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EFFECTIVE INTEGRATION OF ELEARNING PLATFORMS IN TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING (TVET) IN NAMIBIA

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ABSTRACT

The increasing prevalence of educational technology and eLearning platforms have gained attention to enhance the TVET teaching and learning process. This paper explores the effectiveness of eLearning platforms in Technical and Vocational Education and Training (TVET) within the context of Namibia. A mixed-methods approach was employed, to generate data through a questionnaire from 89 TVET trainees and 6 trainers. The study presents a case study of the Blended Distance Learning programme implemented at Nakayale Vocational Training Center. The findings shed light on the characteristics of the eLearning process such as having user-friendly interface and easy navigation features, relevant infrastructure, student support system and capacity building arrangements. This study underscores the suitability of eLearning platforms, and the potential benefits of integrating eLearning into TVET programmes while identifying areas for improvement. Through understanding the perceptions, benefits, challenges, and strategies for improvement, this paper proposes the effective integration of eLearning in TVET.

Keywords: Blended learning, technology education, E-learning, E-Learning platform, online education

INTRODUCTION

The need for innovative educational approaches has become increasingly apparent as a means to address the challenges posed by the changes in education situation (Lagat, 2020; Pallado, Navarra & Tenedero, 2022). Consequently, there has been a notable rise in the integration of technology and eLearning platforms within the educational framework, with a specific emphasis on their implementation in the TVET sector (Goosen, 2023). However, the transition to online education has not been without its difficulties for TVET institutions, as the practical nature of many TVET programs traditionally requires a considerable physical presence (Isac & Peixoto, 2021; Joshi et al., 2020; Kashyap, et al., 2021; Lagat, 2020). Despite this challenge, many institutions

worldwide have embraced a blended learning model, combining virtual and physical teaching methods to sustain learning (Goosen, 2023). Besides, it's important to note that the concept of blended distance learning has historical roots dating back over two centuries, while distance TVET programs were first pioneered in response to a typhoid epidemic in Australia a century ago (Neal, 2020).

The use of Moodle as an eLearning platforms has been identified as a potential solution to the challenges facing TVET institutions (Goosen, 2023; Pallado, Navarra & Tenedero, 2022). Moodle is an open-source learning management system that allows trainers to create and manage online courses. ELearning platforms, on the other hand, provide trainees with access to learning materials and resources online (Goosen, 2023). The use of these platforms has been found to enhance the teaching and learning process by providing trainees with flexibility, access to a wide range of resources, and personalized learning experiences (Kashyap et al., 2021; Lagat, 2020).

The emergence of new knowledge in education has led to significant changes in learning approaches worldwide. However, considerable literature has traditionally focused on physical technology, specifically tools for delivering educational content (Educause, 2010). Nonetheless, it is widely acknowledged that specialized delivery technologies like eLearning are primarily efficient in saving time for training, but they do not necessarily improve learner achievement (Anderson, 2011).

Furthermore, incorporating audio-visual and computer media into the teaching and learning, as opposed to traditional text and diagrams, has been shown to offer considerable learning benefits (Obi, Eze, & Ogochukwu, 2020). However, these advantages are not solely dependent on the medium used but rather on the instructional strategies employed during material design (Clark, 2001). This realization has led to the understanding that for eLearning to be truly effective, it must not only provide learners with time-saving and flexible access but also adhere to sound instructional design principles (Cole, 2000).

Therefore, implementing eLearning requires significant commitment and resources to ensure success. Rossett (2002), pointed that while eLearning holds promises, it must be executed correctly by designing the teaching and learning materials with a learner-centric approach and offering adequate support. Besides, Educause (2010) emphasizes the importance of considering human learning behaviour and psychology in eLearning to create an experience that goes beyond just the electronic aspect. The goal is to make eLearning exciting, energetic, engaging, and extended, thus enhancing the overall learning experience.

Despite the increased popularity of eLearning platforms in the TVET sector; it appears

that in Namibia, the adoption was significantly prompted by the ramification of COVID-19 pandemic. Subsequently, TVET institutions began incorporating eLearning platforms; however, both trainers and trainees still struggle in adapting to this new approach due to lack of preparedness and persistent belief that eLearning is unbecoming for technical courses due to the practical and applied nature (Goosen, 2023; Neal, 2020; Pallado, Navarra & Tenedero, 2022). Therefore, despite efforts to ensure institutional readiness for eLearning, resistance to change continues to persist, largely due to the perception that eLearning is exclusively suited for academic learning.

Based on this understanding, this study aims at exploring the effective integration eLearning platform in the Technical and Vocational Education and Training (TVET) sector in Namibia.

LITERATURE REVIEW

According to Goosen (2022), eLearning is described as a method for acquiring knowledge and expertise using digital means, such as the internet and various electronic platforms (p. 4). In its modern form, eLearning facilitates the dissemination of a wide range of educational content, skills, and competencies through digital technology (Ibid). These digital systems have the capability to oversee both formal and informal learning, as well as the continuous improvement of skills through concise courses, video lectures, animations, presentations, and brief educational sessions (Uunona & Goosen, 2023). However, the field of eLearning is in a constant state of evolution and expansion (Goosen, 2023).

The utilisation of eLearning platforms in TVET has revealed that trainees engaging with these platforms exhibited enhanced performance and a deeper understanding of the subject matter (Lai & Bower's 2019). These outcomes were attributed to the interactive features and multimedia resources available on the platforms, which facilitated experiential learning and increased student engagement. Furthermore, personalized learning features within eLearning platforms have proven beneficial for TVET Trainees. Yang et al., (2020) study on the impact of personalized eLearning in vocational education, found that Trainees who received personalized feedback and adaptive learning paths through the platform displayed higher motivation, engagement, and achievement compared to those in traditional classroom settings. Collaborative learning opportunities provided by eLearning platforms have also been emphasized in various studies. Al-Samarraie (2017) investigated the influence of eLearning platforms on collaboration among TVET Trainees, demonstrating that Trainees participating in online discussions and collaborative activities through the platform exhibited improved teamwork skills and a deeper grasp of the subject

matter. However, the systematic literature review (Chinengundu, 2021) revealed that blended learning has to be embraced as the new normal mode of teaching post-pandemic. It was established that for a smooth transition from face-to-face to online learning careful planning, preparation, adaptation, and an appropriate learning space are required. Specific interventions to integrate blended learning principles in programme design and to orient TVET lecturers and students.

Blended Learning

Blended learning, a term that lacks a universally agreed-upon definition, has been a subject of extensive study. Scholars such as (Delialioğlu & Yildirim, 2007; Gülbahar & Madran, 2009) propose that blended learning is essentially synonymous with hybrid instruction, combining the benefits of web-based training and traditional classroom techniques. A more conservative perspective, as suggested by Bonk (2004), highlights three common definitions of blended learning; combination of instructional modalities (or delivery media), combination of instructional methods or combination of online and face-to-face instruction. However, the third definition, which emphasises a blend of online and face-to-face instruction, is widely accepted by scholars. Picciano (2006) emphasizes that two core elements define blended learning: online and face-to-face instruction. Additionally, Rovai & Jordan (2004) argue that blended learning represents a fusion of online learning and traditional classroom settings, incorporating certain online course features while preserving in-person interaction.

The term eLearning has emerged because of the integration of ICT in the education fields (Tayebinik & Puteh, 2013). These authors further reported that following the application of this technology into teaching, some pitfalls have been identified and this have led to the blended learning phenomenon. However, the preference on this new method has been debated quite extensively. According to Vaughan, Innes, & Garrison (2013), blended learning is the inspiration of the innovation both pedagogically and technologically in higher education. The innovation utilises the internet technology to create online learning platforms. The trainees then are involved in online learning activities which the course contents are provided by the trainers. Rosen & Stewart (2015) explained that blended learning is a solution that minimizes the geographical distance issue and combines the face-to-face classes with online component.

According to Adams, Becker, et al., (2018), blended learning design is the primary option in higher education today due to their prominent role in increasing the flexibility and convenience of the trainees. Blended learning is the innovation and transformation of education in the 21st century. Blended learning also includes

personal quality learning, which facilitates, engages, and supports tailored learning experience. UNESCO and the Commonwealth of Learning (COL) emphasise this approach, as it makes learning become more flexible than before. This method will facilitate the trainees to be part of the digital community. Baditvilai (2016) stated that a blended learning environment not only includes the physical presence of trainers and trainees, but also trainees' ownership and mastery of their time, place, setting, path and learning speed.

Usta & Özdemir (2007) conducted research on the perspectives of trainees regarding a blended learning setup in Turkey. The study involved 36 trainees who were part of the social science teacher education program at Ahi Evran University, Education Faculty, during the 2006/07 Fall Semester. Their findings indicated that trainees held predominantly favourable views of the blended learning environment. Additionally, the study's results highlighted the presence of substantial interaction between Trainees and trainers within this learning context, which corroborated the conclusions drawn by Akkoyunlu & Soylu (2006) which indicated high demands for face-to-face interaction in online learning.

Dziuban, Hartman & Moskal (2004) in a three-year study between the face- to-face, fully online, and blended teaching methods found that blended teaching always give better success rates than the other two methods. Dowling, Godfrey & Gyles, (2003, as cited in Vignare et al., 2005) investigated the association between trainees' outcome and hybrid delivery. The results of their study indicated a positive relationship between trainees' final scores and improved learning outcomes. Moreover, Gómez & Duart (2011) studied a hybrid postgraduate program in a university in Colombia and concluded that trainees had a very positive opinion of the subjects and the educational model in the program.

Similarly, Tselios, Daskalakis & Papadopoulou, (2011) investigated Greek trainees' views toward blended learning. The findings obtained showed that both perceived usefulness and simplicity of use have a positive impact on attitude toward using blended learning in the university. Regarding using digital communication tools, Dzakiria, Mustafa & Abu Bakar (2006) claimed that the interaction between trainees and lecturers as well as scholarly discussion both in synchronous and asynchronous video conference is the privilege offered by blended learning application.

In addition, Apandi & Raman (2020) also conducted a study in Pakistan and reflected that it is debatable whether technology acceptance models developed previously can be used to scrutinize acceptance of Blended Distance Learning by trainers in sector. Further they pointed out that unfortunately, inadequate number of research has done to investigate in TVET sector.

METHODOLOGY

To investigate the effectiveness of eLearning platforms in TVET in Namibia, a mixed-methods approach was employed, combining qualitative and quantitative data collection methods. The aim was to obtain a comprehensive understanding of the research questions and gain insights into the perceptions and experiences of both trainers and trainees.

The study sample consisted of 89 TVET trainees, 3 trainers. To gather quantitative data, questionnaire links were distributed to the trainees and trainers involved in the Blended Distance Learning program at one of the State-owned Vocational Training Centre (VTC) in the country. The data was collected via google forms. The questionnaires were designed to capture the perception on Moodle as an eLearning platform to gain insight on its benefits, challenges, and suggestions for improvement. The responses from the questionnaires were then analysed using SPSS statistical software. Descriptive statistics, including frequencies and percentages, were calculated to summarize the data and identify any patterns or trends. The qualitative interviews were also conducted with the trainers and trainees to delve deeper into their experiences with eLearning in TVET. Thematic content analysis was applied to analyse the qualitative data obtained from the interviews. The study attained a response rate of 98.9% for students and a response rate of 100% from the trainers. Hence the data collected provides a comprehensive understanding of their perspectives and valuable insights about eLearning platforms in TVET programs.

RESULTS AND DISCUSSION

This section discusses the findings derived from both the quantitative and qualitative stages, integrating insights from existing literature. It focuses on the trainers' perceptions regarding the use of Moodle as an eLearning platform in TVET, the advantages of utilizing Moodle for blended distance learning, challenges encountered, and strategies for enhancing Moodle and eLearning for TVET.

Perceptions of Trainers towards the use of Moodle as eLearning platforms in TVET

The findings of the study shed light on the perceptions and views of trainers regarding the use of Moodle an eLearning platforms in TVET. The Trainers were asked to rate their perceptions on a 5-point Likert scale, ranging from "not effective" to "very effective," in four specific areas: quality of online course materials/resources, communication between Trainers and trainees, methods for assessing trainees learning, and accommodations for trainees needs/learning styles.

Table 1:

Perceptions of Trainers towards the use of Moodle as eLearning platforms in TVET

Constructs	Mean	Std. Dev
Quality of online course materials/resources	3,38	0,518
Communication between trainers and trainees	3,50	0,535
Methods for assessing trainees learning	3,38	0,518
Accommodations for trainees needs/learning styles	3,38	0,518

In terms of the quality of online course materials and resources, the trainers reported an average rating of 3.38. This indicates a moderate level of effectiveness, as the rating falls slightly above the midpoint of the Likert scale. The relatively low standard deviation of 0.518 suggests that there was a general consensus among the trainers in their perception of the quality of the provided materials and resources. While not considered highly effective, the findings suggest that the trainers found the online course materials and resources to be moderately satisfactory.

Regarding communication between trainers and trainees, the trainers gave an average rating of 3.50. This indicates a similar level of effectiveness as the previous category, with a slightly higher mean score. The trainers perceived the communication between themselves and the trainees through the eLearning platforms to be moderately effective. The standard deviation of 0.535 suggests that there was some variation in the opinions of the trainers, but overall, there was a moderate level of agreement regarding the effectiveness of communication.

The methods for assessing trainees learning received an average rating of 3.38. This suggests that the trainers had a similar perception of the effectiveness of the assessment methods used in the eLearning environment. The standard deviation of 0.518 indicates relatively low variation, indicating a degree of agreement among the trainers. While not rated highly effective, the findings suggest that the assessment methods employed through Moodle an eLearning platforms were perceived to be moderately satisfactory by the trainers.

Lastly, the accommodations for trainees needs/learning styles also received an average rating of 3.38. This indicates a moderate level of effectiveness in addressing the diverse needs and learning styles of the trainees in the TVET context. The standard deviation of 0.518 suggests a relatively low variation in the trainers' perceptions, indicating a moderate level of agreement regarding the effectiveness of the accommodations provided through eLearning platforms.

Overall, the findings suggest that the trainers in the study had moderately positive perceptions of the use of eLearning platforms in TVET. While the ratings indicate that the online course materials, communication, assessment methods, and accommodations could be further improved, the trainers generally found them to be moderately effective. These insights provide valuable feedback for policymakers, educators, and stakeholders to enhance the implementation and effectiveness of eLearning platforms in TVET.

Benefits of Using Moodle as an eLearning platforms in TVET The findings of the study provide valuable insights into the perceptions and views of trainees regarding the benefits of using eLearning platforms in TVET, specifically the use of Moodle for Blended Distance Learning. The trainees were asked to rate their perceptions on a 5-point Likert scale, which ranged from “strongly agree” to “disagree,” in relation to five specific areas. The results provide a glimpse into the trainees’ perspectives on the benefits they experienced through the utilization of these platforms.

Table 2:

Benefits of using Moodle and eLearning platforms in TVET that includes Blended Distance Learning

Benefits	Mean	Std. Dev
The program has helped me develop independent learning skills.	3,94	1,095
The use of the Moodle platform has enhanced my learning experience	3,85	1,170
The program has effectively supported the continuation of my academic calendar	3,75	1,011
The Blended Distance Learning program at the VTC has provided me with access to educational opportunities during the COVID-19 pandemic and beyond	3,28	1,306
The availability of online resources and materials has been beneficial to my learning process	3,12	1,219

The trainees’ responses indicate a moderate level of agreement with the statement that the BDL program done on Moodle helped them develop independent learning skills, as evidenced by the mean score of 3.94. This suggests that the trainees recognized the program’s contribution to fostering their ability to learn independently. However, the relatively high standard deviation of 1.095 indicates a significant variation in responses, implying that some trainees may have experienced more substantial development in independent learning skills than others.

In terms of the use of the Moodle platform, the trainees indicated an average rating of 3.85, signifying that they perceived it as enhancing their learning experience. This suggests that the incorporation of Moodle eLearning platforms positively influenced the trainees' educational journey, making it more engaging and effective. However, similar to the previous category, the relatively high standard deviation of 1.170 indicates a considerable diversity in the trainees' experiences and views regarding the extent of enhancement provided by the Moodle platform.

Regarding the program's effectiveness in supporting the continuation of the academic calendar, the trainees expressed a relatively positive perception with an average rating of 3.75. This indicates that the Blended Distance Learning program successfully facilitated the trainees' academic progress despite the challenges posed by external factors, such as the COVID-19 pandemic. The standard deviation of 1.011 suggests some variation in the trainees' opinions, emphasizing individual differences in their experiences of the program's support.

When it came to the Blended Distance Learning program's ability to provide access to educational opportunities during the COVID-19 pandemic, the trainees gave an average score of 3.28. This suggests a moderate level of agreement among the trainees that the program has been successful in providing them with educational opportunities despite the limitations brought about by the pandemic. However, the relatively high standard deviation of 1.306 indicates a wide range of perceptions among the trainees, with some experiencing greater access to educational opportunities than others.

In terms of the availability of online resources and materials, the trainees rated their benefits with an average score of 3.12. While indicating a moderate level of agreement, the lower mean suggests that the trainees may have perceived some limitations in terms of the availability or effectiveness of online resources for their learning process. The relatively high standard deviation of 1.219 suggests a wide range of perceptions among the trainees, with some experiencing more significant benefits from online resources than others.

Overall, the findings highlight the trainees' generally positive perceptions of the benefits derived from using Moodle eLearning platforms in TVET, particularly in the context of Blended Distance Learning. The trainees acknowledged the program's contribution to developing independent learning skills and enhancing their overall learning experience. They also recognized the program's effectiveness in supporting the continuation of their academic calendar and providing access to educational opportunities, albeit with some variations in their experiences. However, the availability and effectiveness of online resources and materials were perceived

more moderately, with potential room for improvement. These insights provide valuable feedback for further enhancing the implementation of Moodle eLearning platforms, ensuring a more effective and inclusive learning experience for TVET trainees.

Challenges of using eLearning Platforms TVET

In addition to the previous findings, the study also explored the trainees’ perceptions related to access and connectivity in the context of using Moodle as an eLearning platforms in TVET. The trainees were asked to rate their agreement on a 5-point Likert scale, ranging from “strongly agree” to “disagree,” in relation to five specific statements. The results provide insights into the trainees’ experiences and perspectives regarding access to suitable devices, stable electricity, reliable internet, and the program’s consideration of connectivity and device access challenges, as well as the provision of alternative solutions.

Table 3

Challenges of using Moodle an eLearning platforms in TVET including BDL.

Constructs Challenges	Mean	Std. Dev
I have access to a suitable device (computer, laptop, tablet, etc.) for accessing the Moodle platform and online resources	3,80	1,370
The availability of stable electricity has not been a major obstacle to my participation in the Blended Distance Learning program	3,61	1,319
I have reliable access to the internet for participating in online learning activities	3,54	1,268
The program has taken into consideration the challenges of trainees who may not have reliable internet connectivity or access to suitable devices	3,40	1,207
The program has provided alternative solutions for trainees facing connectivity or device access challenges	3,22	1,219

According to the findings, the trainees expressed a moderate level of agreement with the statement that they have access to a suitable device for accessing the Moodle platform and online resources, with a mean score of 3.80. This suggests that the majority of trainees reported having access to the necessary devices, such as computers, laptops, or tablets, for engaging in online learning activities. However, the relatively high standard deviation of 1.370 indicates a significant variation in the trainees’ access to suitable devices, with some facing more challenges in this regard.

In terms of stable electricity, the trainees indicated a mean score of 3.61, suggesting a moderate level of agreement that the availability of stable electricity has not been

a major obstacle to their participation in the Blended Distance Learning program. This implies that most trainees were able to maintain consistent access to electricity, ensuring uninterrupted participation in their online learning activities. However, the relatively high standard deviation of 1.319 indicates that some trainees may have experienced disruptions or challenges due to unreliable electricity supply.

Regarding reliable access to the internet, the trainees provided an average rating of 3.54. This indicates a moderate level of agreement that they had consistent and dependable internet connectivity for engaging in online learning activities. However, the standard deviation of 1.268 suggests that some trainees may have encountered difficulties or limitations in accessing a reliable internet connection.

When it came to the program's consideration of challenges faced by trainees with unreliable internet connectivity or limited access to suitable devices, the trainees expressed a mean score of 3.40. This suggests a moderate level of agreement that the program considered the challenges faced by these trainees. It implies that efforts were made to address the needs of trainees who encountered connectivity or device access challenges. However, the relatively high standard deviation of 1.207 indicates a wide range of perceptions among the trainees, suggesting that the program's effectiveness in this regard may have varied across individuals.

Overall, the findings shed light on the trainees' experiences and perspectives related to access and connectivity in the context of using Moodle as an eLearning platforms in TVET. While most trainees reported having access to suitable devices and relatively stable electricity, there were variations in their experiences and challenges. Similarly, while most trainees indicated reliable internet access, some faced limitations in this regard. The findings also suggest that efforts were made to address connectivity and device access challenges, although the effectiveness of these measures may have varied. These insights provide valuable feedback for improving access and connectivity aspects of the program, ensuring a more inclusive and equitable learning experience for all TVET trainees.

Based on the sentiments expressed by the trainers during the interviews, several key challenges and concerns emerged regarding the design, development, and teaching of blended courses. These challenges primarily revolved around network and internet connectivity issues, technical problems, coordination with the IT department, and content-related concerns.

One of the most common challenges mentioned by the trainers was network issues. They highlighted that at times, they faced difficulties due to inconsistent or unreliable network connections. This could potentially disrupt the smooth delivery

of online classes and hinder effective communication and collaboration between trainers and Trainees. It also suggests that the infrastructure supporting the network connectivity needs improvement to ensure a seamless learning experience.

Another challenge related to network connectivity was the shortage of data for some trainees and trainers. This highlights the issue of unequal access to resources, as some trainees may face limitations in terms of data availability or affordability. Addressing this challenge is crucial to ensure equitable access to educational opportunities for all trainees. Technical issues, particularly related to internet connectivity problems, were mentioned by some trainers as a challenge. This further emphasizes the significance of reliable and stable internet connections for both trainers and trainees to ensure uninterrupted access to online learning resources and activities.

Trainers also mentioned challenges in coordinating with the IT department. This suggests that there may have been communication or logistical difficulties in resolving technical issues or accessing necessary support for the smooth functioning of the blended courses. Improved coordination and support systems between trainers and the IT department are essential to address such challenges effectively. Trainers in the study expressed concerns about the lack of support from administrators in dealing with technical issues related to eLearning platforms. The system administrator, who was a consultant, faced challenges in resolving login problems promptly, leading to frustration among trainees and trainers. It often took a considerable amount of time, up to two days, to address these issues, causing dissatisfaction and disrupting the eLearning environment.

As eLearning was a new concept in TVET, both trainers and trainees encountered challenges and had to learn through trial and error. Trainers faced difficulties in creating content for the eLearning platforms, resulting in wasted time. Adapting teaching materials and instructional strategies to suit the digital learning environment proved to be a significant learning curve for trainers. These struggles had a negative impact on the motivation and interest of trainers and trainees. The lack of support and technical issues hindered the effectiveness of eLearning, leading to frustration and decreased motivation. Trainers felt overwhelmed with the additional workload of content creation, while trainees experienced difficulties in accessing and navigating the eLearning platforms, potentially leading to disengagement.

The findings emphasize the importance of providing adequate support and training for trainers during the implementation of eLearning in TVET. Administrators need to address technical issues promptly to minimize disruptions and maintain the interest of trainers and trainees. Additionally, comprehensive training and resources should be provided to trainers to alleviate the challenges they face in content creation,

facilitating a smoother transition to the eLearning environment. Additionally, trainers expressed concerns about inconsistent trainee engagement, which could be attributed to factors such as lack of motivation, difficulties in adapting to the blended learning environment, or limited participation due to technical issues. This highlights the need for strategies to enhance student engagement and create an interactive and stimulating online learning environment.

Lastly, one trainer provided feedback on the content of the courses, expressing concerns about repetition and lack of diversity in the syllabus. Specifically, they highlighted that some units covered similar topics and could be combined to avoid unnecessary repetition in content creation on the portal. This feedback points towards the need for curriculum review and refinement to ensure that the content is engaging, diverse, and optimized for effective learning outcomes. In summary, the sentiments expressed by the trainees and trainers and trainees shed light on various challenges and concerns associated with designing, developing, and teaching blended courses. These challenges include network and internet connectivity issues, shortage of data, coordination with the IT department, inconsistent student engagement, technical problems, and content-related concerns.

Strategies to Improve the Use of Moodle as eLearning Platforms in TVET.

To gather comprehensive insights and evidence based implementable strategies to improve the use of eLearning platforms in TVET, interviews were conducted with both trainers and trainees, exploring their perspectives, and identifying strategies to enhance the utilization of these digital tools more in particular Moodle. The data collected from these interviews revealed valuable themes and perspectives from both trainers and trainees providing guidance for the Vocational Training Centres (VTCs) to create a thriving digital learning environment.

Infrastructure Enhancement

The respondents indicated that reliable and high-speed internet connectivity was essential for seamless online learning. This calls for the upgrade of the VTC network, collaboration with relevant stakeholders and service providers to ensure a stable and robust connection.

Training and Capacity Building

The respondents indicated that implementation of eLearning platforms relied heavily on the skills and knowledge of the trainers. This calls for comprehensive training and support for trainers.

Student Support

The trainers emphasised the need to engage and support trainees in their eLearning journey. They stressed the importance of designing interactive and engaging learning experiences within Moodle.

Assessment and Feedback

Trainers highlighted the need for effective assessment practices and timely feedback within the Moodle platform. They emphasized the importance of designing varied and authentic assessments that align with the TVET curriculum..

CONCLUSIONS

The effective integration of eLearning platforms, in TVET has been widely supported by literature. The flexibility, accessibility, personalized learning, collaborative opportunities, and multimedia resources available on these platforms contribute to enhanced student achievement, engagement, and skills development. However, through understanding the perceptions, benefits, challenges, and strategies for improvement, the effective integration of eLearning in TVET is possible. The eLearning platform should have user-friendly interface, easy navigation features, relevant infrastructure, student support system and capacity building arrangements. However, effective Implementation of eLearning platforms in TVET institutions calls for not only appreciation of the benefits but awareness which will influence change of perception and significant increase in commitment. TVET training institution should integrate eLearning such as Moodle platforms as a project and respond to challenges of misconceptions, resource constraints; trainers' capacity and ultimately equip students with the skills they need for success in their chosen fields.

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