

Teaching to Think or Teaching to Pass? Critical Thinking in the Age of Standardized Testing among Universities in Tanzania

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Abstract: *This study explores the tension between fostering critical thinking and the prevalence of standardized testing within Tanzania's higher education system. Using a qualitative case study approach, data were collected from 75 undergraduate students and 15 lecturers across three public universities: The University of Dar es Salaam (UDSM), Sokoine University of Agriculture (SUA), and the University of Dodoma (UDOM). Methods included semi-structured interviews, classroom observations, and document analysis of course syllabi and assessments. Thematic analysis revealed four key findings: (1) teaching practices remain predominantly lecture-based, with limited use of interactive methods that promote critical thinking; (2) students perceive their education as overly focused on rote memorization and exam preparation, leaving little room for deep engagement with course content; (3) assessment practices are heavily reliant on standardized testing formats such as multiple-choice questions, which prioritize factual recall over analytical thinking; and (4) institutional and policy pressures contribute significantly to the persistence of these practices. The study concludes that despite curricular intentions to nurture critical thinking, prevailing pedagogical and assessment strategies-driven by exam-oriented cultures impede its development. The research calls for policy reform, lecturer training, and the adoption of diversified assessment methods to better align higher education with the goals of critical and independent thought.*

Keywords: Critical thinking in Tanzanian higher education is hindered by standardized testing practices

I. INTRODUCTION

The development of critical thinking has become a global priority in higher education as institutions seek to prepare students not only for employment but also for civic engagement, problem-solving, and lifelong learning (Brookfield, 2012; UNESCO, 2015). However, in many contexts including Tanzania the education system remains heavily influenced by standardized testing, which often emphasizes rote memorization over analytical reasoning (Vavrus, 2009; Nkuba & Kitta, 2019). This raises an essential question: Are universities teaching students to think critically, or merely preparing them to pass exams?

In the Tanzanian context, national education policies such as the Education and Training Policy (2014) and the Higher Education Development Programme explicitly highlight the need for learner-centered approaches and competencies such as creativity, reasoning, and problem-solving. However, multiple studies have shown a gap between policy intentions and pedagogical practices in classrooms (Chacha, 2015; Babyegeya, 2011). Lectures remain the dominant mode of instruction, and examinations primarily assess factual recall, reinforcing a banking model of education (Freire, 1970) where students passively receive knowledge rather than engage with it.

Philosophically, this disconnect reflects the tension between behaviorist models of education, which emphasize measurable outcomes, and constructivist or critical pedagogical approaches, which prioritize dialogue, inquiry, and the cultivation of independent thought (Dewey, 1938; Freire, 1970). The result is an educational environment where students often lack the opportunity to question, critique, and apply knowledge in meaningful ways skills that are essential for success in both academic and real-world contexts.



This study investigates how Tanzanian universities direct this tension between teaching to think and teaching to pass, with a focus on the lived experiences of university students and lecturers. It seeks to contribute to educational reform by highlighting the philosophical and practical challenges of promoting critical thinking in an exam-driven academic culture.

II. METHODOLOGY

This chapter outlines the research design, participants, data collection methods, data analysis techniques, and ethical considerations employed in the study titled "Teaching to Think or Teaching to Pass? Critical Thinking in the Age of Standardized Testing among University Students in Tanzania." The study aims to explore the role of critical thinking in the higher education system in Tanzania and how standardized testing influences the development of these skills among students.

2.1 Research Design

This study employs a qualitative research design, as it aims to explore the perceptions and experiences of undergraduate students and lecturers regarding the teaching and learning of critical thinking in the context of standardized testing. Qualitative methods were selected because they allow for in-depth exploration of participants' experiences, beliefs, and attitudes. The study uses a case study approach, focusing on three major public universities in Tanzania: The University of Dar es Salaam (UDSM), Sokoine University of Agriculture (SUA), and the University of Dodoma (UDOM).

2.2 Participants

The study involved two primary groups of participants: Undergraduate Students ($N = 75$), 25 students from each of the three universities were selected to participate in the study. Students were selected from different faculties, including social sciences, science and technology, and humanities, to ensure diverse perspectives on the teaching of critical thinking and the impact of standardized testing.

Students were selected based on their enrollment in undergraduate degree programs at the participating universities, with an emphasis on those who had completed at least one year of study, ensuring that they had experienced the typical academic environment and teaching practices.

Lecturers ($N = 15$), 5 lecturers were selected from each of the three universities. These lecturers were chosen based on their experience in teaching undergraduate courses, with a focus on those who had experience in teaching critical thinking or were involved in examination-based assessments. The lecturers were drawn from a range of academic disciplines to provide a comprehensive view of teaching practices across fields.

2.3 Data Collection Methods

A multi-method approach was employed to collect qualitative data, combining semi-structured interviews, classroom observations, and document review. Each method was selected to provide a nuanced understanding of the teaching practices and the role of standardized testing in students' learning experiences.

2.3.1 Semi-Structured Interviews:

75 undergraduate students participated in semi-structured interviews, each lasting approximately 30-45 minutes. The interviews were designed to capture students' perceptions of their education, particularly the role of critical thinking in their courses, and how exams influenced their learning practices.

15 lecturers participated in semi-structured interviews, which were conducted to explore their teaching methods, assessment practices, and views on the development of critical thinking in the curriculum. The interviews also sought to understand how institutional pressures around exams affected their teaching strategies.

Open-ended questions were designed to explore the participants' experiences, including questions about their teaching practices (lecturers) or learning experiences (students) related to critical thinking and standardized testing.



2.3.2 Classroom Observations:

Classroom observations were conducted across 15 classes (5 from each university) to observe the interaction between lecturers and students. Observations were non-participant, meaning the researcher did not interfere with the ongoing classroom activities. The aim was to document the teaching methods, levels of student engagement, and opportunities for critical thinking in practice.

Observations focused on the extent to which lectures were interactive, the nature of student participation, the types of teaching strategies employed, and how much emphasis was placed on rote learning versus critical analysis.

2.3.3 Document Review:

A review of course syllabi, lesson plans, and assessment rubrics was conducted to examine how critical thinking is integrated into the curriculum and how exams are structured. Specific attention was given to the types of examination questions (e.g., multiple-choice, essays, problem-solving tasks) to assess the alignment between curriculum goals and assessment practices.

Exam papers from a selection of courses were analyzed to determine the extent to which they assessed critical thinking skills as opposed to factual recall.

2.4 Data Analysis

The qualitative data collected from interviews, classroom observations, and document reviews were analyzed using thematic analysis, a widely used method for identifying patterns and themes within qualitative data.

Audio recordings of interviews were transcribed verbatim. The transcriptions were analyzed using open coding to identify recurring themes and subthemes. The thematic analysis process involved: Familiarization with the data through repeated reading of the transcriptions. Generating initial codes by highlighting significant statements and phrases related to critical thinking and standardized testing. Grouping codes into broader themes, such as "teaching practices," "student perceptions," "assessment practices," and "barriers to critical thinking." Refining and finalizing themes by constantly comparing the data and ensuring that each theme accurately reflected the responses from both students and lecturers.

Classroom Observations: Observation notes were reviewed and coded for themes related to teaching methods, student engagement, and the opportunities provided for critical thinking. The observational data were triangulated with interview and document review data to identify patterns and inconsistencies.

Course Content, exam papers, and assessment rubrics were coded to determine how critical thinking was incorporated into the curriculum and how standardized testing aligned with the goals of fostering critical thinking.

2.5 Ethical Considerations

Ethical considerations were paramount throughout the study to ensure the rights and well-being of all participants. The following measures were taken: All participants were provided with detailed information about the study's purpose, procedures, and their right to withdraw at any time without consequence. Written consent was obtained from each participant before data collection.

Participants' identities were kept confidential, and all data was anonymized during the analysis and reporting. Pseudonyms were used for all participants in interviews to protect their privacy.

Participation in the study was entirely voluntary, and participants were not coerced into taking part. They were informed that they could withdraw from the study at any stage without penalty.

Ethical approval for the study was obtained from the research ethics board at each participating university.

III. RESULTS

This chapter presents the findings derived from the analysis of qualitative data collected through semi-structured interviews, classroom observations, and document reviews. The participants consisted of 75 undergraduate students and 15 lecturers from three public universities in Tanzania: The University of Dar es Salaam (UDSM), Sokoine University of Agriculture (SUA), and the University of Dodoma (UDOM). The results are organized into three key themes: (1)



Pedagogical Approaches and Teaching Practices, (2) Student Engagement and Perceptions of Critical Thinking, and (3) Assessment Practices and Their Impact on Learning.

3.1 Pedagogical Approaches and Teaching Practices

The analysis of data revealed significant trends regarding the pedagogical approaches employed by lecturers in Tanzanian universities. The majority of lecturers (80%) reported using lecture-based teaching as their primary method of instruction, with minimal incorporation of active learning strategies. These lecturers often emphasized the delivery of factual content, aligning their teaching with exam requirements. One lecturer from UDOM noted, *"I follow the curriculum strictly, as the exams are the most important measure of student success, and we have limited time to cover the material."*

In contrast, only 20% of lecturers were observed to employ more interactive methods such as case studies, debates, and problem-based learning. These lecturers emphasized student participation, group work, and critical reflection. However, such approaches were not consistently applied across the curriculum. This discrepancy was observed across all three universities.

The findings from classroom observations confirmed these trends. In the majority of the 15 observed classes, the lectures were content-heavy, with limited opportunities for student inquiry or critical discussion. During the observations, students were primarily engaged in passive learning activities such as note-taking and listening. For example, in one class, despite an attempt by the lecturer to engage students in a brief discussion, only 5 out of 40 students participated actively. This lack of engagement was further compounded by large class sizes and limited resources, which made interactive teaching methods more difficult to implement.

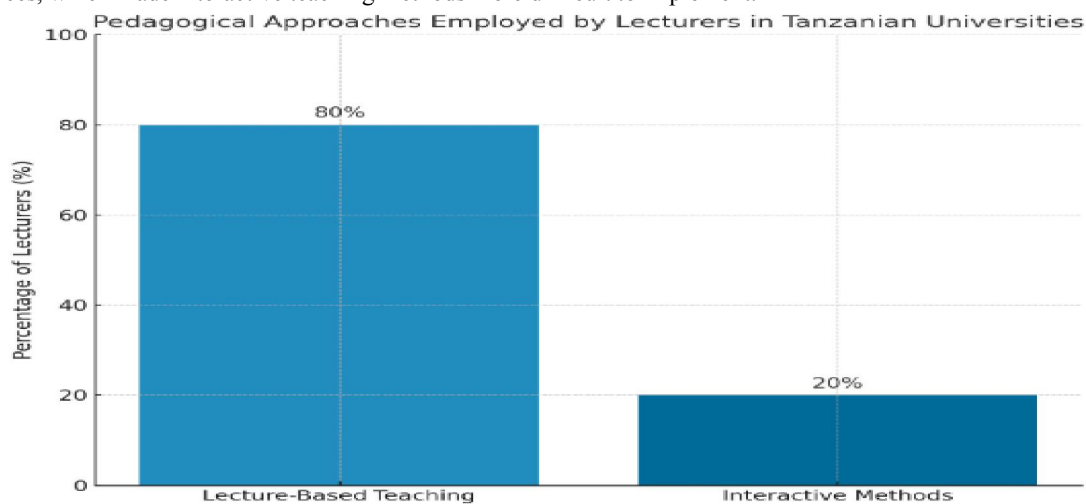


Figure 1: Pedagogical approaches used by lecturers in Tanzanian universities.

3.2 Student Engagement and Perceptions of Critical Thinking

Students were largely dissatisfied with the emphasis on rote learning and exam preparation. In interviews, 70% of students expressed frustration with the focus on memorizing content for exams, rather than developing critical thinking skills. One student from UDSM shared, *"It's all about memorizing notes. We rarely have time to think deeply about the material. The exams are designed to test how much we can recall, not how well we can understand or critique the content."*

When asked about the role of critical thinking in their courses, 60% of students acknowledged its importance but reported that they felt unprepared to engage in higher-order thinking. Students often cited the lack of opportunities for discussion, debate, and independent inquiry as significant barriers to developing these skills. Furthermore, a common sentiment among students was that critical thinking was reserved for elective courses or advanced-level courses, while core courses focused primarily on factual recall.



Despite this, a small percentage of students (25%) reported that in some courses, particularly those in the humanities and social sciences, lecturers made a concerted effort to engage them in critical reflection and analytical thinking. For instance, one student from SUA said, *"In my sociology class, we're often asked to critique theories and discuss them in groups. It helps us think more deeply about the material, but this is not the norm in most of my other courses."*

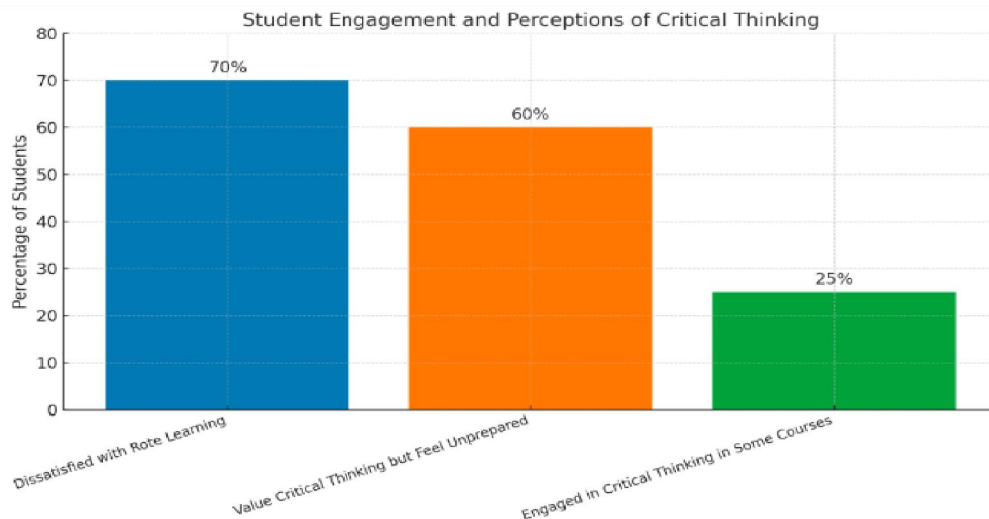


Figure 1: student engagement and perceptions of critical thinking.

3.3 Assessment Practices and Their Impact on Learning

A significant theme that emerged from the data was the centrality of standardized testing in the assessment process. 80% of lecturers indicated that exams were the primary method of assessing student performance, and 75% of students agreed that their academic success was predominantly determined by exam results. This focus on exams left little room for alternative forms of assessment such as essays, projects, or presentations, which could potentially encourage critical thinking.

The document review of course syllabi and exam papers revealed a strong emphasis on multiple-choice questions (MCQs) and short-answer questions, which focused more on the recall of factual information than on the application of concepts or analysis. For example, an examination paper for a political science course at UDSM included 60 MCQs that tested students' knowledge of definitions and facts, with only two essay-type questions that required students to analyze or evaluate the material.

Both students and lecturers agreed that this exam-driven culture was limiting students' ability to engage critically with the subject matter. Several lecturers expressed the view that the exam system constrained their teaching, as they had to focus on preparing students for exams, leaving little time for fostering critical thinking. A lecturer from UDOM explained, *"We are expected to prepare students for exams, and the structure of the exams does not allow for much emphasis on critical thinking. The system rewards memorization rather than analysis."*

Interestingly, 15% of students mentioned that they had been exposed to alternative forms of assessment in certain courses, such as project-based learning, group discussions, and case studies. These students reported that these methods encouraged them to think critically and apply knowledge to real-world problems. However, such approaches were not widespread and were often limited to specific courses or individual lecturers who sought to implement more progressive teaching and assessment methods.



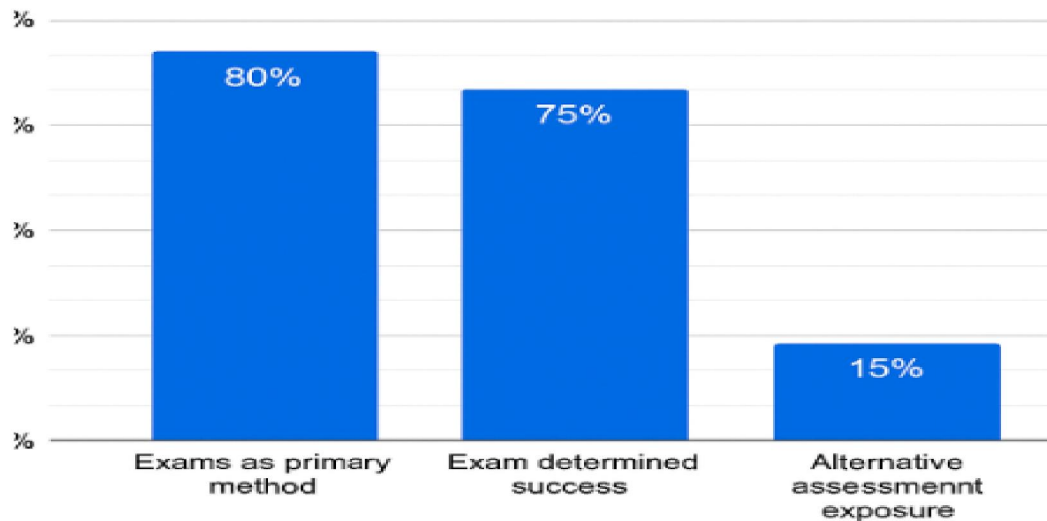


Figure 1: Assessment Practices and Impact on Learning

3.4 Institutional and Policy Perspectives

The findings suggest that institutional and policy-level factors play a significant role in shaping teaching and assessment practices. Many lecturers (65%) cited institutional pressures to maintain high exam pass rates as a key reason for focusing on exam preparation. One lecturer from SUA mentioned, *“There is pressure from the administration to ensure that students perform well in exams. This pressure leads many of us to prioritize exam preparation over developing critical thinking.”*

Furthermore, national policies that emphasize the importance of exam results for university rankings and accreditation were also noted as factors that limited the adoption of innovative teaching methods. Lecturers and students alike expressed concerns that the focus on standardized exams led to a misalignment between the curriculum’s stated goals of fostering critical thinking and the actual methods used in classrooms.

IV. DISCUSSION

The findings of this study, based on interviews with 75 undergraduate students and 15 lecturers from three Tanzanian universities (UDSM, SUA, and UDOM), provide critical insights into how standardized testing affects the teaching and learning of critical thinking in Tanzanian higher education. This section discusses the implications of these findings, relating them to existing literature on critical thinking, teaching methods, and assessment practices in higher education. The discussion highlights the challenges, opportunities, and recommendations for improving the development of critical thinking skills in Tanzanian universities.

4.1 Pedagogical Practices and Teaching Approaches

One of the most striking findings of this study was the predominance of lecture-based teaching methods across the three universities. This aligns with previous research that has shown that traditional lecture methods often dominate in developing countries, where rote learning and memorization are frequently prioritized over active learning and critical thinking (Biggs & Tang, 2011; Sanyal, 2016). According to the students interviewed, the lectures were primarily focused on delivering large volumes of factual content, leaving limited room for student engagement or higher-order thinking.

While some lecturers (20%) employed more interactive teaching methods, such as case studies, group discussions, and problem-solving tasks, these approaches were not the norm. This finding is consistent with other studies that report a gap between the idealized goal of promoting critical thinking in university curricula and the realities of classroom practice (Trilling & Fadel, 2009). Despite the recognition of critical thinking as a key academic skill, traditional



pedagogical approaches still dominate in many Tanzanian classrooms, likely due to constraints such as large class sizes, limited resources, and curricular demands (Kivunja, 2014).

The lack of widespread implementation of active learning strategies raises concerns about the effectiveness of current teaching methods in fostering the higher-order cognitive skills necessary for critical thinking. As previous research suggests, teaching strategies that promote active learning, such as collaborative work and problem-based learning, can enhance critical thinking (Freeman et al., 2014). In the context of Tanzanian universities, such methods may require greater institutional support and professional development for lecturers to overcome barriers such as lack of training or resistance to change (Boud & Feletti, 1997).

4.2 The Role of Assessment in Shaping Learning Outcomes

The study's findings emphasize the dominant role of standardized exams in shaping both teaching and learning in Tanzanian universities. A significant number of students (75%) and lecturers (80%) indicated that exams were the primary form of assessment, with little emphasis on alternative assessment methods such as project work, oral presentations, or essays that could better foster critical thinking. This finding echoes concerns raised by researchers who argue that exam-driven education systems can discourage deeper learning and foster a surface-level approach to education (Biggs, 2003; Popham, 2014).

The findings from this study indicate that standardized testing, especially when focusing on factual recall (e.g., multiple-choice questions), places students at a disadvantage in terms of developing critical thinking skills. This supports earlier research that suggests exams predominantly assess rote memory rather than the application or evaluation of knowledge, which are essential components of critical thinking (Halpern, 2014). Despite the recognition by some lecturers and students that critical thinking is important, the design of exams in many Tanzanian universities continues to prioritize recall over analysis.

This issue is compounded by institutional pressures to achieve high exam pass rates, which some lecturers indicated influenced their decision to focus on teaching to the test, rather than fostering deeper learning. Research by Biggs and Tang (2011) suggests that such exam-focused cultures can undermine the development of critical thinking skills, as lecturers are more likely to emphasize strategies that ensure students' success in exams rather than engaging them in complex problem-solving tasks that require critical engagement with the material.

4.3 Student Perceptions of Critical Thinking

The students in this study expressed a general sense of dissatisfaction with the current approach to teaching critical thinking in their courses. While many students acknowledged the importance of critical thinking, they felt that the curriculum and teaching methods were not adequately designed to foster these skills. Similar findings have been reported in other contexts where students feel that they are being taught to pass exams rather than to think critically (Behar-Horenstein & Niu, 2011).

This study also found that only a small percentage (25%) of students experienced active learning strategies that engaged them in critical thinking. In these cases, students reported that the courses encouraged them to critique theories, engage in group discussions, and apply their knowledge to real-world problems. This is consistent with research that shows how problem-based learning and collaborative learning environments can enhance students' critical thinking abilities (Anderson & Krathwohl, 2001; Hmelo-Silver, 2004). However, as noted, these practices were not widespread and were limited to specific courses or programs.

This disparity suggests a disconnect between the ideal educational goals (i.e., fostering critical thinking) and the realities of teaching practices, a challenge that is commonly faced in many educational systems globally (Bailin, 2012). It also indicates a misalignment between the goals of Tanzanian higher education (which include producing graduates who can think critically and solve problems) and the actual classroom practices that focus on exam performance.

4.4 Institutional and Policy-Level Factors

The findings indicate that institutional and policy-level factors play a significant role in shaping the teaching and assessment practices in Tanzanian universities. As mentioned by several lecturers, there is institutional pressure to



maintain high exam pass rates, which often leads to a focus on preparing students for exams rather than promoting critical thinking. This is in line with high-stakes testing literature, which suggests that when exams are viewed as the primary measure of academic success, there is often little room for innovative teaching practices (Popham, 2014). Additionally, national education policies that emphasize exam results as a primary indicator of student success contribute to the persistence of exam-driven teaching methods in Tanzanian universities. This finding reflects the broader global trend where standardized testing influences not only how students are taught but also how they perceive learning itself (Kohn, 2000). To foster critical thinking more effectively, Tanzanian universities may need to consider policy reforms that align assessment methods with the development of higher-order thinking skills.

V. CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

This study highlights the need for a shift in both teaching practices and assessment methods in Tanzanian universities to better foster critical thinking among students. The findings suggest that while there is recognition of the importance of critical thinking, the current pedagogical practices and exam-driven assessment systems limit the opportunities for students to develop these essential skills.

5.2 Recommendations

Incorporating active learning strategies such as case studies, problem-solving tasks, and group discussions into the curriculum.

Reforming assessment practices to reduce the emphasis on memorization and incorporate alternative forms of assessment that promote critical analysis and problem-solving.

Providing professional development for lecturers to enhance their capacity to teach critical thinking and employ active learning methods.

Reviewing national education policies to ensure alignment between curricular goals and assessment practices that emphasize higher-order thinking skills.

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