

Pedagogical Preparedness and Teaching Effectiveness Among Vocational Teachers in Tanzania: A Qualitative Inquiry into Professional Practice and Institutional Constraint

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Abstract—

The quality of Technical and Vocational Education and Training (TVET) depends significantly on the pedagogical competence of vocational teachers, yet empirical evidence on pedagogical preparedness within Tanzania's vocational education system remains limited. This study examined vocational teachers' pedagogical preparedness in the teaching and learning process, focusing on the acquisition of pedagogical knowledge and skills, preparation of instructional tools, and implementation of learner-centred pedagogical approaches. A qualitative multiple embedded-case study design was employed, involving twelve purposively selected participants comprising vocational teachers and teacher educators from vocational training institutions in Dar es Salaam and Morogoro regions. Data were collected through semi-structured interviews, classroom observations, and documentary review, and analyzed thematically. The findings reveal that vocational teachers acquire fundamental pedagogical knowledge and instructional competencies through pre-service teacher education. However, the effective translation of these competencies into classroom practice remains constrained by institutional and contextual challenges. Although most teachers demonstrated awareness of pedagogical requirements, the preparation and consistent use of instructional tools, including schemes of training, lesson plans, and lesson notes, varied considerably across institutions. Furthermore, the application of participatory teaching approaches was hindered by excessive teaching workloads, inadequate instructional resources and equipment, overcrowded classrooms, limited opportunities for continuing professional development, language transition challenges, and insufficient capacity to support learners with diverse educational needs. These constraints reduced teachers' ability to deliver learner-centred instruction and achieve the intended learning outcomes. The study argues that improving pedagogical quality in vocational education requires systemic reforms that extend beyond initial teacher preparation. Strengthening continuous professional development, enhancing institutional support, improving the availability of teaching resources, reducing teacher workloads, and reinforcing policy implementation are essential for promoting effective pedagogical practice. The findings contribute to the growing scholarship on vocational pedagogy in sub-Saharan Africa by providing empirical evidence on the institutional factors shaping instructional quality and offer practical recommendations for strengthening vocational teacher education and improving the quality of TVET in Tanzania.

Keywords— vocational pedagogy, vocational teachers, pedagogical preparedness, TVET

I. INTRODUCTION

Technical and Vocational Education and Training (TVET) has become a central pillar of national development strategies because of its potential to produce a skilled labor force capable of driving industrialization, economic competitiveness, technological innovation, and sustainable development. The adoption of the 2030 Agenda for Sustainable Development, particularly Sustainable Development Goal (SDG) 4, has further reinforced the strategic importance of TVET in promoting inclusive, equitable and quality education while enhancing youth employability, lifelong learning and decent work (UNESCO, 2022; UNESCO-UNEVOC, 2024). Recent international policy discourse equally recognizes that responsive TVET systems are indispensable for addressing the changing demands of digital economies, green transitions, and rapidly evolving labour markets (OECD, 2021; UNESCO et al., 2023).

Notwithstanding these developments, the effectiveness of any TVET system depends fundamentally on the competence of vocational teachers who translate curriculum intentions into meaningful learning experiences. Vocational teachers occupy a distinctive position because they are expected to integrate occupational expertise with sound pedagogical knowledge, workplace experience and learner-centred instructional approaches. Unlike teachers in general education, vocational

educators must simultaneously facilitate the acquisition of technical competencies, employability skills and professional attitudes that respond to workplace expectations (Lucas et al., 2012; Lucas, 2014; Wheelahan, 2015). Consequently, vocational pedagogy extends beyond subject-matter expertise to encompass instructional planning, authentic assessment, workplace simulation, collaborative learning and reflective practice, all of which significantly influence learners' competence development and employment outcomes.

The growing emphasis on vocational pedagogy has generated extensive scholarly debate regarding the professional identity and preparedness of vocational teachers. Contemporary scholarship argues that effective vocational teaching requires the integration of pedagogical content knowledge, occupational competence and adaptive teaching practices capable of responding to diverse learner needs and rapidly changing workplace technologies (Shulman, 1987; Lucas et al., 2012; Billett, 2011; Mulder, 2017). Similarly, UNESCO (2022) maintains that improving TVET quality requires continuous investment in teacher education, professional learning and institutional support systems that enable teachers to translate pedagogical knowledge into effective classroom practice. Empirical evidence further demonstrates that learner-centred pedagogies, experiential learning, project-based instruction and work-integrated learning significantly improve learners' critical thinking, creativity, collaboration and

problem-solving competencies required in twenty-first-century labour markets (OECD, 2021; UNESCO Bangkok, 2023).

Despite considerable investment in vocational teacher education globally, many developing countries continue to experience persistent challenges in translating pedagogical preparation into instructional effectiveness. Existing studies consistently identify inadequate instructional resources, overcrowded classrooms, limited opportunities for continuous professional development, excessive teaching workloads and weak institutional support as major barriers to effective pedagogical practice (Allais, 2020; Boahin, 2018; McGrath et al., 2019; Misko et al., 2021). These challenges are particularly pronounced in Sub-Saharan Africa, where rapid expansion of TVET has frequently outpaced investments in teacher preparation and institutional capacity, thereby constraining the quality and relevance of vocational education (Lolwana, 2017; UNESCO et al., 2023).

Within the Tanzanian context, TVET occupies a strategic position in achieving the national aspirations articulated in the Development Vision 2025 and broader industrialization agenda. Through the Vocational Education and Training Authority (VETA), the Government has implemented several reforms aimed at strengthening vocational teacher education, competency-based curricula and institutional quality assurance. Among the most significant initiatives was the establishment of the Morogoro Vocational Teachers Training College to provide specialized pedagogical training for vocational teachers. Nevertheless, monitoring reports and empirical studies continue to reveal substantial shortcomings in the implementation of pedagogical practices. These include inadequate preparation and utilization of lesson plans, schemes of training and lesson notes, excessive teacher-trainee ratios, shortages of teaching resources and limited opportunities for continuing professional development, all of which compromise instructional quality (VETA, 2020; Tambwe, 2019; Allais, 2020).

Although previous studies in Tanzania have examined curriculum implementation, employability, competency-based education and TVET governance (Machumu et al., 2016; Tambwe, 2019; Allais, 2020), relatively little empirical attention has been devoted to understanding how vocational teachers acquire pedagogical competence and subsequently translate that competence into everyday classroom practice. Existing studies have largely emphasized institutional reforms while paying comparatively limited attention to the interaction between teacher preparation, instructional practice and institutional conditions. Consequently, evidence remains insufficient regarding how pedagogical preparedness influences instructional effectiveness within Tanzanian vocational training institutions.

This study addresses this scholarly and empirical gap by examining vocational teachers' pedagogical preparedness in the teaching and learning process within selected vocational training centres in Tanzania. Specifically, it investigates how vocational teachers acquire pedagogical knowledge and skills, prepare instructional tools and implement learner-centred

pedagogical approaches while exploring the institutional factors that facilitate or constrain effective pedagogical practice. By situating these findings within the broader discourse on vocational pedagogy and teacher professionalism, the study contributes to the emerging scholarship on TVET teacher education in Sub-Saharan Africa and provides evidence-informed recommendations for strengthening pedagogical quality, institutional effectiveness and policy implementation within Tanzania's vocational education system.

II. LITERATURE REVIEW

The increasing prominence of Technical and Vocational Education and Training (TVET) within global education and labor market reforms has fundamentally transformed scholarly understanding of vocational pedagogy. Historically, vocational education was conceived primarily as an avenue for transmitting occupation-specific technical skills required for particular trades. This traditional perspective reflected industrial-era demands in which vocational institutions were expected to produce technically competent workers capable of performing predetermined tasks. However, the accelerating pace of technological innovation, globalization, digital transformation and changing labor market demands has challenged the adequacy of this narrow conception. Contemporary scholarship increasingly argues that vocational pedagogy must extend beyond technical competence to cultivate graduates who are adaptable, innovative, reflective and capable of lifelong learning (OECD, 2021; UNESCO, 2022; UNESCO-UNEVOC, 2024). Consequently, vocational pedagogy is now understood not merely as a method of teaching vocational subjects but as a comprehensive educational philosophy concerned with developing occupational expertise alongside higher-order cognitive, social and professional capabilities.

This conceptual evolution reflects broader theoretical shifts within educational research. Earlier vocational instruction was largely informed by behaviorist assumptions that emphasized repetitive practice, procedural mastery and the acquisition of observable competencies. While such approaches remain valuable for developing foundational technical skills, critics argue that they inadequately prepare learners for increasingly dynamic and unpredictable occupational environments. As workplaces become more knowledge-intensive and technologically sophisticated, vocational learning increasingly requires learners to interpret complex situations, solve unfamiliar problems, collaborate with diverse teams and continuously update their knowledge and skills. These changing realities have encouraged scholars to embrace constructivist and socio-cultural perspectives that conceptualize learning as an active, contextualized and socially mediated process rather than the passive acquisition of technical procedures.

Among the most influential theoretical foundations underpinning contemporary vocational pedagogy is Kolb's (1984) Experiential Learning Theory, which posits that learning emerges through a cyclical process involving

concrete experience, reflective observation, abstract conceptualization and active experimentation. Within vocational education, this perspective underscores the importance of integrating theoretical instruction with practical engagement, allowing learners to develop conceptual understanding through authentic occupational experiences. However, Kolb's framework primarily emphasizes individual cognitive development and offers relatively limited attention to the broader social contexts within which vocational learning occurs.

Addressing this limitation, Lave and Wenger's (1991) Situated Learning Theory advances the argument that vocational knowledge is inherently social and is acquired through participation in communities of practice. According to this perspective, learners develop occupational competence by engaging progressively in authentic workplace activities alongside experienced practitioners. Learning, therefore, is inseparable from the contexts in which it occurs, suggesting that vocational pedagogy should prioritize collaborative learning, apprenticeship models, workplace simulation and authentic problem-solving experiences. This socio-cultural understanding broadens vocational pedagogy beyond classroom instruction by recognizing that occupational expertise is constructed through participation in professional communities.

Building upon these ideas, Billett (2011) further conceptualizes workplace learning as the principal mechanism through which vocational competence develops. He argues that occupational expertise cannot be effectively acquired through institutional instruction alone but emerges from meaningful engagement with authentic work practices where learners integrate theoretical knowledge with practical experience. Consequently, vocational teachers are expected not simply to demonstrate technical procedures but to create learning environments that replicate workplace complexity through project-based learning, collaborative inquiry, workplace simulations and reflective practice. Collectively, these theoretical perspectives converge in positioning vocational pedagogy as a learner-centred process that integrates cognitive, practical and social dimensions of learning while preparing individuals for continuous adaptation within evolving occupational environments.

The conceptual transformation of vocational pedagogy has also influenced scholarly understandings of the purposes of vocational education itself. Lucas et al. (2012, 2014) argue that vocational teaching should be understood as teaching for occupational expertise rather than merely teaching about occupations. Their framework challenges competency-based approaches that reduce vocational education to the mastery of discrete technical tasks, arguing instead that effective vocational pedagogy intentionally develops resilience, creativity, professional judgement, ethical responsibility, communication, teamwork and reflective practice. These broader occupational capabilities enable graduates to navigate increasingly uncertain labor markets while supporting continuous professional growth. From this perspective, vocational teachers become facilitators of professional identity

formation rather than transmitters of technical knowledge alone.

Taken together, contemporary literature demonstrates that vocational pedagogy has evolved from a narrow focus on occupational skill acquisition to a multidimensional educational philosophy integrating experiential learning, workplace participation, critical thinking, professional identity formation and lifelong learning. This conceptual foundation provides the basis upon which discussions regarding the determinants of effective vocational pedagogy have emerged.

A. Determinants of Effective Vocational Pedagogy

While there is broad consensus regarding the learner-centred nature of contemporary vocational pedagogy, scholarly debate persists concerning the principal determinants of effective pedagogical practice. One dominant perspective attribute instructional quality primarily to teachers' pedagogical competence, arguing that knowledgeable and professionally prepared teachers constitute the most significant factor influencing student learning outcomes. Another perspective contends that pedagogical effectiveness cannot be explained solely through individual teacher competence because institutional environments, organizational resources and policy contexts substantially shape teachers' capacity to implement learner-centred pedagogies. These competing perspectives have generated an important body of literature examining the relationship between teacher competence, institutional capacity and educational quality within TVET systems.

Advocates of the teacher-centred perspective emphasize that vocational teachers require an integrated repertoire of pedagogical knowledge, occupational expertise and professional judgement to facilitate meaningful learning. Lucas et al. (2012, 2014) argue that vocational educators must possess not only technical competence but also the pedagogical ability to cultivate occupational habits of mind, reflective practice, creativity and problem-solving skills among learners. Their work redefines vocational teachers as facilitators of occupational capability rather than instructors responsible only for technical content delivery. Similarly, Hattie (2009), through his synthesis of educational research, identifies teacher effectiveness as one of the strongest predictors of student achievement, suggesting that well-prepared teachers can substantially improve educational outcomes regardless of contextual challenges. These arguments have informed international investments in teacher education, pedagogical training and continuing professional development aimed at strengthening instructional quality across TVET institutions.

Although this perspective highlights the centrality of teacher competence, an expanding body of literature argues that pedagogical effectiveness cannot be adequately understood without considering the institutional conditions within which teaching occurs. Allais (2020), McGrath et al. (2019), Moodie et al. (2019) and Misko et al. (2021) contend that excessive teaching workloads, inadequate workshop facilities, overcrowded classrooms, insufficient instructional materials,

weak institutional leadership and limited opportunities for professional development frequently constrain teachers' ability to implement learner-centred pedagogies. From this perspective, pedagogical competence represents a necessary but insufficient condition for educational quality because institutional environments either enable or inhibit effective instructional practice. Consequently, vocational pedagogy should be understood as an institutional rather than purely individual phenomenon.

International organizations similarly emphasize the multidimensional nature of pedagogical quality within TVET. UNESCO (2022) argues that high-quality vocational education requires integrated investments in teacher education, curriculum development, digital technologies, governance systems, industry collaboration and continuous professional learning. Likewise, the OECD (2021) maintains that successful TVET systems are characterized not only by competent teachers but also by institutional cultures that promote innovation, collaboration, reflective practice and responsiveness to changing labour market needs. These perspectives collectively shift attention from teacher accountability alone towards comprehensive institutional reform capable of supporting sustainable improvements in vocational pedagogy.

Synthesizing these competing perspectives suggests that effective vocational pedagogy emerges through the interaction between individual professional competence and enabling institutional environments. Teachers require sophisticated pedagogical and occupational expertise, yet their capacity to translate this expertise into effective classroom practice depends substantially upon the organizational, material and policy contexts within which they operate. This integrated understanding provides an important analytical framework for examining vocational pedagogy within developing countries, where institutional constraints frequently influence educational practice.

B. Vocational Pedagogy in Sub-Saharan Africa and Tanzania

Although contemporary theories of vocational pedagogy have significantly influenced global TVET reforms, their implementation within Sub-Saharan Africa has remained uneven. Across the region, governments have introduced competency-based curricula, expanded vocational teacher education programmes and pursued institutional reforms intended to improve the quality and relevance of vocational education. Nevertheless, empirical evidence consistently demonstrates that implementation has frequently lagged behind policy ambitions because educational reforms have often outpaced investments in institutional capacity, teacher development and learning resources (Lolwana, 2017; McGrath et al., 2019).

Research conducted across several African countries illustrates these persistent implementation challenges. In Ghana, Boahin (2018) found that despite comprehensive competency-based curriculum reforms, vocational teachers

continued relying predominantly on traditional teacher-centred instructional approaches because of inadequate instructional resources, insufficient pedagogical support and limited opportunities for professional development. Comparable findings have been reported in Malawi, Zimbabwe and South Africa, where shortages of qualified vocational teachers, inadequate workshop facilities, limited industry collaboration and weak institutional support continue to constrain the implementation of learner-centred vocational pedagogy (Chimpololo, 2013; Shizha & Kariwo, 2012; Allais, 2020). Collectively, these studies demonstrate that while policy reforms have redefined expectations for vocational teaching, institutional limitations frequently prevent teachers from translating pedagogical ideals into classroom practice.

The Tanzanian context reflects many of these broader continental experiences. In recent years, the Government of Tanzania has undertaken significant reforms aimed at strengthening vocational education through the establishment of the Morogoro Vocational Teachers Training College, the adoption of competency-based curricula and the introduction of institutional quality assurance mechanisms. These initiatives demonstrate a strong commitment to improving vocational teacher preparation and enhancing instructional quality. However, empirical studies continue to reveal substantial disparities between teachers' formal pedagogical preparation and their everyday instructional practices. Previous research identifies inadequate lesson preparation, inconsistent application of learner-centred pedagogical approaches, shortages of instructional resources, high teacher–trainee ratios and limited opportunities for continuing professional development as persistent barriers to effective vocational teaching (Tambwe, 2019; VETA, 2020; Allais, 2020). These findings suggest that policy reforms alone have been insufficient to overcome the contextual challenges shaping pedagogical practice within vocational institutions.

The reviewed literature therefore reveals a progressive evolution in scholarly understanding of vocational pedagogy—from a narrow emphasis on technical skill acquisition to a multidimensional conception integrating occupational competence, experiential learning, workplace participation, reflective practice and institutional support. International scholarship has extensively examined the characteristics of effective vocational pedagogy, while studies from Sub-Saharan Africa highlight the contextual realities that shape its implementation. Nevertheless, important knowledge gaps remain. Existing research has predominantly examined curriculum reforms, competency-based education and institutional development in isolation, with comparatively limited attention to how vocational teachers translate pedagogical preparation into everyday instructional practice within resource-constrained environments. In Tanzania specifically, empirical investigations have largely focused on policy implementation and institutional reforms, leaving insufficient understanding of the dynamic interaction between pedagogical preparedness, instructional practice and contextual constraints. Addressing this gap is essential for generating evidence capable of informing vocational teacher education, institutional strengthening and policy interventions

aimed at enhancing the quality, relevance and effectiveness of vocational education in Tanzania.

C. Conceptual Framework

The conceptual framework is anchored in constructivist learning theory, workplace learning theory (Billett, 2011), and the vocational pedagogy framework proposed by Lucas et al. (2012, 2014). These perspectives collectively suggest that effective vocational pedagogy depends primarily on the

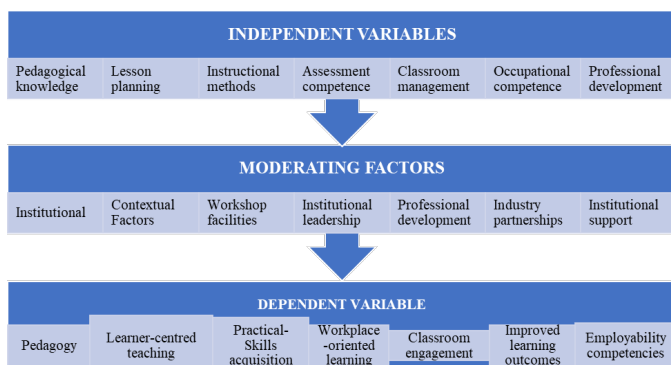


Figure 1. Conceptual Framework

pedagogical preparedness of vocational teachers, while acknowledging that instructional effectiveness is shaped by the institutional contexts within which teaching occurs.

The independent variable, vocational teachers' pedagogical preparedness, encompasses the knowledge, skills and professional competencies required to plan, deliver and assess competency-based vocational instruction. It includes pedagogical knowledge, lesson planning, instructional strategies, classroom management, assessment competence, occupational expertise and continuous professional development. Teachers possessing these competencies are more likely to implement learner-centred and competency-based pedagogies that promote occupational expertise.

The dependent variable is effective implementation of vocational pedagogy, reflected in the extent to which teachers employ learner-centred instructional approaches, integrate practical and workplace-oriented learning experiences, facilitate competency development, engage learners actively and ultimately enhance learning outcomes and employability skills.

The framework further recognizes that this relationship does not occur in isolation. Institutional contextual factors—including the availability of instructional resources, workshop facilities, teacher–trainee ratios, institutional leadership, opportunities for professional development, industry partnerships and institutional support—may either strengthen or constrain teachers' ability to translate pedagogical preparedness into effective instructional practice. Thus, these factors function as contextual moderators influencing the magnitude of the relationship between pedagogical preparedness and effective vocational pedagogy.

III. METHODOLOGY

This study adopted a qualitative research approach to explore vocational teachers' pedagogical preparedness in the teaching and learning process within Vocational Training Centre (VTCs) in Tanzania. A qualitative approach was considered appropriate because it facilitated an in-depth understanding of participants' experiences, perceptions and pedagogical practices in authentic educational settings.

An embedded multiple-case study design was employed to generate rich contextual evidence across three institutions, comprising two Vocational Training Centres in Dar es Salaam and the Morogoro Vocational Teachers Training College (MVTTC). The selected sites provided diverse perspectives on vocational teacher preparation and pedagogical practice.

Participants were selected purposively based on their direct involvement in vocational teacher education and classroom instruction. The study involved vocational teachers and vocational tutors who possessed firsthand experience of pedagogical training, lesson preparation and classroom implementation.

Data were collected using semi-structured interviews and non-participant classroom observations. Interviews generated detailed accounts of teachers' pedagogical knowledge, preparation of instructional tools and classroom practices, while classroom observations provided opportunities to validate reported practices against actual instructional behaviour. The use of multiple data sources enhanced the credibility of the findings through methodological triangulation.

The data were analyzed using thematic analysis, whereby interview transcripts and observation notes were systematically coded, categorized and synthesized into themes aligned with the study objectives. Trustworthiness was ensured through credibility, transferability, dependability and confirmability strategies, while ethical principles—including informed consent, confidentiality, voluntary participation and institutional research approval—were observed throughout the study.

IV. DATA ANALYSIS AND PRESENTATION

A. Vocational Teachers' Pedagogical Preparedness: Acquisition of Pedagogical Knowledge and Skills

The first objective of this study sought to examine how vocational teachers are prepared to acquire pedagogical knowledge and skills for effective teaching and learning in Vocational Training Centres (VTCs). Analysis of interview data, supported by documentary review, revealed that vocational teacher education in Tanzania provides a structured pedagogical foundation that extends beyond technical or occupational expertise. Participants consistently reported that pedagogical preparation was delivered through a combination of professional education modules, particularly Training Methodology, Educational Studies, Psychology, Workshop Management, Entrepreneurship, Communication Skills, and

Curriculum Studies. These modules were perceived as equipping prospective vocational teachers with the pedagogical competencies necessary to translate occupational knowledge into meaningful learning experiences.

Across all participating institutions, respondents emphasized that the Training Methodology module constituted the core component of pedagogical preparation. According to the participants, the module introduced them to essential instructional competencies, including curriculum interpretation, scheme of training preparation, lesson planning, lesson note development, classroom organization, instructional delivery, learner assessment and record keeping. One vocational teacher explained:

"We took courses like psychology, teaching methodology, education studies, workshop management, entrepreneurship and communication skills. In the teaching methodology course, we learnt how to interpret the curriculum into schemes of training, lesson plans and lesson notes as well as how to prepare assessment tools."

This finding suggests that vocational teacher education is deliberately designed to integrate pedagogical theory with instructional practice. Rather than focusing exclusively on occupational competence, the curriculum seeks to develop teachers' capacity to transform curriculum intentions into structured teaching and learning activities. Such preparation reflects the philosophy underpinning competency-based education, whereby teachers are expected not only to possess technical expertise but also to facilitate learners' acquisition of occupational competencies through systematic instructional planning.

The documentary evidence further corroborated participants' accounts by demonstrating that pedagogical preparation encompasses curriculum planning, lesson sequencing, assessment design and classroom management. These competencies collectively constitute what contemporary literature describes as pedagogical content knowledge, enabling teachers to organize subject matter in ways that enhance learner understanding and engagement.

From an analytical perspective, these findings indicate that the vocational teacher education curriculum in Tanzania reflects a multidimensional understanding of vocational pedagogy. The emphasis placed on lesson planning, instructional design and assessment demonstrates recognition that effective vocational teaching depends upon far more than mastery of occupational content. Instead, pedagogical preparedness is conceptualized as the integration of instructional knowledge, curriculum competence, classroom management and assessment literacy. This finding aligns with contemporary theories of vocational pedagogy advanced by Lucas et al. (2012, 2014), who argue that vocational teachers should be prepared to teach for occupational expertise rather than merely transmit technical knowledge. Similarly, Billett (2011) maintains that vocational teachers require pedagogical capabilities that enable learners

to connect theoretical understanding with authentic workplace practice.

The findings also reinforce the proposition advanced in the literature review that effective vocational pedagogy is grounded in the integration of pedagogical and occupational competence. Participants consistently viewed pedagogical knowledge as the mechanism through which occupational objectives are translated into meaningful learning activities, thereby enabling learners to acquire both technical skills and higher-order competencies such as problem-solving, collaboration and reflective practice. This interpretation is consistent with the perspectives of UNESCO (2022) and the OECD (2021), both of which emphasize that high-quality TVET requires teachers who possess not only occupational expertise but also sophisticated pedagogical competencies capable of supporting learner-centred and competency-based instruction.

Nevertheless, the findings also reveal an important tension. Although the curriculum appears comprehensive in its pedagogical orientation, the acquisition of pedagogical knowledge during teacher preparation does not necessarily guarantee its effective implementation in vocational classrooms. Participants acknowledged receiving substantial pedagogical training, yet evidence presented under subsequent objectives demonstrates persistent challenges in translating these competencies into routine instructional practice. This observation suggests that pedagogical preparedness should not be understood merely as curriculum exposure but as a dynamic process whose effectiveness depends on the interaction between teacher competence, institutional support and classroom realities. Consequently, while vocational teacher education provides an important foundation for pedagogical competence, its impact can only be fully understood by examining how such competencies are enacted within the everyday practice of vocational teaching.

B. Pedagogical Approaches Used in Developing Vocational Teachers' Competence

Beyond the pedagogical content offered during teacher education, the findings revealed that the effectiveness of vocational teacher preparation was largely attributed to the pedagogical approaches employed during training. Participants consistently indicated that vocational teacher education at the Morogoro Vocational Teachers Training College (MVTTC) deliberately adopts learner-centred approaches that provide teacher trainees with opportunities to experience, practice and reflect upon teaching before entering vocational training institutions. The dominant approaches identified included participatory learning, experiential learning, learning by doing, teaching practicum, demonstrations, project work, case studies, assignments, group discussions, study tours and field-based learning. These approaches were viewed as fundamental for developing pedagogical competence because they enabled teacher trainees to apply theoretical knowledge within authentic instructional contexts.

Vocational tutors explained that participatory approaches constitute the core philosophy underpinning pedagogical training. Rather than relying predominantly on lectures, teacher trainees are actively engaged in designing learning activities, preparing instructional materials, delivering lessons and reflecting on their teaching experiences. One tutor explained:

"Participatory techniques are mostly used and the trainees are sent for teaching practice in VTCs where they are supposed to prepare and deliver lessons for one month. Tutors are supposed to supervise them once during the classroom delivery. In case of occupational skills, for example electrical courses, we send teacher trainees to Kidatu Electrical Dam to enhance their occupational skills."

Another tutor similarly emphasized the diversity of pedagogical strategies employed during teacher preparation:

"A variety of teaching techniques are employed depending on the nature and objectives of the topic. We use demonstrations, assignments, projects, case studies, group discussions, field trips, teaching practice and study tours to enable teacher trainees to acquire pedagogical skills."

These findings demonstrate that vocational teacher education intentionally combines classroom-based pedagogical instruction with authentic professional practice. The incorporation of teaching practicum, industrial exposure and project-based activities suggests that pedagogical competence is conceptualized not as knowledge that can be transmitted through lectures alone, but as professional capability developed through repeated engagement with real teaching and workplace situations. In this regard, pedagogical preparation extends beyond cognitive understanding to include practical judgement, instructional decision-making and reflective practice, all of which are essential attributes of effective vocational teachers.

The findings further indicate that teaching practice occupies a pivotal position within vocational teacher preparation. Participants described the practicum as a bridge between pedagogical theory and classroom implementation, where teacher trainees are required to prepare lesson plans, organize instructional resources, facilitate learning activities and receive feedback from experienced tutors. Through supervised teaching practice, trainees develop confidence, classroom management skills and the ability to adapt instructional strategies to diverse learning needs. Consequently, teaching practice functions as a mechanism through which theoretical pedagogical knowledge is transformed into practical teaching competence.

From an analytical perspective, these findings reinforce the constructivist orientation of contemporary vocational teacher education. The emphasis on active participation, collaborative inquiry and experiential learning reflects the assumption that professional competence develops through engagement in authentic learning activities rather than passive reception of

information. This finding closely aligns with Kolb's (1984) Experiential Learning Theory, which posits that meaningful learning occurs through a continuous cycle of concrete experience, reflective observation, conceptual understanding and active experimentation. Likewise, the integration of teaching practicum and workplace exposure supports Lave and Wenger's (1991) Situated Learning Theory, which argues that professional competence develops through participation in authentic communities of practice. By placing teacher trainees within actual vocational institutions and industrial environments, the programme provides opportunities for legitimate participation in the professional practices they are expected to perform after graduation.

The findings also provide empirical support for Billett's (2011) Workplace Learning Theory, which contends that occupational competence emerges through engagement with authentic work activities rather than institutional instruction alone. The incorporation of industrial attachment, demonstrations, project work and supervised teaching practice enables prospective vocational teachers to integrate pedagogical knowledge with occupational realities, thereby narrowing the traditional divide between theory and practice. This integration is particularly important within competency-based vocational education, where teachers are expected to facilitate learners' acquisition of occupational competence through authentic and contextually relevant learning experiences.

Furthermore, the findings corroborate the vocational pedagogy framework advanced by Lucas et al. (2012, 2014), which advocates learning through demonstration, project work, problem-solving, collaboration and workplace engagement as defining characteristics of effective vocational pedagogy. Participants' descriptions of demonstrations, case studies, field visits and project-based learning illustrate that vocational teacher education in Tanzania largely reflects these internationally recognized pedagogical principles. The emphasis on learning by doing further resonates with contemporary TVET reforms promoted by UNESCO (2022) and the OECD (2021), both of which identify experiential and workplace-oriented learning as essential for preparing graduates capable of responding to rapidly changing labour markets.

Nevertheless, while the findings indicate that pedagogical preparation is founded upon sound learner-centred principles, they also reveal an important paradox. Although teacher trainees experience participatory and experiential pedagogies during pre-service training, evidence presented under the subsequent objectives demonstrates that many practicing vocational teachers experience difficulties sustaining these approaches after deployment to Vocational Training Centres. This suggests that the challenge facing vocational education in Tanzania may not lie primarily in the design of teacher education programmes but rather in the institutional and contextual conditions that influence the implementation of pedagogical competence in everyday classroom practice. Consequently, the effectiveness of vocational teacher preparation should be understood not solely in terms of the

quality of pre-service training but also in relation to the environments within which teachers subsequently work.

C. Vocational Teachers' Preparation of Pedagogical Tools for Effective Teaching and Learning

The second objective sought to investigate how vocational teachers prepare pedagogical tools before delivering instruction in Vocational Training Centres (VTCs). Documentary review of teachers' instructional documents—including schemes of training, lesson plans and lesson notes—revealed considerable variation in the extent and quality of pedagogical planning among participants. Although the majority of vocational teachers demonstrated an adequate understanding of the importance of pedagogical planning, this knowledge was not consistently translated into professional practice. The findings therefore reveal a noticeable discrepancy between teachers' pedagogical preparedness acquired during pre-service education and their actual preparation of instructional tools in the workplace.

Analysis of documentary evidence showed that only a small proportion of teachers consistently prepared complete pedagogical planning documents before instruction. Approximately one-quarter of the participants had prepared current schemes of training and lesson plans for the academic year under review, while a considerable proportion either relied on outdated documents or had not prepared these planning tools at all. Several teachers presented schemes of training developed several years earlier, arguing that revision was unnecessary because the curriculum had remained unchanged. Others admitted that they had prepared only lesson notes without corresponding schemes of training or lesson plans. Although lesson notes were available for all participants, they varied considerably in format and organization, reflecting the absence of a standardized institutional approach to lesson preparation.

One vocational teacher explained:

"I do not have the current scheme of training and lesson plan. I only have one for the academic year 2021, but I did not prepare any for the 2022 academic year. Lesson notes are the only tool I have prepared."

Another participant justified continued reliance on an earlier planning document by stating:

"It is true that the scheme of training submitted was prepared in 2018. The scheme is still useful because the curriculum has not changed, so I find no reason to prepare another."

These responses demonstrate that while teachers recognize the pedagogical value of planning, some perceive pedagogical tools primarily as administrative documents rather than dynamic instructional resources that should be continuously revised to reflect learners' needs, contextual changes and evolving teaching strategies. Such perceptions appear to

reduce the frequency with which pedagogical tools are updated and systematically used during instruction.

Further documentary analysis revealed inconsistencies in the formulation of learning objectives and the sequencing of teacher and learner activities. Only a minority of the reviewed lesson plans articulated learning objectives that were specific, measurable and clearly aligned with instructional activities. In several cases, learning objectives lacked behavioral outcomes, while corresponding learning activities failed to demonstrate a logical progression from teacher facilitation to learner engagement. These inconsistencies suggest weaknesses in translating curriculum intentions into coherent instructional designs despite teachers having received formal pedagogical preparation.

From an analytical perspective, these findings suggest that pedagogical preparedness should not be evaluated solely by the completion of pre-service teacher education but also by teachers' capacity to sustain professional planning practices throughout their careers. Effective vocational pedagogy begins long before classroom instruction; it is rooted in deliberate instructional planning that aligns curriculum objectives, teaching strategies, learning activities and assessment procedures. Consequently, inadequate preparation of schemes of training and lesson plans has implications extending beyond administrative compliance, affecting instructional coherence, classroom organization and the achievement of competency-based learning outcomes.

The findings further indicate that lesson planning serves several interconnected pedagogical functions. Teachers who consistently prepared pedagogical tools described them as providing a structured roadmap for classroom instruction, facilitating time management, clarifying learning objectives and enabling systematic progression of learning activities. One participant observed:

"Lesson plans enable me to manage the class because they give me a picture of how the lesson will flow—from introduction to conclusion. They also help me to remember the important concepts, learning objectives and time allocation."

This observation reinforces the argument that pedagogical planning is not merely procedural but constitutes an essential component of instructional quality. Similar observations have been reported by Stevens and Deschepper (2018) and Misko et al. (2021), who argue that carefully prepared lesson plans enhance instructional organization, improve time management and increase the likelihood that intended learning outcomes will be achieved. Likewise, Lucas et al. (2012) maintain that effective vocational teaching requires explicit planning of occupational learning experiences capable of connecting theoretical understanding with practical application. The present findings therefore corroborate contemporary scholarship emphasizing that pedagogical tools function as instructional frameworks through which competency-based learning is systematically organized and implemented.

However, the findings simultaneously reveal a critical contradiction. Although vocational teachers received comprehensive pedagogical training during pre-service education and demonstrated awareness of the importance of pedagogical planning, this knowledge was not consistently reflected in their professional practice. This discrepancy suggests that pedagogical preparedness is influenced not only by teachers' knowledge and skills but also by contextual conditions affecting their capacity to implement professional standards. Consequently, understanding vocational teachers' preparation of pedagogical tools requires examination of the broader institutional and organizational factors that shape pedagogical practice, an issue explored in the following section.

V. CONCLUSION AND RECOMMENDATIONS

A. Conclusion

This study set out to examine vocational teachers' pedagogical preparedness for the teaching and learning process in Vocational Training Centres in Tanzania. The findings demonstrate that pedagogical preparedness is neither a static attribute acquired through pre-service teacher education nor merely a function of individual teacher competence. Rather, it is a dynamic and context-dependent process that is continuously shaped by the interaction between professional knowledge, instructional practice and institutional conditions.

The study established that vocational teacher education in Tanzania provides a sound pedagogical foundation by equipping prospective teachers with knowledge of instructional planning, learner-centred teaching, classroom management and competency-based assessment. The pedagogical approaches employed during teacher preparation further reflect contemporary principles of vocational education by emphasizing experiential learning, workplace exposure and reflective practice. These findings suggest that the philosophical orientation of vocational teacher education is largely consistent with international expectations for preparing competent vocational educators.

However, the study also reveals that the transition from pedagogical preparation to classroom practice is neither automatic nor seamless. While teachers generally possess the foundational pedagogical competencies expected of vocational educators, the enactment of these competencies within vocational training institutions is influenced by institutional realities that extend beyond the individual teacher. Consequently, pedagogical preparedness should be understood not simply as what teachers know, but as their sustained capacity to translate professional knowledge into effective instructional practice under diverse organizational conditions.

The study therefore advances the understanding that effective vocational pedagogy emerges through the convergence of three mutually reinforcing dimensions: robust pedagogical preparation, continuous professional learning and supportive institutional environments. Weakness in any one of these

dimensions diminishes the effectiveness of the others, thereby limiting the quality of teaching and learning within vocational education. Improving vocational pedagogy, therefore, requires moving beyond interventions that focus exclusively on teacher competence towards integrated strategies that simultaneously strengthen institutional capacity, professional development and pedagogical practice.

Overall, this study contributes to the growing body of knowledge on vocational teacher education by demonstrating that improving the quality of vocational education depends not only on preparing competent teachers but also on creating educational environments that enable pedagogical competence to be continuously exercised, refined and sustained. In doing so, the study provides an empirical basis for strengthening vocational teacher education and institutional support systems as complementary pillars for improving the quality, relevance and effectiveness of vocational education in Tanzania.

B. Recommendations

The findings of this study suggest that strengthening vocational pedagogy requires a systemic rather than fragmented approach to teacher development. Pedagogical preparedness should therefore be supported through continuous professional learning that integrates mentoring, reflective practice, industry engagement and collaborative knowledge sharing. Such an approach would enable vocational teachers to continually adapt their instructional practices to the evolving demands of competency-based education and the changing world of work.

Equally important is the need to bridge the gap between pedagogical preparation and classroom practice. This calls for closer integration between teacher education institutions, vocational training centres and industry to ensure that pedagogical knowledge is continuously reinforced through authentic teaching experiences, workplace exposure and sustained institutional support. Strengthening this linkage would enhance the relevance of vocational teacher education while improving the practical application of pedagogical competencies.

Finally, improving the quality of vocational education requires creating institutional environments that enable teachers to implement effective pedagogy. Investments in instructional resources, workshop facilities, digital technologies, supportive leadership and manageable teaching conditions should complement teacher preparation, as pedagogical competence can only be fully realized within enabling educational contexts. Future research should extend this work by examining how institutional conditions, professional development and pedagogical practice interact to influence learner outcomes, thereby generating evidence capable of informing sustainable improvements in Technical and Vocational Education and Training in Tanzania.

VI. ETHICAL CONSIDERATIONS

Ethical principles were strictly observed throughout the study by obtaining institutional approval and informed consent,

ensuring voluntary participation, protecting participants' anonymity and confidentiality, securely managing data, and adhering to the principles of respect for persons, beneficence, non-maleficence, and justice in accordance with internationally accepted research ethics (Creswell & Poth, 2018; Bell et al., 2022).

VII. CONFLICT OF INTEREST

The authors declare that there are no financial, professional, or personal conflicts of interest that could have influenced the design, conduct, analysis, or reporting of this study

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