Chapter #16

EXPLORING THE EXPERIENCES OF TVET COLLEGE EDUCATORS REGARDING VIRTUAL LEARNING DURING COVID-19 IN SOUTH AFRICA

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ABSTRACT

This study explored the experiences of private TVET college educators regarding virtual learning during the Covi-19 school lockdown. The Kanter theory of change is adopted as the theoretical base in this study. Data collection was done through face-to-face semi structured interviews and non-participant observation with six educators from three TVET colleges in Gauteng Province, South Africa. Collected data was analyzed using content analysis. Findings reveal that though participants have positive attitude toward the process of change required in transitioning from traditional environment to virtual environment, majority of them did not receive substantive training on how to use technology to support virtual teaching. However, educators indicated that the change process comes with several challenges such as technical problems, ineffective communication from management, workload, inadequate training, lack of access to ICT tools and lack of other structural support within the college which impacts their effective implementation of virtual teaching. Thus, teachers should be adequately prepared, supported and empowered to cope with the changes and transition processes involved to continue teaching in a virtual environment. More so, TVET college managers and policy makers should priorities change management programmes designed to prepare teachers for the inevitability of technological change in education.

Keywords: change management, educator, traditional classroom, virtual classroom, TVET college.

1. INTRODUCTION

In virtual learning context Parlakkiliç (2017 p. 640) described change management as the "combination of processes, activities, and approaches that manage the people of the organization 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 the educational institutions' users such as the students, educators, school leaders. In agreement with Parlakkiliç, change will be tougher when the change process is sudden and forceful such as what most of the schooling system have to do in order to ensure continuity of teaching and learning during the school lockdown cause by the novel Coronavirus (Covid-19).

The outbreak of the Covid-19 has caused a shift in almost every system or model in the world's civilization and the education model has been no exception to this change. On the 15th of March 2020, the President of South Africa declared a national state of disaster and announces the institution of a nation-wide lockdown, including the closing of schools from the 18th of March 2020 (Haffajee, 2020). The Basic education minister further

announced that various platforms will be used to ensure that learning continues from home, i.e., online, radio and television platforms (Brodie, McFarlane, & Ally, 2020). The introduction of the fourth industrial revolution has since been moving the education system in the virtual learning direction. As a result, integrating technology in the education system requires a significant shift which requires educators to be adequately trained on how to use technology, update their knowledge with current technologies available for instruction delivery, and possess the requisite knowledge required to plan and deliver teaching and learning in TVET institutions (Obwoge & Kwamboka, 2016). Nevertheless, the surge of Covid-19 pandemic suddenly changed the mode of instructional delivery in educational institutions including TVET college from traditional learning to virtual learning. Thus, it is important to understand how educators experience the changing process. Hence, this study aims at exploring and describing the experiences of private TVET college educators in Pretoria regarding virtual learning during the school lockdown. The research questions to achieve this aim are "What are the experiences of TVET college educators when transitioning from traditional learning to virtual learning during Covid-19 school lockdown?" and "what are the factors that inhibit and support TVET college educators transitioning from traditional learning to virtual learning?"

2. LITERATURE

Technical and vocational education and training play 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 (DHET, 2013 p. 3). Similarly, Boateng (2012 p. 108) described vocational technical education as the educational courses that involve the study of technologies and the gaining of practical skills and knowledge in order to discover and improve labor in various part of economic for the purpose of economy growth. In South Africa, TVET colleges equip students for jobs that falls within scares skills while other learning institutions prepare students towards the transfer of knowledge rather skills. For the TVET colleges to achieve skills development for economy growth, effective management from the relevant stakeholder is vital especially the educators' ability to manage change process that would enhance their performance during teaching and learning engagement with the students.

Change management is the systematic approach to adjusting and transitioning organisational processes, procedures, strategies, attitudes, functions and/or technologies from their existing state to a relevant and desired state to achieve the result of the change. In South African, higher institutions including TVET colleges were compelled to continue teaching and learning during school lockdown, this left them to no other option than transitioning to virtual learning environment. As a result, the educators' ability to manage change (to adjust and change the teaching and learning strategies and technologies to ensure continuity of teaching and learning) is tested. Nevertheless, research indicate that TVET colleges face several challenges resulting from various forms of change that have occurred in the sector over the past decades (Kraak, Paterson, & Boka, 2016). Furthermore, TVET colleges find it difficult to migrate to virtual learning because they focus more on practical skills and work-learning (Yeap, Suhaimi, & Nasir, 2021) This implies that the adapting to change has been a great challenge in the TVET sector. More importantly in situations where TVET college do not have online teaching and learning plartform in place prior to the covid-19 pandemic (Hondonga, Chinengundu, & Maphosa, 2021). Hence, understanding how TVET educators adapt to virtual learning as a result of Covid-19 school lockdown is very crucial.

Technologically, the world is changing so fast. Hence, educators should be in a position to adapt to these changes and still able to deliver quality teaching. The fourth Industrial revolution brought about changes in our teaching and learning environment globally including South African schools. Ramorola (2013) points out that the new focus on use of Information Communication Technology (ICT) in South African schools indicates that educators are expected to use computers and other technologies as tools to adopt the new and evolving teaching methods. For educators to effectively adapt to use of technologies (virtual classroom) in the place of the usual face-to-face traditional classroom, many factors must be put into consideration such as the educators understanding of virtual learning, educators' readiness or attitudes towards technology, digital competence, requisite skills, availability of the relevant tools and training (Núñez-Canal, de Obesso, & Pérez-Rivero, 2022). According to the European framework for digital competence for Educators, the digital skills required for TVET educators to be considered sufficiently prepared for online teaching are classified into 6 categories: professional engagement, digital resources, teaching and learning, assessment, empowering learners and facilitating learners' digital competence (Ferrari, 2013; Redecker, 2017). These skills are briefed below:

- Professional engagement describes teachers' efficient and appropriate use of technologies for communication and collaboration with colleagues, students, parents and external persons, problem solving, safety, in which technologies are integrated into teaching in a pedagogically meaningful way.
- Digital resources focus on the selection, creation, modification and management of digital educational resources. This also includes the protection of personal data in accordance with data protection regulations and compliance with copyright laws when modifying and publishing digital resources.
- Teaching and learning deals with planning, designing and orchestrating the use of digital technologies in teaching practice. It focuses on the integration of digital resources and methods to promote collaborative and self-regulated learning processes and to guide these activities by transforming teaching from teacher-led to learner-centred processes and activities.
- Assessment addresses the concrete use of digital technologies for assessing student performance and learning needs, to comprehensively analyse existing performance data and to provide targeted and timely feedback to learners.
- Empowering learners emphasises the importance of creating learning activities and experiences that address students' needs and allow them to actively develop their learning journey.
- Facilitating learners' digital competence which highlights that a digitally competent teacher should be able to promote information and media literacy and integrate specific activities to enable digital problem solving, digital content creation and digital technology use for communication and cooperation.

In TVET colleges, educators, students, and administrators are used to traditional pedagogy such as face-to-face settings, practical skills training through apprenticeships and work-based training which have been negatively affected by the lockdown and becomes a challenge to move it online (Kanwar, Balasubramanian, & Carr, 2019). However, studies have indicated the possibility of addressing these training challenges through the use of virtual platforms and e-learning materials (Harriden, 2017; World Bank 2020). Nevertheless, educators with insufficient skills and qualification might struggle to easily adapt to change from traditional teaching to online teaching, especially when the necessary

training and ICT tools are not provided. This is supported by Hondonga et al., (2021) who claimed that educators and students lack technical capacity to use online platforms to deliver practical skills training and support work-based learning during the Covid 19 pandemic. According to Mahazani (2015 p. 8) most of the TVET educators are fresh graduates, and they do not possess working experience in teaching and related technical skill which lead to their inability to deliver teaching processes effectively. Similarly, the South African Council for Educators (SACE) (2011 p. 10) indicated that the prevailing challenge facing FET Colleges is the fact that a substantial number of lecturers at FET colleges are either under-qualified or unqualified. On one leg the consequences of not having the essential teaching skills and qualification will be seriously impede the changing process. On the other leg, unavailability of the essential online teaching and learning gadgets will also be a major hindrance for the educators to effectively engage learners virtually. In addition, rresearch report that virtual learning projects are failing to achieve their objectives due to many reasons, more pronounce in the reasons is the user resistance to change (Parlakkiliç, 2017). For instance, a study conducted by Hondonga et al., (2021), on the readiness and prevalence of TVET colleges for using online teaching platforms during the COVID-19 pandemic in Botswana reveal that students were resistant to changing their mode of learning from traditional methods to online methods. Parlakkiliç (2017 p. 642) 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.

According to Hondonga et al., (2021), most TVET colleges did not have online teaching and learning platforms in place prior to the COVID-19 pandemic due to lack of training, adequate infrastructure and resources on the part of students and/or TVET institutions.

Authors point out factors that enhance implementation of online learning in TVET programs to include availability of technology resources and educators' willingness to use (Adelabu, Adu & Adjogri, 2014). The World Bank (2021) expatiate by saying that implementation of ICT in TVET requires high investment on installations and maintenance of ICT tools, technical support and training of educators. Yasak and Alias (2015) argue that before one plan for effective implementation of ICT in TVET there is a need to understand how effective use of ICT implementation is, as well as what need to be done to advance the present situation regarding online teaching and learning. Thus, understanding the movement from the traditional to online teaching and learning becomes significance in understanding the ICT tools that were used during the change process. In addition, provision of technical support by the college management team could enhance the transitioning to online learning and transform educators' perception towards the change process.

3. THEORETICAL FRAMEWORK

The Kanter theory of change is adopted as the theoretical base in this study, given its correlation with the researchers' intentions to explore and describe the experiences of TVET college educators when transitioning from traditional classroom to virtual classroom particularly during the Covid-19 school lockdown. The Kanter theory buttressed this study by highlighting how TVET educators managed the change processes involved, on account of their attitudes and behaviours during transitioning to virtual classroom. While different models and approaches have been developed to better understand the process change in

organisations and educational settings as viewed by Kanter's theory, the particular areas of change that need to be articulated when addressing lecturers' experiences in this study utilizes the ADKAR model to provide a valuable interpretation of TVET college educators transformative efforts during the transition to virtual classroom. The ADKAR model adapted by Hiatt and Creasey (2003) includes five different phases in change management process which are awareness of the need for change; desire and willingness for change; knowledge of how to change; ability to implement change; and reinforcement which involves provision of support towards the change process. These phases of change process in ADKAR model guides this study in understanding the TVET college educators' experiences regarding their attitude and willingness towards the transitioning from the traditional teaching and learning to online teaching and learning as well as the supports and challenges experienced during the transitioning process. The ADKAR model also helps in the aspect of data collection instrument to be engaged in the study and the analysis of data, for example being able to relate the educators' experiences to the five phases of change process.

4. METHODOLOGY

To achieve the objectives of the study, a qualitative research approach was used to obtain first-hand information in the research setting (Neuman, 2011); and to interpret and understand the participants experiences regarding their transitioning from traditional classroom to virtual classroom (Babbie & Mouton, 2015). This study engaged a multiple case study research design as it was deemed most appropriate to obtain multiple information from various perspectives (Baxter & Jack, 2008). The study focused on three private TVET colleges in Gauteng Province, South Africa to provide answers to the research questions. Case studies permits spending time in the setting of the research subject (Hamilton & Corbett-Whitter, 2013). Purposive sampling technique was used to select six educators from the chosen private TVET colleges. The participants were purposively selected based on their knowledge and information that they are privy to regarding online teaching and learning during the covid-19 school lock-down. Table 1 depicts the educators' profile.

Table 1.
Educators' profile.

College	Educators' pseudonyms	Age	Gender	Highest Qualification	Years of teaching experience in TVET college
1	Mr. A	31	Male	National Diploma	6years
	Ms. B	28	Female	Bachelor of science Degree	3years
2	Ms. C	27	Female	Bachelor of science Degree	3years
	Ms. D	35	Female	National Diploma	6years

3	Ms. E	40	Female	Bachelor of science Degree	2years
	Ms. F	40	Female	Master's degree	10years

Data was generated through face-to-face semi-structure interviews and non-participant observation of the ICT tools in the learning environment. The covid-19 restrictions were observed, during the interview sessions. Minimum of 45minutes was spent with the participant at the college in order to understand them from their view. Data analysis was done thematically through analytically coding and categorizing the generated data into themes that emerged from the data. The research questions and conceptual framework also guided the researcher in the systematic analysis of data in terms of sorting it according to themes. It should be noted that the sample size used in this study is not large enough to generalize the findings to the entire population of TVET educators/colleges in South Africa.

5. FINDINGS AND DISCUSSION

The findings are presented and discussed in the three sub-headings below. Participants responses about their experiences in transitioning to virtual are presented in terms of three themes which are attitude of TVET college educators toward virtual learning; supporting factor towards successful virtual learning; and mitigating factor towards successful virtual learning.

5.1. Attitude of TVET college educators toward virtual learning

In the aim of attempting to answer the research questions while analyzing the participants shared experience regarding virtual learning during the covid-19 school lockdown, it was discovered that most of the participants had a mixed feeling towards the changing process from the traditional learning to virtual learning. Majority of the participants have positive attitude about virtual learning however, the circumstances that surrounded their movement negatively affected the change process from traditional learning to virtual learning. Mr. A and Ms. C, E and F described their feelings towards virtual learning as follow respectively –

> "It is not that bad, but it is a bit challenging because of the rushing to change due to the national lockdown",
>
> "I think online learning in itself is not a bad idea, but I don't think it can be the main mode of learning",
>
> "I think virtual classroom is essential, I don't want us to go back to the traditional way of teaching"
>
> "it's not boring asides the network issues which are the basic technical issues that we see regarding online classes. Online learning for me is actually more convenient".

The positive attitude displayed by majority of the participants towards the moving from traditional learning to virtual implies that there should be successful integration of virtual classrooms in our TVET colleges. However, the good attitudes displayed by the participants come with some hindrance which would affect the adoption of virtual learning in their colleges. The findings of this present study agree with Nokwali, Mammen, and Maphosa (2017) in their study where they found that teachers have a positive view towards

the idea of using ICTs in lessons. According to Torres and Giddie (2020) teachers' attitudes towards technology, as well as their readiness to accept ICT into their teaching are key factors for the successful integration and use of technology in education. Similarly, Davis, Bagozzi, and Warshaw (1989) in their Technology Acceptance Model (TAM) firmly indicate that attitude that users formed toward a system will actually determine if users will accept or reject it. Invariably educators' attitude towards virtual learning is important but more important are the situations surrounding the use of virtual learning. The following themes below are used to discuss factors that affect virtual learning in the participated TVET colleges.

5.2. Supporting factor towards successful virtual learning

Data collected through the interviews and observation revealed that the educators with background IT skills are in better position to successfully adapt to virtual learning despite the circumstance regarding the change process. For example, Mr A and Ms E said respectively that "*For me I have IT background, I had certificate course in IT engineering, I have adequate knowledge on IT, so the changing from traditional classroom to virtual classroom was easy for me*" and "*Luckily for 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*". Data collection also reveals that the piece of trainings provided to the educators helped them during the moving from traditional classroom to virtual classroom. Although, the training seems not to be sufficient due to the short period that the educators have to change to virtual learning. This was narrated by Ms. E and B respectively "*the institution tries to do some short training where online learning platform was explained*", and "*Immediately the President announced the national lockdown, decision was made to replace traditional classroom to virtual classroom by the college management and little or no form of training could be provided within that period*". This finding suggests that training is necessary to ensure a smooth transition to virtual learning because some TVET educators may lack the pedagogical knowledge, skills, and competencies required to facilitate virtual learning (Yeap, Suhaimi, & Nasir, 2021). The literature attests that educators' prior exposure to virtual learning, technological knowledge, pedagogical knowledge, and the support system influence their level of participation in virtual learning platforms (Lie et al., 2020). Furthermore, educators' involvement in professional trainings creates opportunities for them to collaborate with peers and outside organizations in creating interactive and effective pedagogy that can be used on virtual platforms (Yeap, Suhaimi, & Nasir, 2021). Thus, Cheok, Wong, Ayub, and Mahmud (2017, p. 30) recommend that "room to experiment, to make mistakes, to try again and finally learn must be made part of the school culture if change is expected". This implies that practical and continuous training regarding virtual learning should be provided for the educators.

5.3. Mitigating factor towards successful virtual learning

It was discovered from the analysis of the interviews and the observation of the learning environment of the participated TVET colleges that there is lack of ICT tools such as personal laptops for the educators, and access to Wi-Fi connection to facilitate virtual learning. According to the participants response, Mr. A said that "…*there was not enough time for the school to provide the adequate and necessary materials such as laptops, android phones*". He further stated that "*the students also need the online garget like the phone, laptop, data, so that they can be able to stay online whenever they are having online classes. If students don't have any of these tools, it means that they will not be able to*

connect to the online classes". Similarly, Ms. C shared her experience regarding ICT tools "that is the biggest problem because the ICT gadget is lacking if I can say". Ms. D also added *"in my college, lecturers were given data to work online but it is not frequent and sufficient. No provision regarding laptop or router for the lecturers. The students were also not supported with any resources needed for online learning. The students are on their own because this is a private college".* The findings of this present study correlate with Nokwali et al. (2017) studies where they found that challenges such as a lack of ICT resources, space, and time compromises the teachers' ability to implement the use of ICT in lessons in an effective manner. This implies that lack of ICT tools would negatively affect the changing process from traditional classroom to virtual classroom. The lack of appropriate ICT tools experienced by the participants of this study made them to conclude that virtual learning has not come to stay but is just used to ensure continuity of learning during school lockdown. For instance, this was mentioned by Ms. D when she said that *"I can say I have good attitude concerning online learning but the essential tools for online learning are not provided. So, we have to move back to traditional learning because the students are expected to write national vocational examination in July".* This was also reported by Ms. F when said *".... not too much that was invested in the virtual learning, no infrastructure. So now that we are back to traditional learning, I can say that the virtual learning died a natural death".* Regardless of the issues identified and highlighted, it is believed that the integration of virtual learning into TVET colleges can be improved by providing students with access to the internet and technological resources so that they can connect with one another and lecturers irrespective of their location or difficulties encountered (Mpungose, 2020). In addition to addressing the challenges of internet access and digital tools as mitigating factors for successful virtual learning, TVET colleges could consider using low-technology training solutions that are simple to use for educators and students such as Direct-To-Home TV channels, mobile phones and interactive voice response (The World Bank, 2020).

6. CONCLUSION AND RECOMMENDATION

Existing literature recognized the benefits of virtual learning and adapting ICT tools in learning environment to improve the output of education sector and transform the economy at the long run (Torres & Giddie, 2020; Dlamini, Marais, Mwapwele, & Van Biljon, 2019; Rubagiza, Were, & Sutherland, 2011). However, the adaptation of virtual learning comes with several challenges (Nokwali et al., 2017). This study was an attempt to provide insights about the experiences of educators at TVET colleges regarding transitioning to virtual learning during the school lockdown due to the Covid-19 pandemic. Results illustrated how educators' experiences in transitioning to virtual learning was influenced by educator's readiness for virtual teaching and learning, institutional support provided, educators' technological knowledge and competence. Findings from educators shared experiences revealed that the participated TVET college educators demonstrated good attitude towards virtual learning based on their perceptions on the value and importance of teaching and learning in a virtual environment. In effect, educators favourable attitude ushered them into the acceptance of transitioning to virtual learning amidst the pandemic, making it imperative for them to embrace the inclusion of virtual learning environment as an additional method of instructional delivery in TVET colleges. However, it was also found that the transitioning process to virtual learning at the respective TVET colleges were influenced by factors such as lack of institutional

technological infrastructure, educators and students lack of basic ICT skills as well as lack of access to ICT resources. As a result of these, participants echoed that virtual learning has not come to stay in their colleges. Hence, to ensure successful integration of virtual learning/ ICT in our TVET colleges it is recommended that the educators which be provided with practical and continuous training regarding virtual teaching and learning. It is also recommended that the Government should support the private TVET colleges in South Africa regarding ICT resources to facilitate proper and progressive integration of virtual learning. It is also essential for TVET colleges to collaborate with telecommunication providers to obtain connectivity at a subsidized rate. This will enable the educators and the students to have access to data. In addition, TVET college could consider the use of low assistive technology or low tech-devices in bridging the challenges that students encounter with access to ICT resources.

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Short biographical sketch: Dr Aina is a passionate educator with management and leadership background. Her qualifications include National Diploma in Accountancy and Finance, Higher National Diploma in Accountancy and Finance, Bachelor of Science in Business Education, Honours in Education Policy (Cum Laude), Master's in Education Management, Leadership and Policy (Cum Laude) and she just concluded her PhD programme investigating availability and use of resources (pedagogic, infrastructure, human, financial) in Early Childhood Education from University of Pretoria. Her research interest is focused on school financial management, education management and leadership, Human and learning resources management, ICT tools, and early childhood education.

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