

# An Empirical Analysis of Teacher Professional Development: Competency-Based Implementation Readiness and Challenges

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## Abstract

This empirical study systematically evaluated the national curriculum rollout in 2024, primarily to uncover critical professional capacity gaps and the effectiveness of the training approach used to enhance teachers' understanding of the 2023 curriculum reforms in Tanzania. Using an advanced descriptive mixed-methods design, quantitative data were analyzed alongside qualitative data from the national curriculum rollout. The primary objective of the study was to assess the extent to which the training approach (Smart Class) used during the rollout training enabled teachers to achieve the objective of developing an understanding of the 2023 curriculum reform. The second objective was to identify specific areas of the implementation of the 2023 revised curriculum for Lower Secondary Education, Forms I–IV, that require deeper training and professional development to ensure effective implementation. The quantitative dataset comprises a large cross-country sample of 14,121 teachers from both government and private schools, capturing operational data from training centers across all 184 district councils in Tanzania Mainland. The findings conclusively revealed that a large proportion (63.7%) of respondents viewed the capacity-building training as highly effective, 35.9% as moderately effective, and only 0.4% as low (not achieved). However, a major knowledge gap was identified in the technical and practical design of a structured lesson plan (*Andalio la somo*) and scheme of work (*Azimio la kazi*) for effective competency-based learning, as per the 2023 revised curriculum in Tanzania. The findings indicate that teachers face difficulty in preparing specific learning activities in the scheme of work, writing assessment criteria in both the scheme of work and the lesson plan, using the 5Es Instructional Model to develop the 4Cs, and conducting formative assessment. The report underscores Social Constructivism Learning Theory and establishes an actionable strategic roadmap for policymakers at the Ministry of Education, Science and Technology (MoEST) and the Tanzania Institute of Education (TIE).

**Keywords:** Competency-based curriculum, revised curriculum, rollout training, Smart Class

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## 1 Introduction

### 1.1 Background of the Study

Education policy and curriculum development in Sub-Saharan Africa have entered a transformative era, driven by the collective necessity to equip the next generation with modern competencies rather than historical academic abstractions. In the United Republic of Tanzania, the socio-economic evolution toward an industrialized, knowledge-based middle-income economy explicitly demands a major restructuring of the workforce. However, since the implementation of the 2014 Education and Training Policy began, education stakeholders have been expressing various opinions and concerns regarding the adequacy and relevance of the policy's content and the curricula at different levels of education training. A significant argument was that the content of the policy did not meet the requirements of economic, social, scientific and technological changes. Besides, there have been opinions that numerous changes in the political, economic, technological, and social realms, both within and outside the country, have not yet been incorporated into the education and training system (Ministry of Education, Science and Technology, 2023a). To address these general limitations, the Government of the United Republic of Tanzania, through the Ministry of Education, Science and Technology, undertook a comprehensive national reform of the education system in 2023 by reviewing the 2014 Education and Training Policy to make it skills-based, consistent with the country's environment and the global labor market.

The reform led to the revision of curricula at Pre-Primary, Primary, Secondary, and Teacher Education levels by the Ministry of Education, Science and Technology, through the execution institute of the Tanzania Institute of Education (TIE) in the same year (2023), focusing on developing competencies (knowledge, skills, and attitudes) among Tanzanians to manage their life and contribute to national development, taking into account changes in science and technology and the requirements of the 21<sup>st</sup> century (Ministry of Education, Science and Technology, 2023b). The revision of the curricula necessitated the Institute responsible for in-service teachers' training in the county, TIE, to conduct teacher training to roll out the curriculum and implement it effectively, as Ybnu et al. (2024) assert that training plays a pivotal role in enhancing teachers' skills and capabilities, especially amid curriculum change.

### **1.2 Problem Statement**

While the 2023 revised curriculum in Tanzania aligns seamlessly with global standards, its ultimate success depends entirely on classroom-level implementation capabilities. Effective implementation of a competency-based curriculum is challenging for many teachers who are not well trained in it. Field evidence implies that despite extensive master facilitator rollouts, deep structural and conceptual bottlenecks remain widespread among frontline teachers. Many teachers find themselves caught between content-memorization habits and the complex requirements of modern competency-based curricula. As Majiwa et al. (2025) assert, without the necessary training, teachers struggle to implement the learner-centered approach these curricula require. In this regard, there was a critical, high-priority need to empirically map teachers' feedback to assess the extent of the effectiveness of the training approach (Smart Class) to enhance teachers' understanding of the 2023 curriculum reform, and identify areas of the training in which teachers are still struggling and need more help for effective curriculum implementation.

### **1.3 Research Objectives**

The execution of this study was guided by the following objectives:

- (a) To assess the extent to which the training approach (Smart Class) used enhanced teachers' understanding of the 2023 curriculum reforms.
- (b) To identify the specific technical areas in the implementation of the 2023 revised curriculum that require further specialized training for teachers.

### **1.4 Research Questions**

To achieve the aforementioned objectives, the study was structured around the following research questions:

- (a) To what extent has the training approach (Smart Class) used enabled you to develop an understanding of the 2023 curriculum reform?
- (b) Which area of the 2023 revised curriculum implementation requires additional training to implement it effectively?

### **1.5 Significance of the Study**

The findings of this study are of vital importance to multiple education stakeholders. For TIE, the insights provide a data-driven blueprint for tailoring professional development frameworks to eliminate technical confusion and support the effective implementation of the 2023 revised curriculum. At the school, ward, and district level, heads of schools (HoS), Ward Education Officers (WEOs), School Quality Assurance Officers (SQAOs), and District Education Officers (DEOs) can use the findings to optimize teachers' continuous professional development (MEWAKA) programs by making follow-ups closely at schools and in the Communities of Learning (CoLs) centers.

## **2 Literature Review**

### **2.1 Theoretical Framework**

This study was explicitly guided by Social Constructivism Learning Theory pioneered by Lev Vygotsky (1978). The theory urges that knowledge is fundamentally constructed through social interaction, dialogue, and collaborative cultural practices. Constructivist learning encourages learners to apply practical methods to construct knowledge, reflect on their work, and discuss it. It discourages memorizing others' conceptions and

definitions; instead, it encourages learners to discover their own through emphasis on learner involvement, discussion, and knowledge exchange. (Fleury & Garrison, 2014; Saleem, Kausar, & Deeba, 2021; Akpan, et al., 2020; Wibowo et al., 2025). Learning occurs within the Zone of Proximal Development (ZPD), which is the cognitive distance between what a learner can accomplish independently and what can be achieved with scaffolding from a More Knowledgeable Other (MKO) or through structured peer collaboration (Wibowo et al, 2025; Irshad et al., 2021; Ally, 2021). In contemporary educational discourse, collaborative constructivist pedagogy remains vital for designing effective learner-centered experiences, where knowledge is most effectively constructed when learners actively engage, reflect, and interact with their environments rather than passively absorbing content.

In the context of the 2023 Tanzanian curriculum reform, Social Constructivist Learning Theory is the driving engine of the classroom. The model completely discards the traditional view of students as empty vessels to be filled by teachers' monologues. Instead, it argues that 21st-century classrooms call for pedagogical approaches that nurture critical thinking, creativity, collaboration, and problem-solving among learners. Constructivist learning theory offers a robust framework for achieving these goals by emphasizing active engagement, experiential learning, and knowledge construction rooted in real-life contexts. Constructivism promotes learner-centered instruction that values inquiry, exploration, and social interaction as central to the learning process (Mir, et al, 2025). Ekmekeci & Serrano (2022) emphasize the critical link between teacher quality and student achievement, highlighting the significance of ongoing professional learning opportunities. Additionally, Muir et al (2022) argue that as teachers engage in training programs, they gain insights into instructional strategies that promote student engagement, personalized learning, and critical thinking. These strategies are particularly pertinent in the context of curriculum changes aimed at fostering 21st-century skills (Almazroa & Alotaibi, 2023).

## 2.2 Concept Mapping: The 5Es Instructional Model and the 4Cs

One of the essential aims of contemporary education is to promote the 21st-century skills, such as creativity, communication, collaboration, and critical thinking – collectively known as the 4Cs. One effective approach for fostering the 4Cs is the 5Es Instructional Model, which consists of five phases: engage, explore, explain, elaborate, and evaluate (Aalorabi, 2019). Using the 5Es Instructional Model enables learners to redefine, reorganize, elaborate on, and revise their initial concepts through self-reflection and interaction with peers and their environment. They interpret objects and phenomena, and internalize those interpretations in terms of their current conceptual understanding (Bybee (1997, cited in Duran & Duran, 2004:51). In this regard, to successfully operationalize the 2023 revised curriculum in classrooms, the Tanzania Institute of Education (TIE), which is mandated to provide in-service training to help teachers implement the curriculum effectively, has structured its pedagogical strategy around the 5Es Instructional Model. This systematic model helps teachers design activities that enable their learners to develop the 4Cs across the stages of a competency-based lesson plan. The conceptual mapping of the 5Es Instructional Model is explicitly detailed in Table 1.

**Table 1:** The 5Es Instructional Model and the 4Cs integration

| 5Es Phase | Core instructional action plan                                                                                                                                                                                                                                                                    | Targeted 21st-century skills (4cs) integration                                                                                                                      |
|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Engage    | The teacher gets the learner's prior knowledge of the target lesson, arouses the learner's interest, generates curiosity, and engages them in the lesson through different techniques such as discussions about how they can use the knowledge they expect to gain, KWL Charts, songs, and games. | <b>Critical Thinking:</b> Students immediately question historical assumptions and analyze the problem's core components.                                           |
| Explore   | Learners are placed in collaborative peer teams to perform hands-on activities. They are provided with several activities that enable them to build competence through reading texts, watching videos, listening to audio sources, conducting                                                     | <b>Collaboration &amp; Creativity:</b> Peer interactions require a cooperative division of labor while enabling the testing of distinct problem-solving approaches. |

| 5Es Phase | Core instructional action plan                                                                                                      | Targeted 21st-century skills (4cs) integration                                                                                                      |
|-----------|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
|           | discussions, investigating, observing, and questioning.                                                                             |                                                                                                                                                     |
| Explain   | Learners present group findings, defend their lines of reasoning, and introduce conceptual terms; teachers provide formal guidance. | <b>Communication:</b> Enhances technical articulation, structural presentation skills, and constructive peer-feedback loops.                        |
| Elaborate | Learners apply newly mastered knowledge in various situations, including non-routine tasks or cross-cutting social issues.          | <b>Creativity &amp; Critical Thinking:</b> Forces students to think beyond immediate contexts, designing novel artifacts or unique local solutions. |
| Evaluate  | Formative assessments, interactive self-tests, portfolio logs, and performance rubrics are used to track academic progress.         | <b>Meta-Cognitive Growth:</b> Instills objective self-assessment, individual accountability, and comprehensive progress tracking.                   |

**Source:** Duran & Duran (2004), Bybee et al (2006)

### 2.3 Identification of empirical knowledge gaps

Prior scholarly research on large-scale educational transitions across developing nations highlights a recurring failure point: the critical disconnect between macro-level policy ideas and micro-level classroom execution. If teachers have not received proper training, they may not know how to support students in the emerging ideas in the curriculum (OECD, 2020). While substantial literature focuses on the abstract benefits of competency-based education, a significant empirical knowledge gap persists regarding how teachers translate these broad policies into specific lesson templates for classroom implementation. Most existing studies suffer from restricted sample sizes or fail to capture direct feedback from classroom teachers working in under-resourced schools. This research report directly addresses this critical knowledge gap by analyzing an extensive empirical dataset and explicitly linking it to teachers' daily operational struggles in implementing the curriculum at the classroom level.

## 3 Research methodology

### 3.1 Research design

This study deployed a comprehensive, descriptive, and analytical mixed-methods research design. By integrating massive quantitative survey data with qualitative insights, the study captured both wide macro-level operational trends and deep, micro-level context-specific indicators. This dual design ensured that statistical frequencies regarding teacher understanding were systematically contextualized and validated by direct, text-based field insights from classroom teachers who implement the curriculum.

### 3.2 Study area and data collection centers

The study was nationwide in scope. The target population comprised all secondary school teachers targeted for the roll-out of the 2023 revised curriculum for Lower Secondary Education in January 2024. The data were collected from all 184 district councils in the 26 regions of Tanzania Mainland. Each council had a training center where teachers from all secondary schools allocated to the council attended the training. The data from the training centers were collected for the study.

### 3.3 Sampling technique and sample size

Rather than selecting a restricted sample, this study employed a census-based sampling approach, collecting feedback from the entire population of active participants during the training window. The final sample size for this study is exactly 14,121 secondary school teachers. This comprehensive coverage completely eliminates sampling error and provides an accurate assessment of the training's nationwide execution.

### 3.4 Data collection instruments and quality control

Primary data collection was conducted using structured digital tracking matrices and electronic data-collection tools distributed nationally via online platforms. To maintain high data quality and eliminate administrative bias, questionnaires featured both closed-ended evaluation scales, such as Likert-type measuring target goal achievement, and extensive open-ended text fields. These open fields allowed teachers to provide honest, unstructured feedback on personal knowledge gaps and operational documentation challenges.

### 3.5 Data analysis procedures

Quantitative data were processed using programmatic text parsing and descriptive statistics to get absolute frequencies, percentage distributions, and demographic proportions. For the open-ended data, an advanced thematic analysis framework was used. This involved standardizing Swahili and English terms, such as matching “Andalio la Somo” and “Azimio la Kazi” with “Lesson Plan” and “Scheme of Work,” respectively, compiling exact word frequencies, and running a thematic sorting process to extract the most accurate, representative quotes from the field. Through this procedure, the researcher was able to determine relationships among concepts or themes, link various concepts or themes to participants’ thoughts, and compare the relative frequencies of the identified themes in the study within the data set. This thematic analysis yielded insightful and trustworthy findings and was flexible in identifying, describing, and interpreting patterns (themes) within a data set in great detail (Nowell et al., 2017; Braun & Clarke, 2006).

### 3.6 Ethical considerations

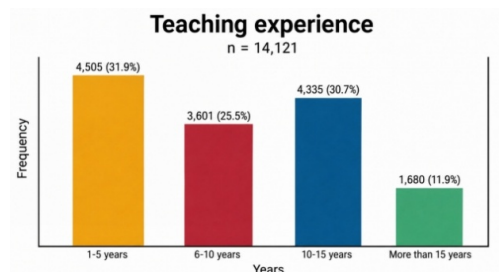
Data privacy, anonymity, and institutional confidentiality were strictly maintained throughout the entire research cycle. All participation was strictly voluntary, and the study's objective was explained to participants.

## 4 Findings

### 4.1 Demographic and professional profiles of the respondents

#### (a) Teaching experience

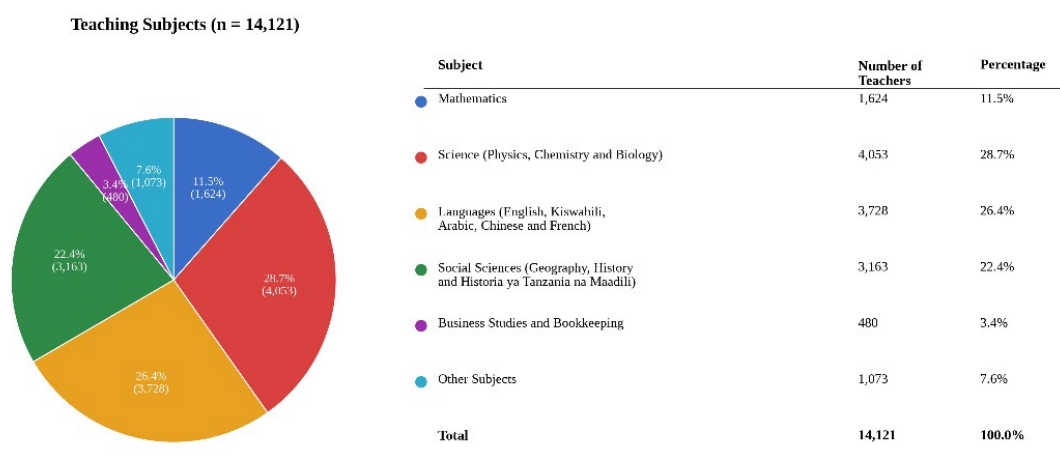
Regarding teaching experience, the quantitative data revealed that 4,505 (31.9%) teachers have one to ten years of teaching experience, 4,335 (30.7%) teachers have 10 to 15 years of teaching experience, 3,601 (25.5%) teachers have six to ten years of teaching experience, while 1,680 (11.9%) teachers have more than 15 years of teaching experience, as indicated in Figure 1.



**Figure 1:** Distribution of working experience among respondents (*Field data, 2024*)

#### (b) Teaching subjects

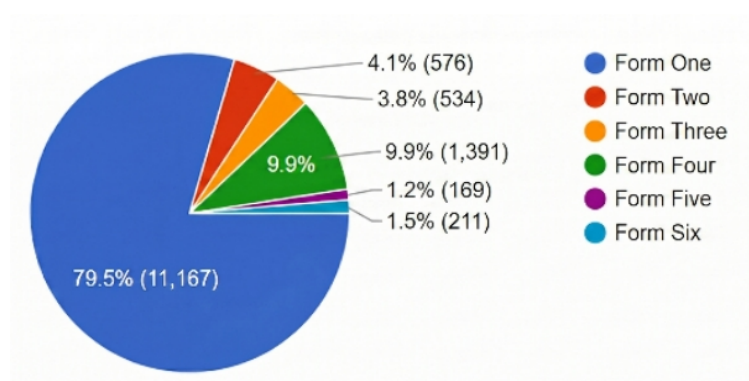
In terms of specialization, 4,053 (28.7%) teachers teach Science subjects, (Physics, Chemistry and Biology), 3,728 (26.4%) teachers teach languages subjects, 3,163 (22.4%) teach Social Science subjects; 1,624 (11.5%) teachers teach Mathematics; 480 (3.4%) teachers teach Business Studies and Bookkeeping, while 1,073 (7.6%) teachers responded that they teach other subjects in the curriculum which were not included in the list. Figure 2 is illustrative.



**Figure 2:** Distribution of subjects taught by the respondents (Field data, 2024)

### (c) Grade-level teachers teach

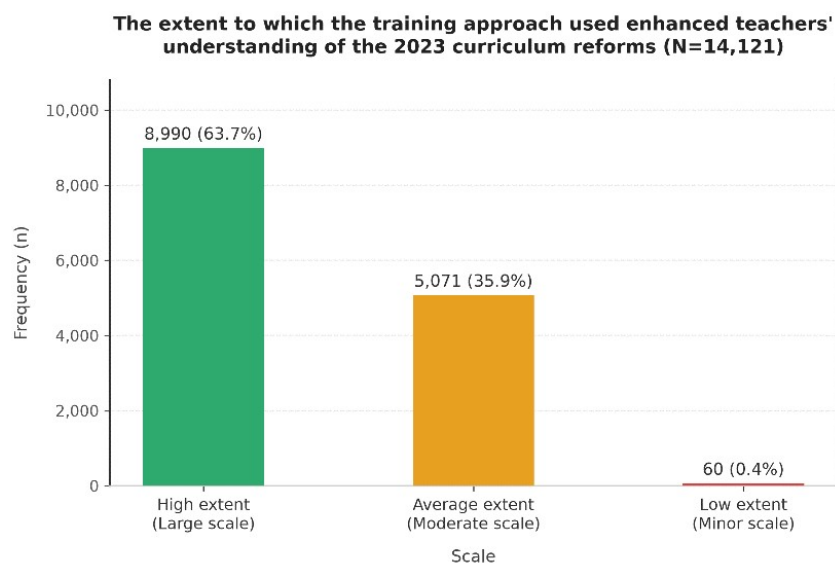
In terms of Grade Level, as per the Tanzanian education system, secondary education ranges from Form One to Form Six. In this study, the majority of the teachers: 11,167 (79.5%) teach Form One. They represented a large number because the 2023 revised curriculum for the Secondary Education level was first implemented only for Form One students in 2024, before other classes in the coming years. Therefore, the teachers teaching Form One students were the primary target of the curriculum rollout training, which led to this study. Other teachers: 1,391 (9.9%) teach in Form Four grade level, 576 (4.1%) teach in Form Two grade level, 534 (3.8%) teach in Form Three grade level, 211 (1.5%) teach in Form Six grade level, and 169 (1.2%) teach in Form Five grade level. Figure 3 is illustrative



**Figure 3:** Distribution of grade level the respondents teach (Field data, 2024)

## 4.2 Core evaluation and goal achievement

The study assessed the extent to which the training approach (Smart Class) used enabled teachers to achieve the objective of developing an understanding of the 2023 curriculum reform. The quantitative response frequencies for this evaluation scale are structured and presented in Figure 4.



**Figure 4:** The extent to which the training approach (Smart Class) enhanced teachers' understanding of the 2023 curriculum reform (*Field data, 2024*)

The statistical data in Figure 4 revealed that a large proportion (63.7%) of respondents viewed the capacity-building training as highly effective, 35.9% as moderately effective, and only 0.4% as low (not achieved). This indicates that the orientation training was successfully achieved and oriented the teachers about the 2023 revised curriculum, making them ready to start its implementation.

## 4.3 Core knowledge gaps: Areas demanding additional training

To answer the central research question – “What area in the implementation of the 2023 revised curriculum would you need to learn more?” the open-ended responses indicate teachers' demand for further specialized training. While teachers understand what the 2023 revised curriculum expects them to achieve, they face significant technical barriers to documenting, planning, and evaluating lessons on a daily basis. The primary areas where teachers requested special training are indicated in Table 2.

**Table 2:** Identified areas for curriculum implementation that need further (special) training (N = 14,121)

| Rank | Areas for further (special) training (Knowledge gap) | Contents to be covered                                | Response frequency (n) | Percentage |
|------|------------------------------------------------------|-------------------------------------------------------|------------------------|------------|
| 1.   | Competency-based lesson planning                     | IDDR Model, the 5Es Instructional Model, Lesson plan  | 6,524                  | 46.2%      |
| 2.   | Competency-based scheme of work                      | Specific learning activities, assessment criteria     | 3,502                  | 24.8%      |
| 3.   | The 21st-century skills                              | How to use 5Es to develop the 4Cs                     | 1,991                  | 14.1%      |
| 4.   | Formative assessment                                 | Methods, how to prepare and use assessment tools)     | 1,186                  | 8.4%       |
| 5.   | Vocational stream                                    | Practical specialization                              | 607                    | 4.3%       |
| 6.   | Newly introduced subjects                            | Business Studies, and Historia ya Tanzania na Maadili | 311                    | 2.2%       |

**Source:** Field data, 2024

Combined, Ranks 1 and 2, the data in Table 2 demonstrate that a majority of teachers (71.0%) who attended the training still need further specialized training in competency-based lesson planning and scheme of work. This indicates a major national challenge, as teachers are highly motivated by the content of the 2023 revised curriculum, but struggle with daily paperwork and structural documentation required to implement it effectively.

## 5 Discussion of findings

### 5.1 The extent to which the training approach used enhanced teachers' understanding of the 2023 curriculum reforms

To ensure comprehensive coverage prior to the classroom implementation of the 2023 revised curriculum in Tanzania, the institute responsible for curriculum design, development and review; preparation of curriculum support materials, and provision of teachers' in-service training for effective curriculum implementation, TIE, adopted a synchronous, hybrid e-learning strategy known as the "Smart Class" approach. Facilitators broadcast live presentations from a centralized smart classroom at the TIE Headquarters in Dar es Salaam to geographically distributed training centers established in each district across all 26 administrative regions in Tanzania Mainland, where participants from different schools gathered in decentralized centers, such as large halls or spacious classrooms with projectors or Smart TV, laptops, and internet and electricity connectivity, situated within their respective districts. To optimize network traffic and administrative management, the training was conducted concurrently for two to three regions before scaling to the next regions.

The facilitators at the TIE Headquarters in Dar es Salaam used a specialized room equipped with smart-class devices, multiple cameras, speakers, and interactive displays. However, some curriculum experts were embedded in each training center to provide scaffolding, resolve technical glitches, and facilitate micro-discussions during breakout sessions. Quantitative and qualitative evaluations for this approach revealed a high level of overall effectiveness: 8,990 (63.7%) of participants reported that the training approach enhanced their understanding to a great extent, 5,071 (35.9%) noted an average extent, and only 60 (0.4%) indicated a low extent (the training objective was unachieved). By establishing synchronous links (Google Meet), TIE ensured that teachers in remote areas received the exact same high-quality explanations regarding curriculum reforms as their urban

peers. One of the teachers explained how this approach enhanced their understanding of the 2023 revised curriculum:

*“The greatest benefit of this approach is that we received the same message directly from a single source. The content is not diluted by other local facilitators who could not fully understand the changes made in the revised curriculum. We listened directly to the very experts from TIE Headquarters who revised the curriculum and its support materials, such as syllabi and textbooks. Every center, whether located in an urban or rural area, received exactly the same high-quality explanations simultaneously.” (Physics Secondary School Teacher, 2024)*

This aligns with Chaney (2010), who asserts that the demand for online courses stems from a push to provide quality education to all students, regardless of location or time. However, despite the effectiveness of the training approach, the teachers reported a critical systemic challenge: limited interactive engagement and unstable internet connectivity and electricity in some centers. This aligns with Gillet-Swan (2017) and Kabage & Sanga (2022), who argue that teaching is hindered by unreliable internet connections, high bandwidth costs, and an unreliable electricity supply. Because multiple districts and many participants were synchronized, the practical space for individual questions, feedback, and detailed group presentations was severely limited. Respondents heavily voiced this limitation during the qualitative feedback cycles, expressing disappointment over restricted communicative opportunities and being unable to be heard by others from other centers:

*“The Smart Class setup was wonderful because we heard directly from the main curriculum experts at TIE and could see everything clearly on the big screens. However, our center struggled to get a chance to ask questions and present the work we discussed to the masses. Every time we attempted to join the queue, the online session was already overwhelmed with contributions from other centers. It took too much time to manage all of us online compared to when we had a physical face-to-face facilitation in a single room, where we had more interactions and engagement” (English Secondary School Teacher, 2024).*

This implies that teachers missed some opportunities to interact with others and, as a result, there was less engagement than in physical face-to-face training. This aligns with the study by Munna & Kalam (2021), who argue that the more interactive the lesson, the more engaged and motivated learners are to improve their learning experiences; thus, blended learning (a mixture of online and offline learning) is recommended. Similarly, Bala et al (2017) assert that students have difficulty understanding the topic if smart-class teaching is not supplemented by a lecture. With this feedback, it can be concluded that, despite its effectiveness in enhancing teachers’ understanding of the 2023 revised curriculum, the approach used during the training (Smart Class) had some limitations, as indicated by respondents in the qualitative feedback.

## 5.2 Areas demanding additional training

The empirical findings of this study revealed a deep, systematic paradox that could threaten the long-term success of the 2023 curriculum reform. A massive 71% of all the respondents who attended the orientation rollout training requested a focus on the high-priority need for deeper guidance on lesson planning and the scheme of work. A close look at the daily mechanics of classroom delivery reveals how they affect the effectiveness of curriculum implementation. This means that while teachers can easily use modern educational buzzwords, such as competency-based learning or learner-centered learning, they become severely confused when trying to translate these important ideas into structured, step-by-step daily paperwork. To completely understand the operational reality of this transition, it was vital to analyze the exact verbatim feedback provided by teachers. When asked to identify their primary technical challenges, teachers repeatedly cited the stress of lesson documentation (lesson plans and schemes of work) and the lack of concrete tools. For example, an experienced Geography teacher at Kibamba Training Center shared his frustration:

*“Managing and preparing lesson plans is very challenging, especially the design stage. I request a complete guide with a sample lesson plan and scheme of work prepared for the revised curriculum, because all of us at school are just guessing at the moment.” (Geography Secondary School Teacher, 2024).*

Another teacher explained:

*“I find it difficult to connect the 5Es in the stages of the lesson plan such as Introduction, Competence Development, Design, and Realization (IDDR) because it is not well clear for me at which stage I will use Engagement, at which stage I will use Exploration, at which stage I will*

*use Explanation, at which stage I will use Elaboration, and at which stage I will use Evaluation, and how this can develop the 4Cs among the learners. This needs more orientation for me”*  
*(English and Kiswahili Language Secondary School Teacher, 2024)*

These verbatim responses reveal a critical operational challenge: Teachers are struggling to prepare lesson plans, especially at the design stage, which requires them to design activities for learners to apply the gained knowledge, as grounded in the elaborate phase of the 5Es Instructional Model. Teachers also face challenges in connecting lesson plans with the 5Es to develop the 4C, as emphasized by TIE for the effective implementation of the 2023 revised curriculum. Table 2 presents the stages of the lesson plan adapted by TIE for teachers to implement the 2023 revised curriculum.

**Table 2:** Teaching and Learning Process

| Stage                  | Time<br>(Minutes) | Teaching<br>Activities | Learning<br>Activities | Assessment<br>Criteria |
|------------------------|-------------------|------------------------|------------------------|------------------------|
| Introduction           |                   |                        |                        |                        |
| Competence Development |                   |                        |                        |                        |
| Design                 |                   |                        |                        |                        |
| Realization            |                   |                        |                        |                        |

**Source:** (TIE, 2023 – Unpublished template but distributed to teachers who use it)

Another teacher explained challenges during preparing a scheme of work: another official document necessary for preparation for teaching,

*“Most of us get confused about how to prepare specific learning activities when we prepare a scheme of work. This is a very difficult component of a scheme of work for implementing the 2023 revised curriculum; it is a new component, “tunajikanyagakanyaga tu”. We expected to find these specific learning activities in the syllabi, as it is done for main competences, specific competences, and learning activities. Assessment criteria are confusing as well: some say we prepare assessment criteria based on the main competence, others say we base them on specific competence, and others say we base them on learning activities. So which is which?”*  
*(Mathematics Secondary School Teacher, 2024)*

The above response indicates a challenge that teachers face in designing specific learning activities and assessment criteria when preparing schemes of work. The Swahili phrase “tunajikanyagakanyaga tu” (we are trapping over ourselves) perfectly captures the deep confusion and lack of professional confidence among teachers. Teachers expected to find specific learning activities in the subject syllabi and copy and paste them into the scheme of work, as they do for main competences, specific competences, and learning activities. Figure 5 illustrates the components of the syllabi they use.

Form IV

Table 6: Detailed Contents for Form IV

| Main competence                                    | Specific competence                                                              | Learning activities                                                                                                                                                                                                                                                                                       | Suggested teaching and learning methods                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Assessment criteria                                                         | Suggested teaching and learning resources                                                                                                         | Number of periods |
|----------------------------------------------------|----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
| 1.0 Demonstrate mastery of English language skills | 1.1 Use appropriate grammar and vocabulary in oral and in written language tasks | (a) Prepare and deliver short speeches about common topics (e.g., <i>entrepreneurship, corruption, child rights and security, gender education, cyber security education, disaster management, health and reproductive education, drug abuse, life skills, financial management education, taxation</i> ) | <b>Project work:</b> Ask the students to listen to various short speeches in their environment or from online sources and analyse them based on their characteristics, parts, the language used and techniques used in delivering such speeches.<br><b>Presentation:</b> Guide the students through presenting their work to the class<br><b>Observation:</b> Guide the students through observing and discussing the characteristics and language used in a given short speech on common topics<br><b>Speech delivery:</b> Guide the students through preparing short speeches on common topics and delivering such speeches to the class using appropriate techniques | Short speeches about common topics are prepared and delivered appropriately | Written texts of different types, dictionaries, encyclopaedia, oral texts, audio and audio-visual materials (audio/video clips, recorded stories) | 14                |

**Figure 5:** Extract from Syllabus for English language subject for Lower Secondary Education in Tanzania (Ministry of Education, Science and Technology, 2023c)

From the extract above, it is observed that the subjects' syllabi used by teachers in designing schemes of work, apart from other components, include main competences, specific competences, and learning activities. However, specific learning activities are not included in the subject syllabi in the sense of providing opportunities for teachers to use their professional knowledge to break down the learning activities stipulated in the syllabi (as indicated in Figure 5) into several specific learning activities, each to be taught during the duration of the lesson. Figure 6 illustrates the components of the scheme of work used.

| Main Competence | Specific Competences | Learning Activities | Specific Learning Activities | Month | Week | Number of Periods | Teaching and Learning Methods | Teaching and Learning Resources | Assessment Tools/Methods | References | Remarks |
|-----------------|----------------------|---------------------|------------------------------|-------|------|-------------------|-------------------------------|---------------------------------|--------------------------|------------|---------|
|-----------------|----------------------|---------------------|------------------------------|-------|------|-------------------|-------------------------------|---------------------------------|--------------------------|------------|---------|

**Figure 6:** Extract from the scheme of work template for Primary and Secondary Education in Tanzania (TIE – Unpublished template but distributed to teachers who use it)

Comparing Figures 5 and 6, the component of Specific Learning Activities is not presented in Figure 5 (Syllabus), but it is presented in Figure 6 (Scheme of work). Therefore, in translating the syllabus into classroom practice, teachers must design specific learning activities by breaking down the learning activities from the syllabus, which is challenging for them. The Institute responsible for designing scheme of work format, TIE, did not include the specific learning activities component in subject syllabi on purpose to develop creativity among subject teachers. However, based on field evidence, this area is challenging for teachers and requires specialized, intensive training alongside lesson plans.

Designing a competency-based lesson plan requires mapping out explicit learning actions for every phase of the 5Es instructional model, aligning specific group activities with distinct 4Cs competencies, and matching them to assessment criteria. Without intensive hands-on, practical guidance on managing this paperwork, teachers will naturally experience cognitive overload, leading them to drift back to safe, traditional lecture methods. This

aligns with the OECD (2020) report, which states that teachers who have not received proper training may not know how to support students with emerging ideas in the curriculum.

Notably, designing specific learning activities and a competency-based lesson plan grounded in the IDDR Framework (Introduction, Competence Development, Design, and Realization), integrating the 5Es to develop the 4Cs, is an emerging approach to curriculum implementation in Tanzania. This was not a practice in the former curricula; it is a new practice for teachers implementing the 2023 revised curricula. In this regard, effective implementation of these areas requires extensive, specialized, subject-based training for teachers. As Rutherford, Long, and Farkas (2017) argue, when teachers lack the required skills, they are likely to feel overwhelmed and helpless. Furthermore, Zee & Koomen (2016) argue that even well-prepared teachers may experience a drop in their sense of self-efficacy in some of these emerging areas if they have not received sufficient support through either their initial teacher preparation program or targeted professional development activities.

## 6 Conclusion

### 6.1 *Summary of the empirical findings*

The extensive national research study provides a vital, data-driven assessment of teachers' readiness during the historic rollout of the 2023 revised curriculum for Lower Secondary Education, Forms I-IV. The empirical findings combined from 14,121 secondary school teachers point to several major conclusions as follows:

**Creating awareness for teachers:** The training was highly effective in raising awareness among teachers and helping them understand the changes made to the curriculum and the general education system. With 99% of teachers reporting that the training successfully established a strong awareness of the reforms.

**Pedagogical gap:** A profound capacity gap exists in the execution of daily paperwork, with 71% of teachers requesting immediate, intensive training in structured lesson planning and scheme of work.

### 6.2 *Overall conclusions and policy synthesis*

The ultimate success of Tanzania's educational reform depends entirely on the country's ability to bridge the gap between high-level policy design and low-level classroom execution. Teachers across the nation are deeply inspired by the philosophy of competency-based curriculum and want to develop their students' critical thinking, communication, collaboration, and creativity. However, they are currently blocked by a complex web of administrative confusion. For the effective implementation of the 2023 revised curriculum, teachers require extensive, subject-based training and additional time. To achieve true educational transformation, the national strategy must invest in teachers' continuous professional development, with robust monitoring and evaluation, including regular scaffolding for teachers facing challenges.

## 7 Recommendations

### 7.1 *Practical and systematic suggestions for the educational authority*

Based on the dense empirical findings and qualitative feedback from the study, the following recommendation is submitted: The institute responsible for teachers' in-service training and curriculum support materials in Tanzania, TIE, should provide samples of filled-out schemes of work and lesson plans for each subject at each education level and make them available through TIE's Learning Management System (LMS). This will help guide teachers in their Communities of Learning (CoL) as they discuss how to prepare such documents based on the 2023 revised curriculum. The lesson plans should show how the 5Es Instructional model is interpreted and used to develop the 4Cs.

### 7.2 *Prioritized areas for future scholarly research*

Future research should investigate the long-term classroom impact of the 2023 revised curriculum by conducting direct, multi-regional classroom observation studies. This will allow researchers to measure the quality of the 5Es implementation beyond self-reported survey data.

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