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Investigating TVET college educators' experiences while transitioning from the traditional classroom to the virtual classroom during the COVID-19 pandemic

Abstract

The growing utilisation of digital technologies in today's complex and fast-changing world has taken the reality of education beyond the physical classroom. However, the COVID-19 pandemic has forced many educational institutions to make hasty and unprecedented decisions as they switched to the virtual classroom. This study explores teachers' experiences in transitioning from traditional teaching to virtual teaching during and after the COVID-19 college closure. A sample of seven Technical and Vocational Education and Training (TVET) educators was conveniently selected from colleges in an urban area in South Africa using a case study research design. Data were collected through semi-structured interviews and analysed using thematic analysis. In this regard, all ethical considerations were adhered to during this study. Three of the educators demonstrated a positive cognitive, affective and behavioural attitude towards transitioning to virtual learning. Six of the educators used WhatsApp and online platforms integrated into their college's website to communicate during virtual teaching. However, challenges such as lack of support on the integration of technology into their practice, access to connectivity, provision of little or no training on pedagogical practices, unconducive home environment, students' attitudes in the online space, lack of infrastructure and poor policy guidelines and framework for implementing virtual learning pose a threat to educators' desires to change and support a transition to virtual learning permanently. Therefore, it is recommended that TVET education providers and managers provide adequate support and training for educators to foster pedagogical practices aimed at enhancing students' virtual learning.

Keywords: Change management; COVID-19; traditional classroom; TVET college; virtual classroom.

1. Introduction

For the educational system to strive for excellence in the ever-changing technological world, Technical and Vocational Education and Training (TVET) colleges' relevant stakeholders must be willing and ready to accept

change. Change is a constant and important factor in life, affecting families, businesses, colleges and nations. However, more important is how the change is managed. Parlakkiliç (2017: 640) describes change management in a virtual learning context as the “combination of processes, activities, and approaches that manage the people of the organisation through the transition from the old way of teaching to new e-learning”. Parlakkiliç (2017) further indicates that it is very difficult to change the behaviours, culture and routine of an educational institution’s users, such as the students, educators and school leaders. As a result, achieving change appears to be more difficult when the change process is abrupt and forceful, especially when most colleges are compelled to continue with teaching and learning during the COVID-19 pandemic.

The Coronavirus disease (COVID-19) was a silent and unexpected pandemic that quickly spread around the whole world. At the initial stage of the COVID-19 pandemic, to salvage the devastating impact on peoples’ lives and the health systems, most governments across the globe were forced to embark on national lockdowns. The national lockdowns brought a sudden change to the mode of teaching delivery in the education sector globally, including technical and vocational education and training colleges (TVET colleges). TVET colleges in South Africa were compelled to move from the traditional classroom to the virtual classroom (Mapulane, 2020).

The concept of online learning is not new, however, recently there is an increasing awareness of the use of virtual classrooms in an online environment because of COVID-19 (Zalat, Hamed & Bolbol, 2021). A virtual classroom “is an online learning environment, also known as a virtual learning environment which can be web-based and accessed through a portal or software-based” (Rajagopalan, Viswanathan & Rahman, 2013: 4). Within the context of this study, a virtual classroom is an online learning environment that allows educators and students to participate in learning activities. Several authors have written about virtual learning and its benefits in the school setting, such as the provision of teaching and learning anytime and anywhere (remotely); the capacity to engage diverse audiences; cost-effectiveness; increasing access to information; providing measurement tools for learning outcomes and facilitating collaboration between the students and the educator (Ramorola, 2013; Parlakkiliç, 2017; Mwapwele *et al.*, 2019; Torres & Giddie, 2020). Despite several identified benefits of virtual learning, there appear to be many challenges that impede virtual learning in the TVET college setting.

Thieman (2008) identified related virtual learning challenges to include a low rate of student participation, student resistance, a high rate of non-completion and poor student performance. According to Hew and Cheung (2014), virtual classrooms involve greater workloads compared to traditional classrooms. However, “there is no clear agreement on how online teachers are evaluated for tenure purpose” (Palloff & Pratt, 2013: 38). In a study conducted by Torres and Giddies (2020) on teachers’ perceptions regarding Information and Communications Technologies (ICT) use in South Africa, it was revealed that teachers often have limited access to ICTs and lack the necessary computer literacy skills to facilitate in the virtual classroom. Torres and Giddie (2020) noted that the attitudes and willingness of educators towards the use of technology are key factors for the successful adoption and effective use of virtual classrooms.

In the TVET sector, teaching and learning are mostly designed and conducted in the form of practical work and work integrated experiences (Makgato, 2019). However, research

claims that delivery of educational activities in the TVET sector is affected by the influence of technological development, thus making the delivery of online learning in TVET colleges challenging (Nundkumar & Subban, 2018; Hoftijzer *et al.*, 2020). In South Africa, the TVET sector was compelled to move their teaching and learning activities online in order to ensure continuity of their programmes during the COVID-19 lockdown. As a result, this present study aimed to investigate TVET college educators' experiences regarding the sudden and forceful transitioning from the traditional classroom to the virtual classroom during the COVID-19 lockdown.

The research question guiding this study was: what are the experiences of TVET college educators when transitioning from a traditional classroom to virtual classroom during the COVID-19 lockdown?

2. Literature review

Technical and vocational education and training plays an essential role in increasing a knowledgeable and skilled community that will be able to effectively improve the social and economic growth of a country (Department of Higher Education and Training, 2013: 3). Similarly, according to Boateng (2012: 108), "vocational technical education refers to the educational processes that involve the study of technologies and related sciences and the acquisition of practical skills and knowledge aimed at discovering and developing the individual for employment in various sectors of economic and social life". For the TVET colleges to achieve skills development for economic growth, effective management from the relevant stakeholders is vital, especially the educators' ability to manage the change process that would enhance their performance during teaching and learning engagements with students.

Technologically, the world is changing fast. Hence, educators must be able to adapt to these changes and still deliver quality teaching. The fourth industrial revolution (4IR) brought about changes in our teaching and learning environment globally, including in South African colleges (Nundkumar & Subban, 2018). More so, it is believed that the availability and use of Information Communication Technology (ICT) resources play a significant role in enhancing the effectiveness of TVET education in a rapidly changing world. In this regard, the integration of ICT in TVET colleges can help students acquire practical 21st century skills that are needed for their personal employability (Adebesin & Adedokun, 2020). According to Mohd Ishar, Wan Derahman and Kamin (2020), the use of ICT tools in TVET colleges does not only enhance the quality of the teaching but also improves educators' technological self-confidence. In addition, integrating technology into TVET colleges can also help educators to create a more proactive learning environment through improved interactive media and course content (Ghavifekr & Yulin, 2021).

Ramorola (2013) points out that the focus on the use of ICT in South African colleges indicates that educators are expected to use computers and other technologies as tools to adopt the new and evolving teaching methods within the physical and online learning environments. In addition, Mbanga and Mtembu (2020) argue that before online learning can be used effectively in TVET colleges, resources must be available and there must be some level of readiness and willingness on the part of educators and learners. However, research shows that there is no strategic direction in place that aligns online learning with the needs of programmes offered at TVET colleges (Mbanga & Mtembu, 2020). Hence, the implementation of online learning in TVET colleges might not be well catered for. As a result, this study seeks

to explore the experiences of the TVET college educator when transitioning from traditional learning to virtual learning during COVID-19. For educators to effectively adapt to the use of technologies (the virtual classroom) instead of the usual face-to-face traditional classroom, many factors must be considered. These factors include the educators' understanding of virtual learning, their readiness or attitudes towards technology and the availability of relevant tools and training. Educators, students and administrators are used to traditional pedagogy. Research reports that virtual learning projects fail to achieve their objectives for many reasons; the most noticeable of these is user resistance to change (Parlakkilic, 2017). Parlakkilic (2017) further states that there are different views about the nature and aims of ICTs in education; consequently, diverse behaviours and attitudes are found in the development, use and change management of virtual learning environments. In line with Parlakkilic's (2017) finding regarding the use of virtual learning, this present study seeks to explore and describe TVET college educators' experiences regarding virtual classrooms during the COVID-19 lockdown.

According to Nawaz and Kundi (2010), the use of ICTs by educators is influenced by several factors, including demographics, availability of hardware, educators' experience regarding the use of instructional technology and users' perception regarding the usefulness and ease of using digital devices. In agreement with Nawaz and Kundi (2010), research echoes that educators, students and other ICT users perform according to their demographic characteristics, educational level, cultural background, experience, motivation, familiarity with different instructional methods and previous experience with eLearning (Bagarukayo & Kalema, 2015; Thieman, 2008). This implies that the effectiveness of virtual learning during the college lockdown will depend on the factors mentioned above.

3. Theoretical framework

Research describes change management as a process of planning, initiating, realising, controlling and stabilising change processes on corporate and personal levels aiming to serve the ever-changing needs of external and internal customers (Anyieni, 2013; Moran & Brightman, 2000). In other words, one can describe change within the context of this study as the process of transforming or realigning educators and the education system to a changing environment. The Kanter, Stein and Jick (1992) theory of change is adopted as the theoretical base for this study, given its correlation with the researchers' intentions to explore and describe the experiences of TVET educators when transitioning from the traditional classroom to the virtual classroom, particularly during the COVID-19 lockdown. The Kanter *et al.* theory of change states that employees respond differently to change based on the availability of operational support (Flinsch-Rodriguez, 2017). However, Kanter *et al.* (1992) state that organisational habits and attitudes are determined by social systems in the organisation, not personal predispositions. The authors indicate that workers are motivated when they understand that their work environments provide an opportunity for the development and the strength required to meet job demands. This implies that an educator's skill base becomes very important in making informed decisions that might lead to improvement. Workers, however, seem to feel incompetent when certain conditions/skills are absent. Such workers' passivity makes them more vulnerable to burnout and decreased job satisfaction, which threatens the organisation's efficiency (Kanter *et al.*, 1992). Thus, it could be said that experiences of workers tend to influence their attitude and behaviour towards the process of change.

The Kanter *et al.* theory informed this study by highlighting how TVET educators managed the change processes involved in their attitudes and behaviours during transitioning to virtual

classrooms. Badenhorst and Radile (2018) claim that lecturers in South Africa's post-school vocational education system continue to face challenges in various aspects of teaching and learning, which is a substantial weakness in the capacity of these lecturers to meet the skills needed for effective teaching. One of the reasons why change becomes vital at TVET colleges, particularly during the COVID-19 era, is the introduction of new ways of teaching due to the use of emergent technologies.

4. Methodology

A qualitative research approach was used to obtain first-hand information in the research setting to achieve the objectives of the study (Neuman, 2011), and to interpret and understand the participants' experiences regarding their transition from the traditional classroom to the virtual classroom (Babbie & Mouton, 2015). The interaction between the researchers and the participants provided a clearer understanding of virtual learning in TVET colleges during the COVID-19 lockdown.

This study used a case study research design as it was deemed most appropriate to obtain in-depth and multi-faceted understandings of educators' real-life experiences (Crowe *et al.*, 2011). Furthermore, the use of a case study design in this study provides a comprehensive view and understanding of how participants interpret the phenomenon under investigation (Brink, 2018). This allowed the researchers to pose open-ended questions and to explore a deeper and broader understanding of how TVET educators experienced transitioning from traditional learning to virtual learning during the lockdown. The major benefit of using a case study design was that the approach helps to capture explanatory information on the "how" and "what" questions such as how educators within the sampled TVET colleges perceive and implement the virtual classroom for TVET courses during the COVID-19 lockdown. The case study design also offers additional insights into the gaps that exist while transitioning to a virtual classroom. The study focused on four private TVET colleges in central Pretoria, South Africa, to provide answers to the research question. Case studies permit spending time in the setting of the research subject (Hamilton & Corbett-Whitter, 2013). While the COVID-19 restrictions were observed, the researchers conducted face-to-face semi-structured interviews with each participant. A minimum of 45 minutes was spent with the participants at each college to understand their viewpoints.

5. Ethical considerations

The researchers considered participants' rights throughout the process of the study. Research approval was obtained from the Department of Higher Education and Training (DHET) and consent was obtained from the TVET college managers. Before data were collected, the aims and purpose of the study were explained to all the participants. The participants were told that they could withdraw from the study at any time after they have given their consent to participate. It was also explained to the participants that their real identity or that of their college will not be disclosed, instead, pseudonyms would be used. Participants read, understood and signed the consent form before the interview sessions.

6. Data collection

Data were collected through semi-structured interviews with seven participants from the four TVET colleges. Using semi-structured interviews in this study allowed the researchers to explore participants' thoughts and beliefs about virtual learning and also to delve deeply

into participants' personal experiences while transitioning from traditional learning to virtual learning. The interview data were used to gain a better understanding of the experiences of participants regarding virtual learning. The interview guide contained questions that explored how the participants felt about changing from traditional teaching to online/virtual teaching, their views/beliefs regarding online/virtual teaching, what online learning materials and tools were provided during the move from the traditional classroom to the virtual classroom in their colleges and any experiences or professional development they have had regarding online/virtual teaching during the short period available before transitioning from the traditional classroom. Other questions explored the communication processes that build a culture of engagement, transparency and trust critical for innovation to succeed in their colleges and environmental factors/challenges/barriers that impact their teaching performance/experience during the transition at their respective college. The interview session was conducted by the first researcher and participant responses were audio-recorded. The recorded responses were then transcribed into a Microsoft Word document. The credibility of the findings was enhanced through member checking (McMillan & Schumacher, 2014). This was achieved by returning the transcribed data to participants at the end of the collection process to ensure accuracy and resonance with their experiences. This also provided participants the opportunity to interact with and contribute to the interview and interpreted data.

6.1 Sampling

Four private TVET colleges situated in the city area of Pretoria were purposively sampled to explore educator experiences regarding moving from the traditional classroom to the virtual classroom due to the COVID-19 lockdown. Nieuwenhuis (2014) describes purposive sampling as selecting participants because of some defining characteristics that make them the holders of the data needed for the study. Purposive sampling allowed the researchers to select the TVET college educators who were most likely to offer rich data. The following criteria were used to purposively select the participants: The participating college must be a private institution since they control their own funds and administrative issues, unlike the public colleges that are funded by the government. In addition to this criterion, the college must have been in existence for a minimum of five years; the educator must have been teaching in a TVET college for a minimum of three years and the educator must have a minimum qualification of a diploma certificate. A detailed representation of the participants' information is provided in Table 1 below, using pseudonyms to ensure anonymity and confidentiality.

Table 1: Biographical data of participants

College	Educators' pseudonyms	Age	Gender	Highest qualification	Teaching experience
1	Mr A	31	Male	National Diploma	6 years
	Ms B	28	Female	Bachelor of Science Degree	3 years
2	Ms C	27	Female	Bachelor of Science Degree	3 years
	Ms D	35	Female	National Diploma	6 years
3	Ms E	40	Female	Bachelor of Science Degree	2 years
	Ms F	40	Female	Master's degree	10 years
4	Ms G	33	Female	Bachelor of Science Degree	10 years

7. Data analysis

The collected data were analysed using thematic analysis. Clarke and Braun (2014) describe thematic analysis as a process of identifying and/or interpreting patterns of meanings (themes) within a data set. To better interpret and understand participants' responses as data, their words and actions were interpreted in the form of codes that emerged from the data, while keeping the research question of the study in mind. Thus, thematic analysis was deemed appropriate because it assisted in analysing and comprehending the educators' experiences with transitioning from the traditional classroom to the virtual classroom during the school lockdown. The second author read the transcripts and undertook the coding, which was then verified by the first author. Both researchers collaborated on coding and categorising the findings, which are presented in themes. The research question and conceptual framework also guided the researchers in the systematic analysis of data to sort it according to themes.

8. Results

To understand the experiences of TVET college educators when transitioning from a traditional classroom to a virtual classroom during the COVID-19 lockdown, the findings from this study are presented in terms of three themes that emerged from the data and are informed by the theoretical framework. These themes are educator's attitudes and beliefs, facilitating in the virtual classroom and challenges to transitioning from a traditional classroom to a virtual classroom.

8.1 Educator's attitudes and beliefs

The COVID-19 pandemic has brought about an accelerated change process in the transitioning from the traditional teaching and learning approach to an online approach in most TVET colleges across South Africa. Thus, the attitude formation and attitude change of TVET educators become significant in the successful transitioning and implementation of the virtual learning process at TVET colleges. The findings reveal that some of the educators demonstrated a positive affective attitude towards transitioning to online or virtual learning, while some demonstrated a negative affective attitude. For instance, Ms G indicated that initially, she was not enjoying the transitioning process, but she started feeling excited about teaching online after some time. She further reported on what she enjoyed about the transitioning process when she said:

I feel excited about changing from a traditional classroom to a virtual classroom because it made me realise that I can access students nationwide, that is, students from other campuses can be in my class. Unlike traditional learning where I only teach students at a specified campus, but with virtual learning, I am now able to teach students from over 6 campuses and this makes me feel good (Ms G).

Ms G's response reveals how reinforcement through accountability for more classes and students across different campuses supports her in adopting the change to the virtual classroom. During the interview, Ms E indicated a positive cognitive judgement towards changing from traditional to the virtual classroom. This was noted when she said:

I think it was about time because from my observation when I started; I realised that young people in tertiary institutions were bored with the structures of the traditional ways of teaching. There is a definite need for change; I immediately start[ed] with the flipped classroom approach when I joined [the] TVET College as a lecturer, and that was what helped to keep some of my students engaged. Luckily for me, I was from the IT industry,

so I was able to apply my background knowledge by giving them online activities with traditional face-to-face teaching. So, I think the students in my college are happy with the online classrooms because they know the topic to be discussed so they can as well research and learn more online (Ms E).

This remark reveals Ms E's desire and willingness to change. The result also shows that Ms E believes that the virtual classroom is essential and proposes the possibility of adopting a blended/hybrid approach to learning as an effective structure to complement the process of change in transitioning from a traditional to a virtual classroom. This viewpoint confirms her knowledge of how to change to a virtual classroom and her ability to implement the change. The view of adopting virtual learning was also expressed by Ms B where she indicated that her behavioural attitude towards transitioning to online learning is a result of her past experience.

Online teaching is good for me personally. I love it because I went through online learning while I was a student. I cannot say that I am happy moving to online learning because of the condition of moving to online is not official. While I was a student, I faced a lot of challenges doing online learning from home with babies around, noise from neighbours and I know the same will apply to other students and even educators (Ms B).

Ms B's response reveals that although she values online learning, she seems dissatisfied with the college's sudden decision to switch to virtual learning because the transition was made without adequate planning and preparation from the college. In addition, her previous experiences with online learning seems to influence her reaction towards moving to virtual learning. Nevertheless, analysis of the interview responses revealed that despite educators' awareness of the need to transition to a virtual classroom during the COVID-19 pandemic, some of the participants expressed dissatisfaction with the idea of transitioning to a virtual classroom. For instance:

Personally, I am not so happy because we are rushing to change the mode of teaching because of the national lockdown (Mr A).

I am not excited about the change to [a] virtual classroom because of the challenges is more than the benefits as far as [I] am concern (Ms D).

In addition, one of the participants mentioned that transitioning to a virtual classroom presents more challenges and risks than benefits, implying a negative attitude towards the transition process. This attitude was observed when Ms C mentioned how the absence of reinforcement through feedback from students and educators in the virtual classroom directly poses a resistance to the change process.

8.2 Facilitating in the virtual classroom

The analysis of participants responses revealed communication and monitoring as practices employed by the educators in facilitating a virtual classroom. One of the interview questions required the participants to describe, "how they were able to facilitate teaching and learning in a virtual classroom". During the data collection, it was observed that some of the participants described how they use various communication tools for teaching and learning during the emergent transition to a virtual classroom. For instance, it appears that some of the educators such as Mr A, Ms B, Ms C and Ms D created WhatsApp groups and used the platform to upload videos, voice notes and content for their lessons as a way to build a culture of engagement and interaction with their students. The following is an excerpt from one of the participants:

I typically send the content of the topic, videos of the lesson, and tutorial materials that we receive from the Department of Education to the students through the WhatsApp group. I also give them assignments from their textbooks which they are supposed to submit directly to me on WhatsApp (Mr A).

The findings also revealed that some TVET colleges already have a learning management system (LMS) making it easy for these colleges to immediately incorporate different online educational platforms and services into their existing websites. This also supported and enabled some educators to successfully transition to a virtual classroom within a short space of time. In addition, some of the educators also mentioned how they used virtual meeting tools and applications to facilitate teaching and learning in the virtual classroom.

What we are doing in our college is just sending voice notes and material to the students via the website and WhatsApp. The students visit the website to get the class activities, assignments, and tests while we lecturers send WhatsApp voice-note to explain to the students what they need to do. The website was created during the lockdown, and it is still active now. So, we hope the college management might decide to upgrade or do something more about the website later (Ms C).

Basically, we are using Microsoft Team[s], we had to go through pieces of training in order to learn how to upload activities for students, how to mark online, and conduct assessments online. We are also using some interesting apps like mentimeter.com and Kahoot to engage our students (Ms F).

Apart from the use of communication tools in facilitating teaching and learning in the virtual classroom, participants also indicated how monitoring practices employed by the academic managers enhanced the facilitation of activities in the virtual classroom. For example, Ms G indicated that they have an attendance register that students sign and the campus manager also monitors the process by joining the session to see if the lecturer is present. This opinion was also reported by other teachers, as revealed in the following excerpts:

The principal is part of the WhatsApp group chat to monitor what the lecturer is sending to the students and also how students respond. Most of the time students do not respond. So, I cannot say the monitoring is 100% okay (Mr A).

Our academic managers are responsible to monitor and check the content of the works uploaded for the students. Sometimes the academic managers join the virtual class to ensure that you are actually holding the class. From the system the academic manager can also see the time you started your class and when you finished your class. We also send a weekly report to the head office regarding what we do regarding virtual classrooms (Ms F).

8.3 Challenges to transitioning from a traditional classroom to a virtual classroom

Analysis of participants' responses reveals that TVET educators encountered several challenges during the transition to virtual classrooms. One of the major challenges identified by participants was a lack of access to digital resources and tools. For instance, Ms B mentioned that no support or resources were provided for the lecturers regarding online learning. She also indicated that students always complained about not having data, no access to active Wi-Fi, no smartphones or laptop as excuses for not attending virtual classes. This viewpoint was also reflected in the responses of other participants, as shown in the excerpts below.

There is no proper implementation of online classes because no proper tools and gadgets in place to make online learning possible, and students also do not have the necessary gadgets for online learning because of various challenges from their parents some of the students cannot buy data and other aspects of things that will enable them to be online for lectures at the right time (Mr A).

The challenges are not all students have smartphones or laptops that they can easily come online. Another challenge is whereby the students say we do not have data; they do not have money for airtime, they are not able to join the online class at the time given. They only have data in the middle of the night because it is free. Those are some of the challenges that we really face. For example, may be out of 30 students, only five students come online during the lecture time, maybe two hours after the lecture time. Others will come and say, ma'am, I really need you to explain. The students are not ready for online learning. The college also has challenges, for example, not providing data for the lecturers and lecturers using their own data (Ms D).

In addition, it was found that all the participants expressed concern about the openness and control of assessment practices as another challenge in the virtual classroom.

For me, transparency in a virtual classroom is not effective because the online process does not reflect the true evaluation of learner's ability because you can easily notice that when you give students assessment online some of the students were able to do it and send it to your email while some students are not able to do the assessment. Another problem is lecturers are not able to give immediate feedback. Virtual marking is not really effective (Ms D).

You cannot successfully say that the process of students' assessment is transparent. I will share this with you, the students just finished writing an examination online and we discovered that all the students got 100 out of 100, we actually set a time limit, so at the expiration of the allocated time, the system automatically closes. However, we discover there are shortcomings. The students are so clever, they are able to research for answers from another device. So, we cannot say that there is 100% transparency when it comes to assessment online (Ms F).

Another significant challenge that was mentioned by participants was students' unruly behaviour and attitude. This challenge was noted when Ms F said: "we also get some naughty students that are knowledgeable about information technology, so they usually mute the lecturers from their side". This concern was also reinforced by Ms E when she stated that "some of the students will login to join the online lecture and the lecturer will be talking and teaching but the students are not there". Other factors that were reported by participants as problems encountered when transitioning to virtual classrooms include inadequate electricity or rolling blackouts also known as load-shedding, network and connectivity issues, time management, background noise and distractions from the home environment. These challenges encountered by most of the participants made them conclude that virtual learning has not come to stay in their college but was used to ensure continuity of teaching and learning during the COVID-19 lockdown.

9. Discussion

This study explored the experiences of TVET college educators when transitioning from a traditional classroom to a virtual classroom. It was found that most of the participants in this study have a positive cognitive, affective and behavioural attitude towards transitioning from a traditional classroom to a virtual classroom. However, a few of them were dissatisfied with

the idea of transitioning to a virtual classroom. This finding correlates with the Kanter *et al.* (1992) theory of change that indicates that employees respond differently to change. All the participants recognised the value and benefit of adapting to a virtual classroom amidst the pandemic and beyond. This finding is significant if transitioning to virtual learning is to become an important tool for change in TVET colleges. This attitude is also critical in enhancing the hybridisation of TVET colleges, the experiences and overall digital competence of TVET students and educators. When looking at the experiences of TVET college educators during the transitioning process, it was found that educators used digital tools such as WhatsApp, Microsoft Teams, the LMS, Mentimeter, and Kahoot to facilitate teaching and learning at their respective TVET colleges. However, one significant thing preventing the effective use of the identified digital tools was the educators' beliefs on the reliability of the assessment practice in a virtual classroom, supporting the findings of Arnold (2014).

Literature attests that one of the significant issues preventing effective transitioning to virtual learning, particularly in TVET colleges, is resistance to change (Abdel-Ghany, 2014; Parlakkiliç, 2017). Resistance to organisational change usually occurs due to a lack of planning and implementing strategy on the part of the initiator, employees' readiness, behaviours and opinions about the change process (Abdel-Ghany, 2014). Even though most participants in this study recognise the significance of virtual learning and are aware of the need for change, problems in the adoption process continue to emerge, indicating a critical gap between educators' perceptions, theories and practices (Makgoti, 2019; Parlakkiliç, 2017). When looking at educators' experiences in terms of adapting virtual learning for successful course delivery in TVET colleges, it appears that the existence of contextual factors such as a lack of learning facilities, access to data and connectivity, home climate, inadequate or lack of training and support for TVET educators and students have a strong mediating impact on adapting virtual learning in TVET colleges (Denhere & Moloji, 2021; Schwartz, 2010). These factors are also present in South Africa and other African countries. While some of the participants were excited about the move to virtual learning, the resources they needed to work online were not provided, nor were they given sufficient training to help them implement the various techniques and methods necessary for successful online pedagogy. The interview responses from all the participants revealed a complex set of challenges facing the enactment of policies on digitisation and the effective integration of technology into the pedagogical practices of TVET educators. In addition, participants indicated that transitioning to a virtual classroom might not be effective because most of the students do not have access to digital resources, internet connectivity, laptops, smartphones or tablets. Thus, the efficiency of virtual learning in TVET colleges depends on the motivation provided to educators and students in terms of support and continuous training (Kanter *et al.*, 1992). This motivation is crucial in promoting pedagogical innovation, policies and growth in digital solutions required to make virtual learning more acceptable and effective in TVET education. The findings also revealed that all the participants participated in the emergent transition process as instructed by their college. However, only a few of them demonstrated their desire to support the change effectively and make the change permanent. To effectively transition to virtual learning, TVET educators, students and managers need the ability and desire to consider the possibilities and developmental use of technological tools and educational technology (videos, smartphones, learning management systems and social media sites). These technologies can enhance the acquisition of students' employability, knowledge, digital literacy skills and competencies (Mpungose, 2020).

10. Conclusion

Despite the implicit and explicit attitudes displayed by TVET educators toward online learning, they seem to have a generally low desire and willingness to transition to virtual classrooms as a result of the problems they face in this environment. Since the transitioning process to virtual classrooms in the sampled TVET colleges took place during the COVID-19 pandemic, the educators did not have the operational support and training to facilitate effective teaching and learning in the virtual space. In addition, the findings suggest that most of the participants appear not to be strategically, pedagogically, technically and structurally prepared to adapt to virtual learning. It is therefore recommended that TVET college principals, human resources managers and the respective stakeholders in the TVET sector should provide TVET educators with the necessary training and support in terms of digital competencies, knowledge, skills and the attitude required to adapt, implement, facilitate and assess virtual teaching and learning of TVET courses.

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