunities and facilities.

## 4.2 Learner Participation and Classroom Interaction

Another major finding from the reviewed studies concerns learner participation and classroom interaction. Most studies indicated that student participation in classroom activities remains relatively low in many Tanzanian secondary schools. Although teachers occasionally organise group discussions, presentations, and classroom questions, actual learner engagement is often limited because teachers dominate classroom communication and decision-making (Mwakalinga, 2023; Mwambela & Mwakapina, 2024). Constructivist theory emphasises social interaction as a central component of effective learning. Vygotsky's concept of the Zone of Proximal Development (ZPD) explains that learners develop understanding more effectively when interacting with teachers and peers through guided participation and collaborative learning activities (Woolfolk, 2021). However, the reviewed studies revealed that classroom interaction in many Tanzanian secondary schools remains largely one-directional, where teachers speak most of the time while students mainly listen, copy notes, and respond to closed-ended questions.

The reviewed studies identified several factors limiting learner participation in classrooms. One major factor is overcrowded classrooms, which reduce opportunities for individual student participation and meaningful teacher-learner interaction. Teachers handling very large classes often find it difficult to organise group activities, monitor discussions, or provide individualised support to learners. Consequently, teaching becomes more teacher-dominated and less interactive. Language of instruction also emerged as an important factor affecting classroom participation. In Tanzanian secondary schools, English is used as the medium of instruction, yet many students possess limited English language proficiency. Several reviewed studies reported that students fear participating in discussions because they lack confidence in speaking English. Teachers also frequently switch to Kiswahili during instruction to simplify concepts and improve understanding. This situation demonstrates the complex relationship between language policy and classroom pedagogy in Tanzanian secondary education.

Furthermore, cultural factors influence classroom interaction in some schools. Traditional beliefs that teachers are the sole authority figures in classrooms discourage students from questioning teachers or expressing alternative opinions. As a result, some students remain silent even when learner-centred methods are

introduced. These findings indicate that successful implementation of learner-centred pedagogy requires not only curriculum reforms but also the transformation of classroom culture and teacher-student relationships. Nevertheless, the reviewed studies also showed positive outcomes in schools where learner-centred approaches were effectively implemented. Students in such classrooms demonstrated improved confidence, communication skills, collaboration, critical thinking, and problem-solving abilities. These findings support constructivist assumptions that active participation enhances meaningful learning and competence development.

## 4.3 Assessment Practices in Tanzanian Secondary Schools

The review further revealed that assessment practices in Tanzanian secondary schools remain largely traditional and examination-oriented. Most studies indicated that teachers predominantly use written tests, quizzes, and terminal examinations to evaluate students' performance (Nyamubi, 2021; Mosha & Komba, 2022). Competency-based assessment methods such as portfolios, projects, practical tasks, peer assessment, presentations, and continuous formative assessment are still inadequately implemented. Under competency-based education, assessment is expected to measure not only students' theoretical knowledge but also practical competencies, problem-solving abilities, communication skills, and application of learning in real-life contexts (URT, 2023). Constructivist theory similarly emphasises authentic assessment practices that evaluate learners' understanding through active performance and the application of knowledge. However, the reviewed studies indicate that many teachers continue to emphasise memorisation and reproduction of information during assessment.

Several factors contribute to the persistence of traditional assessment practices. First, teachers often lack adequate professional training in competency-based assessment techniques. Many teachers reported uncertainty regarding the preparation and administration of authentic assessment activities. Second, large class sizes make continuous assessment difficult because teachers are forced to handle excessive numbers of students. Third, the national examination system continues to emphasise written examinations, thereby encouraging schools and teachers to prioritise examination preparation. The reviewed studies further revealed that some teachers perceive competency-based assessment as time-consuming and difficult to manage under existing school conditions. Practical assessments, projects, and continuous evaluation require sufficient instructional materials, manageable class sizes, and adequate time allocation, which are often unavailable in many public secondary schools. Consequently, teachers rely on written tests that are easier to administer and mark.

Despite these challenges, the studies emphasised that effective assessment reforms are essential for the successful implementation of competency-based education in Tanzania. Without transforming assessment practices, teaching is likely to remain examination-oriented and teacher-centred, as teachers often teach to the demands of national examinations.

#### 4.4 ICT Integration in Teaching and Learning

The reviewed studies also examined the integration of Information and Communication Technology (ICT) in pedagogical practices. Findings indicated that ICT integration in Tanzanian secondary schools remains relatively low despite government efforts to promote digital learning and educational technology (Mtebe & Gallagher, 2022). Many teachers rarely use computers, projectors, internet resources, or digital learning platforms during classroom instruction. Constructivist theory supports ICT integration because digital technologies can facilitate interactive learning, collaboration, inquiry, problem-solving, and access to diverse learning resources. Technology-supported pedagogy enables students to participate actively in knowledge construction and independent learning. However, empirical evidence suggests that many Tanzanian secondary schools lack the sufficient ICT infrastructure necessary for effective digital learning.

Several barriers affecting ICT integration were identified in the reviewed studies. These include a shortage of computers, unreliable electricity supply, poor internet connectivity, inadequate technical support, insufficient teacher training, and limited ICT competence among teachers. Rural schools were found to experience more severe ICT challenges compared to urban schools. The findings further revealed that some teachers hold negative attitudes toward educational technology, perceiving ICT integration as difficult or unnecessary. Older teachers, in particular, were reported to have lower confidence in using digital technologies than younger teachers.

Additionally, insufficient institutional support and limited funding constrain schools' capacity to establish functional ICT facilities. Despite these challenges, schools that effectively integrated ICT demonstrated improved learner motivation, participation, communication, and access to educational materials. Students in ICT-supported classrooms were more engaged and interactive during learning activities. These findings suggest that strengthening ICT infrastructure and teacher training could significantly improve pedagogical practices in Tanzanian secondary schools.

#### 4.5 Challenges Affecting Effective Pedagogical Practices

The reviewed studies focused on the level of integration of Information and Communication Technology (ICT) into learning and teaching activities in secondary schools in Tanzania. The results indicated that although educational reforms and the government's efforts to promote digital learning and technology-supported teaching and learning have begun, the integration of ICTs in education is still relatively low (Mtebe & Gallagher, 2022; Mwinuka, 2021). Although more teachers are utilising modern approaches, most still rely on traditional chalk-and-talk methods because many schools lack sufficient ICT facilities and support systems. As a result, the availability of computers, projectors, the Internet, Web-based learning platforms, and electronic instructional resources in secondary schools' classrooms remains limited for classroom instruction.

The reviewed studies also identified several obstacles that made it difficult to integrate ICT into secondary school teaching. Some of these problems are: limited access to computers, unreliable electricity, limited internet connection, limited technical support, lack of teacher training, and limited teacher digital skills (Kafyulilo, 2020; Mtebe & Gallagher, 2022). This was especially true of the rural schools, as many lacked electricity, internet, or the necessary ICT infrastructure to support technology in the learning process. All these infrastructural issues keep deepening the digital divide between urban and rural secondary schools in Tanzania. From the perspective of Constructivist Learning Theory, the integration of ICTs supports active learning, collaboration, inquiry, creativity, and participation in learning activities (Schunk, 2020). Educational technologies allow learners to access various information sources, learn independently, interact with peers and be actively involved in building knowledge. However, the reviewed studies reveal that many secondary schools in Tanzania have yet to make sufficient use of ICTs to support learner-centred pedagogies.

The studies reviewed focused on exploring the use of Information and Communication Technology (ICT) in secondary schools across Tanzania. The findings indicated low integration of ICTs in education, despite the government's drive towards digital and technology-supported learning and educational reform (Mtebe & Gallagher, 2022; Mwinuka, 2021). Conventional chalk-and-talk methods remain the primary approach for most teachers because ICT facilities and technological support are still lacking in most schools. As a result, very little use is made of computers, projectors, internet resources, online learning platforms, and digital instructional materials during classroom instruction in most secondary schools.

The reviewed studies also showed that there are some barriers to effective ICT use in secondary school pedagogy. Some of the challenges include a lack of computers, an unreliable power supply, a weak internet connection, weak technical support, a lack of teacher training, and low digital competencies among teachers (Kafyulilo, 2020; Mtebe & Gallagher, 2022). Many rural schools were badly impacted, as they had limited access to electricity, the internet, and ICT infrastructure to support technology-based learning. The infrastructural problems are further widening the digital disparities between secondary schools in urban and rural areas in Tanzania. ICTs can facilitate active learning, collaboration, inquiry-based teaching, creativity, and participation in the learning process in relation to the CLT, as they enable interactive learning through student involvement (Schunk, 2020). Educational technologies allow students to access a variety of information sources, learn independently, work cooperatively, and actively participate in the process of building knowledge. Despite this, the studies reviewed provide empirical evidence that many secondary schools in Tanzania have not fully embraced ICTs to improve learner-centred pedagogy.

The reviewed studies also showed that the teacher's attitudes and competencies make significant contributions to the implementation of ICT in classrooms. Several teachers were found to have negative attitudes towards the use of educational technologies, due to perceptions that integrating ICT into the teaching process was challenging, time-consuming, or unnecessary (Nibalema, 2022). Moreover, teachers, to a certain extent, lack confidence and interest in using digital technologies in the classroom, due to inadequate professional training and institutional support. An interesting finding was that older teachers reported more problems adapting to the fast-paced technological demands than younger teachers. Despite these challenges, the reviewed studies showed that teachers who successfully integrated ICT into teaching and learning activities positively impacted learner motivation, interaction, communication, and access to educational materials in the classroom (Mtebe & Gallagher, 2022; Kafyulilo, 2020). The learning activities in the classroom with ICTs were more interactive and engaged than the conventional classroom. The results suggest that investing in improving ICT infrastructure and teacher digital competency could have a major impact on pedagogical practices and on the effective implementation of learner-centred, competency-based education in Tanzanian secondary schools.

#### **4.6 Challenges Affecting Effective Pedagogical Practices**

The studies reviewed highlighted several challenges in implementing the learner-centred, competency-based pedagogy in Tanzanian secondary schools. Overcrowded

classrooms are a challenge because they do not provide adequate space for effective classroom interaction, group work, individualised instruction, and continuous assessment (Mlyashimbi, 2021; Mosha & Komba, 2022). Teachers in large classes often use the lecture style because it is easier to manage. Large classes also limit teachers' capacity to track students' learning progress and offer personalised teaching assistance during class activities.

A lack of teaching and learning resources is another challenge identified in the reviewed works. The lack of textbooks, laboratory equipment, teaching aids, ICT facilities, libraries, and classroom furniture remains a major concern in many secondary schools (Mahenge, 2021; Sauli, 2023). These resource constraints limit the teacher's ability to effectively implement good practice in participatory, practical, and learner-centred teaching. This means theoretical, teacher-dominated teaching methods continue to be widely used by many teachers, as they are simple to implement in the classroom and cheaper than other delivery methods, particularly in more resource-poor settings.

Lack of teacher preparation and professional development proved to be a critical barrier to pedagogical implementation as well. In several studies reviewed, limited orientation and inadequate training in competency-based approaches to teaching, authentic assessment, classroom interaction, and the integration of information and communication technology (ICT) were observed among many teachers (Komba & Jonathan, 2021; Nibalema, 2022). Consequently, some teachers are not confident, have pedagogical inadequacies, and lack the skills to implement learner-centred instruction effectively. The studies also showed that inadequate in-service training results in a lower ability to accommodate curriculum changes and shifting educational requirements among teachers.

The studies reviewed also confirmed that the policies and curriculum expectations in education do not necessarily reflect the actual school situation. While the curriculum reforms call for learner-centred pedagogy and the development of competence, the majority of schools in the study are still operating under examination systems that lack adequate funding and infrastructure, and face pressure to complete the syllabus before national examinations (Mtallo, 2023; URT, 2023). This discrepancy between the policy and classroom realities creates implementation problems for the teacher and the school. This means that teachers tend to focus more on what to cover in the syllabus and on preparing students for examinations rather than on developing their practical skills and higher-order thinking skills.

Moreover, there are significant socio-economic differences between schools that strongly affect pedagogical implementation in Tanzania. The infrastructure, teaching equipment, teachers' qualifications, access to ICT, and teaching resources in urban schools tend to be better than those in rural schools (Mahenge, 2021; Sauli, 2023). There are serious teacher shortages, limited electricity, internet connectivity, and educational facilities at rural schools, all of which are required for effective learner-centred instruction. Such differences persist in the quality of teaching and learning across schools with varying contexts. The results are consistent with the findings of Constructivist Learning Theory (CLT), which highlights the role of supportive learning environments, social interaction, learner participation, and adequate teaching resources in meaningful learning (Woolfolk, 2021). The reviewed studies, however, show that many Tanzanian secondary schools still face structural, institutional, and socio-economic challenges that hinder the implementation of learner-centred and competency-based pedagogical practices.

## **5. Conclusion and Recommendations**

### **5.1 Conclusion**

The purpose of this systematic review was to summarise pedagogical practices in secondary schools in Tanzania, based on 28 empirical studies published from 2020 to 2025. The review confirmed that Tanzania has implemented competency-based curriculum reforms, focusing on developing competencies and shifting to learner-centred pedagogy in secondary schools. However, teachers' pedagogy in many secondary schools remains largely teacher-centred. Despite curriculum expectations that focus on active learning, working collaboratively, thinking critically, being creative, and problem-solving, most teachers still deliver instruction that mostly involves lectures, note-taking, memorisation, and exam preparation. The review also found that the use of learner-centred teaching methods, e.g., group discussion, collaborative learning, inquiry-based activities, classroom presentations, and participatory assessment, is inconsistent both within and across schools. The results also showed that several issues affect the implementation of competency-based, learner-centred pedagogy in Tanzanian secondary schools. The challenges faced include a high student-to-teacher ratio, a lack of teaching and learning facilities, a shortage of qualified teachers, poor ICT infrastructure, exam stress, and disparities in educational facilities between urban and rural schools. As a mirror of the Constructivist Learning Theory, the review found that few classrooms offer opportunities for learners to participate, interact with one another, and actively construct knowledge. Hence, it is concluded that implementing competency-based pedagogy in Tanzanian secondary schools requires greater

investment in teacher professional development, educational resources, the adoption of ICT in the education system, reforming assessment systems, and providing conducive learning environments.

This systematic review aimed to synthesise the results of 28 empirical studies published from 2020 to 2025 on pedagogical practices in Tanzanian secondary schools. The review found that while competency-based curriculum reforms have been embraced in Tanzania with a vision to foster learner-centred pedagogy and competence, teaching and learning in the majority of secondary schools remain teacher-centred. Although the curriculum calls for students to be active, work collaboratively, think critically, be creative, and problem-solve, most teachers still use traditional teaching methods such as lectures, note-taking, memorisation, and exam-oriented lessons. The review also found that learner-centred teaching methods (group discussion, collaborative learning, inquiry-based activities, classroom presentations, and participatory assessment) are not consistently applied in schools. The findings also revealed some challenges that make competency-based, learner-centred pedagogy difficult to implement in secondary schools in Tanzania. Providing classrooms that are too large, insufficient teacher training, limited educational resources, inadequate ICT infrastructure, examination pressure, and unequal distribution of schools between urban and rural areas are among these challenges. The review has shown that, in relation to CLT, most classrooms still offer minimal facilitation for active learning, participation, interaction, and knowledge construction. Hence, the study advocates increased investment in teacher professional development, educational materials, the incorporation of ICT, changes in assessment practices, and a conducive learning environment to support the successful implementation of competency-based pedagogy in secondary schools in Tanzania.

### **5.2 Recommendations**

Based on the results of this systematic review, the following recommendations are suggested for improving pedagogical practices and enhancing the implementation of competency-based education in secondary schools in Tanzania:

1. The Ministry of Education, Science and Technology should strengthen continuous teacher professional development programmes to equip teachers with practical knowledge and skills in learner-centred, competency-based teaching. Such programmes should aim to enhance teachers' ability to promote active learning, critical thinking, creativity, and

collaboration, as well as communication and problem-solving skills amongst learners.

2. Teachers should be provided with regular practical training in classroom interaction, participatory teaching methods, authentic assessment techniques, and in integrating Information and Communication Technology (ICT) into the teaching and learning process. The training needs to focus on the use of valuable techniques in group discussions, inquiry-based learning, collaborative learning, project-based teaching, classroom presentations, and formative assessment practices that motivate students to demonstrate learning capabilities and participate actively in learning.
3. Government and educational stakeholders should enhance investment in teaching and learning resources to effectively implement learner-centred pedagogy in secondary schools. This includes sufficient science textbooks, science laboratories, libraries, teaching aids, ICT facilities, Internet access and classroom facilities.
4. The assessment system in secondary education should be reformed to align with the purpose of competency-based education. Assessment should shift away from rote learning and theoretical recall and focus on skills and abilities such as real-world application, communication, creativity, critical thinking, and innovation. Educational institutions, such as the National Examinations Council of Tanzania (NECTA), should take stringent measures to emphasise continuous assessment, projects, portfolios, practical activities, and performance assessment techniques for meaningful learning and the development of learners' competence.
5. Educational inequalities between urban and rural secondary schools should be minimised by equitably distributing qualified teachers, ICT facilities, teaching resources and educational infrastructure. Special support should be provided to rural schools to enhance access to electricity, internet services, libraries, laboratories, and digital learning technologies.
6. Lastly, further studies in Tanzanian secondary schools on competency-based pedagogical practices, both observational and experimental, as well as longitudinal studies, are recommended to be conducted in the classroom to investigate the long-term impact on students' academic performance, competency development, critical thinking, creativity, and employability skills.

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