EFFECTIVE STRATEGIES FOR ENHANCING TVET EDUCATORS' PEDAGOGICAL EXCELLENCE

Theme: Innovative Open Education: Fostering Resilient Societies for Sustainable Economic Development
Sub-Theme: Changing mindsets for inclusive open education
Institution: Kenya School of TVET
Author: Ms. Nancy Oloo
Email: *lavyke@kstvet.ac.ke*

ABSTRACT

Pedagogical excellence refers to the highest standards of teaching and educational practices that foster student learning and development. Innovative approaches to pedagogical excellence are crucial for adapting education to the changing needs of students and the demands of the 21st century. Traditional models of instruction may not suffice for today's dynamic vocational training environments, where digital literacy and technological integration play an increasingly significant role (Hattie, 2009; Chan & Kiviniemi, 2018). This paper aims to identify strategies and innovative methods that will empower educators to enhance their teaching skills and deliver superior instruction to their students. The study seeks to explore a variety of strategies and creative methods, including those that focus on instructional design, classroom management, and student engagement, among others. Some of the innovative methods include E-tivities, Storyboarding, Mentorship, Peer-to-Peer coaching, and Reflective practice. This study aims to examine effective classroom management practices and creative techniques that can help educators adapt their teaching methods to accommodate diverse learning styles, as well as the impact of technology and digital tools on the effectiveness of pedagogy. The research design is exploratory, and both qualitative and quantitative data were collected through questionnaires. The data was collected using the Kobo Toolbox, analysed, and presented in pie charts, graphs, and tables. The study found that the level of engagement and confidence of the trainers in using the digital tools is still low, however, challenges that hinder trainers were also noted. There is still a need to enhance pedagogical skills using innovative approaches and classroom management practices. Hence, this study recommends continuous professional development, lifelong learning, and micro-credentials.

INTRODUCTION

Technical and Vocational Education and Training (TVET) plays a crucial role in equipping learners with skills that are directly relevant to the workforce. Educators at the core of this system must therefore uphold high standards of pedagogical excellence to ensure that training is effective and pertinent. Innovative approaches to pedagogical excellence are essential for adapting education to the evolving needs of students and the demands of the 21st century. Education 5.0 involves leveraging new technologies to deliver more personalized teaching, prioritizing students' social and emotional development, and implementing solutions that enhance community life. According to Zhou et al. (2023), an ecological approach to TVET teacher professional development emphasizes that sustainable improvements in teaching competencies depend on coordinated efforts at the national, institutional, and individual levels. In this perspective, strategies such as tailored training workshops, mentoring programs, and on-the-job coaching are essential to help educators stay updated with both pedagogical advancements and evolving industry demands. Babita Rani (2022) researched effective teaching in broader educational contexts, underscoring that continuous professional learning and structured growth opportunities can lead to significant improvements in academic outcomes. When applied to TVET, these strategies not only enhance personal teaching skills but also foster a culture of lifelong learning, which is critical for adapting to fast-changing vocational landscapes. Bound et al.'s (2025) literature on future-oriented pedagogies offers insightful directions for transforming traditional teaching models. Bound et al. advocates for shifting away from strictly transmissive methods toward teaching approaches that encourage dynamic, collaborative inquiry what they conceptualize as Dynamic Generative Knowing (DGK). For TVET educators, adopting such reflective practices can mean integrating regular peer reviews, collaborative lesson planning, and structured reflective dialogues into their routine practice. These strategies not only promote self-assessment and continuous improvement but also empower educators to innovate and critically adapt their approaches depending on classroom dynamics and emerging industry needs. Collaborative learning and mentorship, in particular, are cited as effective means of elevating pedagogical practices. Peer-to-peer coaching sessions and professional learning communities create spaces for educators to share experiences and collectively troubleshoot common challenges. This shared responsibility for growth ultimately supports a sustained improvement in teaching quality across TVET institutions. Other studies suggest that traditional, didactic teaching methods may not suffice in the context of modern vocational training. Instead, effective strategies emphasize the adoption of innovative instructional approaches that actively engage learners. For example, project-based learning has been shown to stimulate critical thinking and practical problem solving (Thomas, 2000), while the flipped classroom model repositions students as active participants in their learning process (Bishop & Verleger, 2013). In addition, differentiated instruction, which tailors teaching to meet diverse learner needs, has also demonstrated promise in enhancing creativity and learner engagement (Tomlinson, 2014). The current era of rapid digital transformation necessitates that TVET educators are not only subject experts but also proficient in leveraging digital tools to enhance learning. Technological integration has emerged as a key strategy for delivering interactive and blended learning experiences. Research from the TVET context highlights that methods such as the use of e-learning platforms, simulation software, and digital assessment tools can make training sessions more responsive and tailored to individual learning paces (Chan & Kiviniemi, 2018; Zhang, Huang, & Zeng, 2019). Researchers such as Emmer and Stough (2001) and Sugai and Horner (2002) emphasize that proactive (preventative) strategies—including explicitly teaching rules, establishing structured routines, and creating a positive classroom climate—are essential for reducing behavioral problems and maximizing instructional time. The current conditions for conducting training significantly reduce the quality of the educational process. And even those teachers who have worked out practical methods of high-quality teaching and interaction between students for years give up when it comes to ensuring a high-quality educational process in the context of complete digitalization. Nowadays, it can be stated that pedagogical skills require fundamentally new approaches to learning, turning all the weaknesses and shortcomings of distance education into its advantages (Zubakin & Polianina, 2019)

OBJECTIVES

1. Identified effective classroom management strategies that could help create a positive and productive learning environment.
2. Explored innovative approaches that could be effective for educators in adapting teaching methods that include diverse learning styles.
3. Established the impact of technology and digital tools on the efficacy of pedagogy.

STATEMENT OF THE PROBLEM

Traditional models of instruction may not suffice for today's dynamic vocational training environments, where digital literacy and technological integration play an increasingly significant role (Hattie, 2009; Chan & Kiviniemi, 2018). TVET educators often face challenges related to limited access to modern digital tools, insufficient training in innovative pedagogical methods, and systemic constraints such as inadequate professional development programs. These challenges hinder the ability of educators to integrate digital technologies, such as e-learning platforms, simulation software, and digital assessment tools, into their teaching practices in a manner that is both engaging and responsive to individual learner needs (Sugai & Horner, 2002; Zhang, Huang, & Zeng, 2019). Despite the crucial role educators play in shaping students' futures, many educational institutions struggle to ensure consistent pedagogical excellence among their teaching staff. Traditional teaching methods are employed, and lack student engagement and collaboration. Professional development programs often fall short in addressing the diverse needs of educators, leading to varying levels of teaching effectiveness. Hence, there is a need to investigate and identify effective strategies that can enhance the pedagogical excellence of TVET educators.

METHODOLOGY

The study focused on investigating the effective strategies for TVET educators' pedagogical excellence. The study explored the classroom management practices, innovative instructional approaches, and the impact of technology and digital platforms on achieving pedagogical excellence. The study employed an empirical research design using random sampling across the region. To validate and ensure the reliability of the research instruments, a pilot study was conducted with a small group of TVET trainers. Snowballing was used to identify the TVET trainers during the pilot. Self-administered questionnaires were used to collect data. A desktop review of previous research was done. The study used a multi-case study to explore training processes. Both primary and secondary sources of information are applied in data triangulation. The secondary sources used were documentation, annual reports, website reports, publications, and other similar sources. The data were correlated using tables and pie charts. The study analysed the competencies of TVET trainers based on the classroom management practices, innovative instructional approaches, and digital integration into their teaching and learning activities.

FINDINGS

The online self-administered questionnaire was shared with various TVET institutions. The questionnaire had 6 sections, which included the respondent's demographic information, general perception of pedagogical excellence by TVET trainers, Classroom Management Practices, Innovative Instructional Strategies, and the Impact of technology and digital tools on pedagogical practices

A. Demographic Information

The respondents cut across 28 Institutions in the country, in their different capacities. 39 out of the 57 respondents (68.42%) were trainers, 10 (17.54%) administrators, heads of sections and departments at 4 (7.02%). This was a good representation of the different levels of TVET trainers. The study went further to identify the academic departments of the TVET trainers involved. The study assumed that different departments would consider different strategies for pedagogical excellence. 14 respondents out of the 57 didn't pick their departments. Agriculture had the highest number of respondents at 12 (21.05%), 11 (19.3%) from the building and civil engineering department, 8 (14.04%) from electrical engineering department, 4 (7.02%) from the business department, information communication technology and hospitality department both had 3(5.26%) and 2(3.51%) from the liberal department. 28 respondents (49.12%) are the majority, having served between 0 to 5 years, followed by those of 20 years and above (14.04%). From the study, the difference in years of experience is assumed to be linked to the age of the trainers as well, which could also be linked to creativity, innovation, and technology integration other than the traditional methods of teaching. The trainers are varied in their levels of education. 16 (28.07%) respondents have a Bachelor's degree, followed by the Diploma (21.05%), Higher Diploma, and Master's degrees respectively (14.04%), and 1.75% at the Doctorate level.

B. General perception to pedagogical excellence

Table 1: Commitment to excellence

Level of commitment	Frequency	Percentage
5	34	**59.65**
1	5	**8.77**
4	4	**7.02**
2	1	**1.75**
3	**1**	**1.75**

The level of commitment using the scale provided:

1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree

Table 1 above, explains further, whether enhancing pedagogical skills continuously is essential for effective teaching, and its clear that 34 (59.95%) of respondents Strongly Agree, 5 (8.77%) Strongly Disagree, 4 (7.02%) Agree, 1 (1.75%) Disagree, and 1 (1.75%) were Neutral. This explains that the majority of the respondents are committed to excellence by enhancing their pedagogical skills.

The study went further to explore whether regular professional development and training sessions have a positive impact on my teaching practices. From the findings, 64% of the respondents strongly agreed, 20% Agreed, 1.75% Strongly Disagreed, and 7.02% Disagreed.

C. Effectiveness of Classroom Management practices

As depicted figure 1 below, 28 of the respondents strongly agreed, 13 respondents agreed, 3 respondents were neutral, and 1 strongly disagreed. This shows that the majority of the respondents are in agreement that effective classroom management practices contribute significantly to creating a positive and productive learning environment.

Fig 1: Effectiveness of classroom management practices

The study went further to identify some of the classroom management practices actively used by TVET trainers.

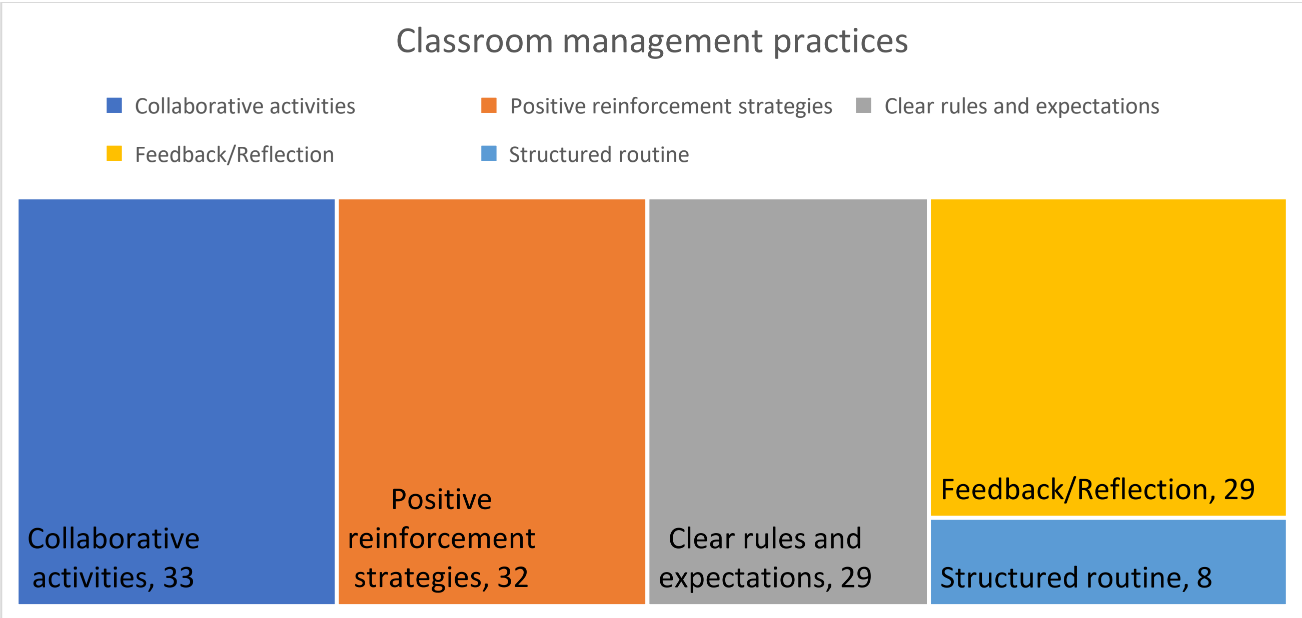


Fig 2: Examples of classroom management practices

In Figure 2 above, the respondents were selecting all the classroom management practices that they actively use in their teaching or training. Collaborative activities are the most preferred by 33 respondents, Positive reinforcement by 32 respondents, Clear rules and expectations by 29 respondents, and Feedback and reflection, also by 29 respondents. Structured routine was not preferred by the trainers. Two other options were not selected, since they are not actively used by the respondents. These are training methods and the positive relationships.

Table 2: Suggested classroom management practices

Apart from the practices selected above, the respondents also had their suggestions as indicated in Table 2 below. From the table, the study depicts the use of active learning strategies, peer-to-peer learning, among others. 35% of the respondents didn't have any practice in mind to suggest.

Suggested classroom management practices	Frequency	Percentage
N/A	7	**35**
Question and answer	2	**10**
Peer-to-peer engagement	3	**15**
Inclusive strategies	1	**5**
Jigsaw method	1	**5**
Creating a comfortable and organized Physical space: A well-organized classroom minimizes distractions and allows students to move around easily.	2	**10**
Active/learner participative learning strategies	2	**10**
Case Study	1	**5**
Use of digital classroom tools to monitor participation and provide instant feedback (e.g., Google Classroom, Quizizz).	**1**	**5**

Table 3: Use of the suggested effective classroom management practices (Respondents' opinions)

Table 3 explains further on the effective classroom management practices, whether the trainers have used some or all of the classroom management practices listed.

Effective classroom management practices	Frequency
Discussion	5
Collaborative activities	10
Create engaging lessons	1
Time management	1
Feedback and reflection	6
Peer-to-peer learning helps the trainees who have industry/girls experience to be resourceful and assist their colleagues	3
Actively engaging learners through random questions that they respond to, they also raise questions and concerns when needed. Plus, active group discussions	2
Positive reinforcement/Motivation	4
Learner-centred approach	1
Creating a positive classroom climate: Building strong relationships with students, showing empathy, and fostering a sense of belonging can create a more supportive and productive learning environment.	1
Use of role plays keeps learners alert and anticipating for more learning	1

From the responses, collaborative activities, group discussions, and peer-to-peer teaching and learning are highly recommended. However, other practices such as role-plays, feedback, and reflection have also been suggested.

D. Innovative Instructional Strategies

The study further investigated on the effectiveness of the innovative approaches in enhancing pedagogical practices:

Table 4: Effective Innovative Approaches

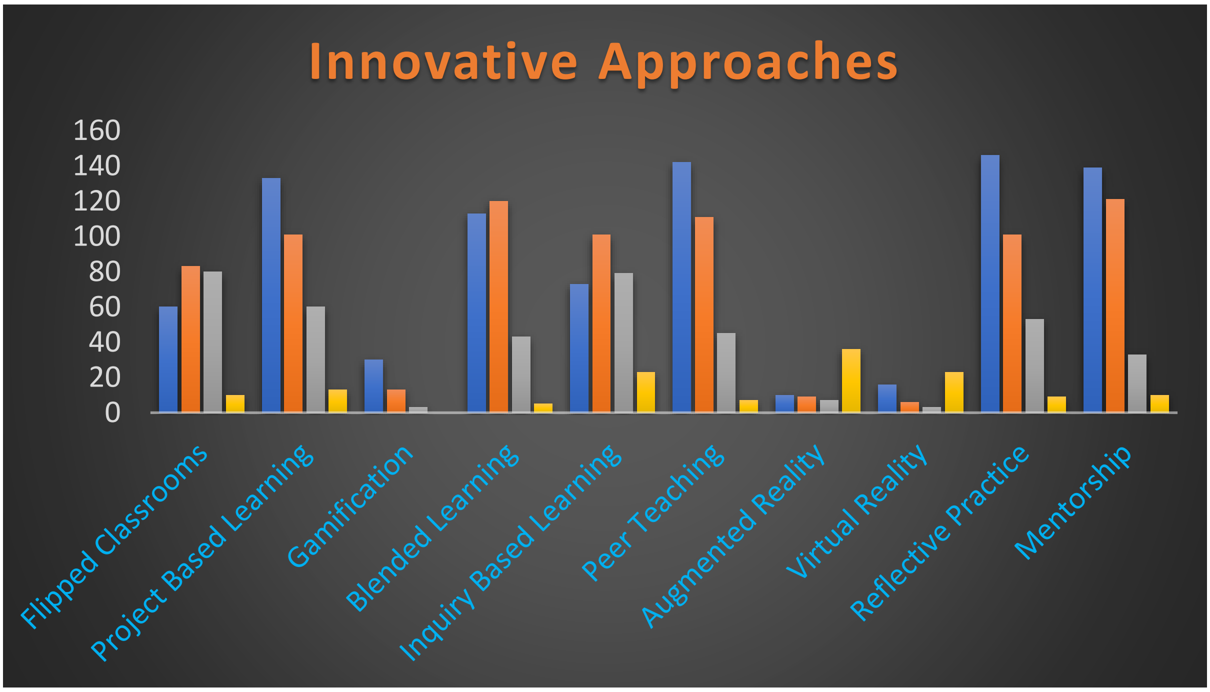
To measure the level of effectiveness the study used the scale below:

Not Effective (1) | Slightly Effective (2) | Moderately Effective (3) | Very Effective (4) | Extremely Effective (5).

Innovative Approach	5	4	3	2	1
Storyboarding for Lesson Planning					
Gamification					
Blended Learning					
Project-Based Learning					
Mentorship					
Peer-to-Peer Coaching					
Collaborative Learning					
E-tivities/Online Activities					
Virtual Reality					
Reflective Practice					
Augmented Reality					
Flipped Classrooms					

From the tables, the study further depicts that several innovative approaches are used by the trainers. The mean of the respondents' frequency was used to mark out the table. The majority of the respondents rated blended learning, Mentorship, peer-to-peer coaching, reflective practice, and collaborative learning as very effective approaches. Storyboarding, Gamification, and flipped classrooms are rated as moderately effective. E-tivities, virtual reality, and augmented reality are rated as slightly effective.

This is also shown in the graph below.



D. Impact of technology and digital tools on pedagogical practice

The study also investigated the use of technology and digital tools (e.g., e-learning platforms, interactive whiteboards, Learning Management System, Artificial Intelligence) to enhance teaching effectiveness

Indicating the level of agreement with the following statements using the scale provided:

1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree

Table 5: Use and effectiveness of technology and digital tools

Level of agreement	Frequency	Percentage
5	28	49.12
4	14	24.56
1	2	3.51
3	1	1.75

In Table 5 above, respondents agree with the technology statement, depicting that technology has made teaching more effective. 28 (49.12%) respondents strongly agree, 14 (24.56%) agree, 2 (3.51%) strongly disagree, and 1 (1.75%) is neutral. Despite having the majority of the respondents strongly agreeing, there is a gap in technology integration since not even 50% of the respondents have strongly agreed.

Digital tools have significantly increased student engagement and participation in my classes as shown in Figure 3 below.

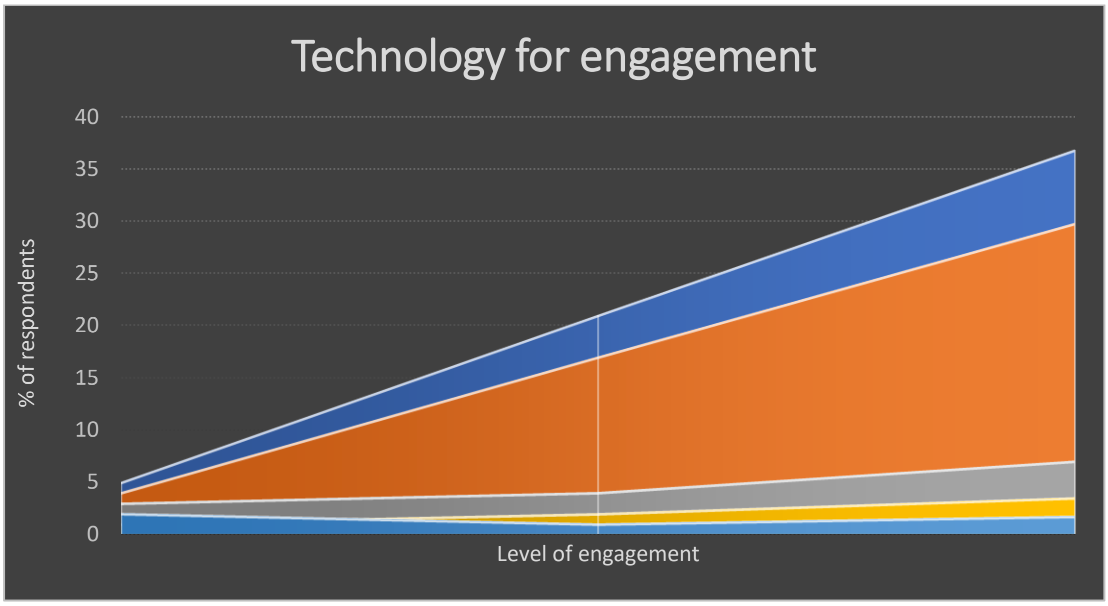


Figure 3: Technology for engagement

Apart from the level of technology engagement, the study went deeper to investigate on the level of confidence of the trainers in integrating technology in their teaching and learning activities.

Table 6: Level of confidence in technology

Level of confidence	Frequency	Percentage
4	20	**35.09**
5	18	**31.58**
3	6	**10.53**
1	**1**	**1.75**

Respondents were expected to measure their level of confidence in integrating technology, and Table 6 shows the findings as tabulated. 20 (35.09%) respondents feel confident by agreeing to the statement above, yet another 18 (31.58%) feel very confident and strongly agree. 3 respondents (10.53%) are not sure, so neutral, and 1 respondent (1.75%) strongly disagrees. Continuous training, mentoring, and coaching TVET trainers to build confidence could easily fill these gaps.

Table 7: Challenges in technology integration

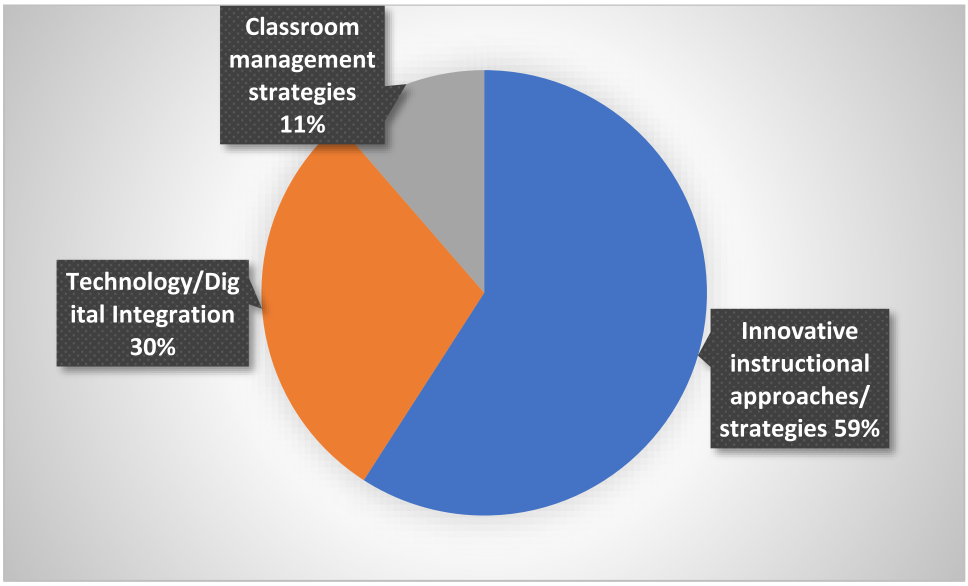
Type of challenge	Frequency	Percentage
Limited access to equipment	28	**49.12**
Limited access to the internet	28	**49.12**
Budget Constraints	26	**45.61**
Insufficient training in new technologies	20	**35.09**
Resistance to change by trainees and colleagues	**13**	**22.81**

Table 7 above, identifies with some of the challenges trainers face when integrating technology.

Other challenges noted from Respondents	*Frequency*
None	*4*
Power blackout	*5*
Limited time to learn some assistive technology for instructional pedagogy	*1*
Special trainees-Blind and Deaf can't effectively benefit from digital tools	*1*

Inadequate digital skills	*1*
Less time allocation	*5*
Low level of technology use by learners	*1*
Lack of goodwill from the administration	*1*
Workload	*1*
Transition pressure	*1*
Integrating and validating scores from e- activities	*1*
Dependency on assistance from others	*1*

Fig 4: The proposed area of focus to enhance pedagogical excellence in TVET



From figure 4, 59% of the respondents feel that innovative instructional approaches should be the main area of focus to TVET trainers in enhancing their pedagogical skills and excellence, 30% feel that integrating technology and use of digital tools should be the main area of focus, while, 11% feel more focus should be put on the classroom management practices.

DISCUSSION

The study reveals a significant correlation between effective teaching strategies and pedagogical excellence among TVET educators. The study supports Zhou et al. (2023), who emphasize that continuous professional development on effective training strategies is critical to TVET educators at national, regional, and individual levels. According to the study, the majority of trainers/educators preferred to undertake professional development to enhance their pedagogical skills. Technology integration is not popular with the trainers, and from the study, most respondents didn't respond to the technology-related innovative approaches and have prioritized innovative instructional approaches as a key area of focus when enhancing pedagogical skills. The trainer's level of engagement and confidence in integrating technology is wanting, and this may require more practice to build confidence**.** According to (Hattie, 2009; Chan & Kiviniemi, 2018), Traditional models of instruction may not suffice for today's dynamic vocational training environments, where digital literacy and technological integration play an increasingly significant role which is also evident in this study. Classroom management practices are linked to the achievement of trainee learning outcomes, though a percentage of trainers are still attached to the traditional methods.

RECCOMMENDATIONS

The study therefore recommends that the TVET educators/trainers should to engage in professional development opportunities, such as workshops, conferences, and online courses, to stay updated with the latest teaching strategies. The TVET educators should **r**egularly reflect on teaching practices, seek feedback from peers and students, and make necessary adjustments to improve the effectiveness of the teaching and learning. This may include reflective practice, mentorship, and peer-to-peer coaching. One of the critical aspects of pedagogical excellence should be to create a supportive, respectful classroom atmosphere that fosters student engagement and motivation. Utilizing digital tools and platforms (e.g., learning management systems, interactive whiteboards, educational apps) is one of the strategies that would enhance learning experiences. TVET educators to develop an understanding of students' cultural contexts and use this knowledge to inform teaching practices and hence adopt teaching methods and resources to accommodate students' diverse learning needs, styles, and paces.

In conclusion, this study recommends further research and a comprehensive review of the various classroom management strategies, innovative instructional approaches, and their effectiveness based on the gathered research. Explore further on perception, knowledge, and the use of technology in teaching and learning activities

REFERENCES

Bishop, J. L., & Verleger, M. A. (2013). The flipped classroom: A survey of the research. In ASEE National Conference Proceedings, Atlanta, GA

Bound, H., Murphy, I., Chan, S., Choy, M., & Mohamed, F. (2024). Developing Future-oriented Pedagogical Practices*. Institute for Adult Learning.

Chan, K. C., & Kiviniemi, M. (2018). Digital transformation in vocational education: The impact of e-learning tools on teaching effectiveness. Journal of Vocational Education Research, 12 (2), 45–62

Rani, B. (2022). Importance and Strategies of Effective Teaching. JETIR.

Training Methodology in TVET and Innovative TVET Teaching Methods. (2024). CPSC Tech.

Thomas, J. W. (2000). A review of research on project-based learning. The Autodesk Foundation.

Tomlinson, C. A. (2014). The differentiated classroom: Responding to the needs of all learners (2nd ed.). ASCD.

Zhang, L., Huang, J., & Zeng, F. (2019). Simulation-based learning in technical training: Enhancing responsiveness through digital assessment. International Journal of Educational Technology, 22 (4), 350–368.

Zhou, Q., Diao, J., Wang, Y., Chen, M., Yang, C., Li, M., Wang, J., Yi, K., Han, X., Cui, G., & Zhang, T. (2023). Strategies for Developing TVET Teachers' Professional Competencies. Handbook of Technical and Vocational Teacher Professional Development in the Digital Age. Springer.