TVET leaders' experiences of an enquiry-based blended-learning programme

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ABSTRACT

A grave need exists among managers in Technical and Vocational Education and Training (TVET) in South Africa to have their leadership and managerial skills developed. The Postgraduate Diploma in TVET programme at the University of Pretoria was developed in 2019 as an enquiry-based blended-learning programme aimed at contributing to an appropriate response to this need. The purpose of this exploratory case study was to describe the experiences of the first cohort of programme participants according to the way the design of this programme influenced their engagement in the programme and how it supported the development of their leadership and managerial skills. Data were generated using reflective essays and a group reflection session with all the participants. The essays and the transcription of the group reflection session were thematically analysed. The findings suggest that the programme promoted the development of the participants' leadership and managerial skills. It also developed their critical thinking skills, their ability to work independently and their inclination to become self-efficacious learners. The facilitators in this programme became powerful role models to the research participants to replicate their learning experiences in their own institutions. Although the participants found it challenging to adjust to working from home while also studying during the COVID-19 lockdown period, they were inspired and motivated to persist through their networking experiences with international and national peers and leaders in their fields of education and industry.

KEYWORDS

Background and context

Technical and vocational education and training colleges (TVET) in South Africa have been in existence for 20 years after the former technical colleges and colleges of education and training centres were merged in 2002. Considerable expectations existed about how these 50 colleges would become more vital institutions with the capacity to teach increased numbers of students in a variety of programmes (HRDC, 2013). Despite having received substantial funding from the government at the launch of the TVET colleges, these institutions still face significant challenges (Mohlokoane & Coetzer, 2007; Badenhorst & Radile, 2018). In assessing the quality of TVET colleges, Worku (2019) identified a lack of leadership as one of the primary challenges. This lack of leadership was identified in both administrators and academics, which resulted in a lack of resources, poor curriculum design, a lack of quality lecturers and inadequate facilities in colleges (Mohlokoane & Coetzer, 2007; Badenhorst & Radile, 2018; Robertson & Frick, 2018; Worku, 2019). Specific areas of underperformance include a failure to attend scheduled council board meetings, to form partnerships with relevant stakeholders or to ensure that the curricula are aligned to the labour markets (Worku, 2019). It was also found that more accountability, fairness, objectivity and transparency were needed to warrant the effective use of college resources (Worku, 2019).

In a study by Robertson and Frick (2018), it was found that TVET managers often come straight from a teaching environment and are expected to lead and manage TVET colleges without having undergone the necessary training. Furthermore, the studies by Worku (2019) and Robertson and Frick (2018) show the gap between what is expected of TVET managers and their current performance, indicating a need for them to participate in further training and development (Worku, 2019). Similarly, Robertson and Frick (2018) alluded to the need for TVET managers to obtain the necessary skills and knowledge to manage and lead their institutions effectively in order to meet the mandate set for TVET colleges. But investment in the professional development of TVET managers is needed to enable the quality of leadership in the colleges to improve. Improving leadership could, in turn, result in improved curriculum design and implementation, which could lead to the quality graduates needed in the labour market being produced (Balkrishen & Mestry, 2016; Badenhorst & Radile, 2018; Worku, 2019).

A needs analysis conducted in 2018 by the Department of Higher Education and Training (DHET, 2018) similarly identified the skills gap evident in TVET college leaders. The Post Graduate Diploma in Technical and Vocational Education and Training (PGDip in TVET) programme that is reported on in this article was developed at the request of the DHET in support of the College Lecturer Education Project which was part of the Teaching and Learning Development Capacity Improvement Programme (TLDCIP) – a partnership programme between the DHET and the European Union (EU).

The University of Pretoria, in consultation with TVET colleges, the DHET, industry and the Technical University of Munich (TUM), developed the PGDip TVET programme in 2019. The German Agency for International Cooperation (GIZ) funded the development of the

programme and the Education, Training and Development Practices Sector Education and Training Authority (ETDP SETA) sponsored the tuition fees of the programme's participants. This internationally benchmarked, one-year enquiry-based blended-learning programme was envisaged as a means of supporting leaders in the TVET sector in developing strategic leadership skills and advancing their professional competency.

The programme consists of eight compulsory modules and one optional module. The purpose of the programme, as illustrated in Figure 1, is to create enabling opportunities for TVET leaders that could help them to develop the professional knowledge, skills and values required to become innovative, visionary and strategic leaders who are able to navigate context-specific demands and perform leadership functions in the following key performance areas (KPAs): Curriculum Design and Development, Managing and Leading People, Managing physical infrastructure and Finance with the last about developing innovation and quality. The professional development and mentoring framework was central to the programme and it provided opportunities for the participants to develop and network with other TVET leaders or experts. Various approaches to enquiry-based learning – such as problem-based learning, project-based learning, game-based learning and discovery learning – were used in the different modules. The programme leaders took a decision that the word 'student' would not be used when referring to the managers and leaders who decided to enrol for the programme. Instead, they would be called 'programme participants'. The reason for this is that the teaching and learning approach in the programme was collaborative and participatory in nature and therefore it made sense to refer to the future graduates in the programme as programme participants.

Figure 1 shows the structure of the PGDip in TVET programme and how all eight modules, the KPAs and the mentoring framework are interlinked. The programme challenges the participants to understand the TVET context, think critically, communicate, collaborate, and develop their professional and strategic leadership competencies as TVET leaders.

The Professional Development (PFO 700) module is an integration of all the modules and KPAs. In KPA 1, the modules Curriculum Leadership (CDD 711) and Instructional Leadership (LMD 700) are included. The modules Emotional-Social Well-being (KGG 731) and Management and Leadership in Education (LVO 732) form part of KPA 2. In KPA 3, the Financial and Human Resource Management (EDM 734) module is a compulsory module and then the research module NMQ 745 and 755 are optional modules that programme participants could take in addition to the eight compulsory modules if they wish to pursue postgraduate studies further. In KPA 4 the modules included are Educational Technology in Higher Education (OWT 730) and Assessment and Quality Assurance (QPI 713).

Following the implementation of this programme in 2020, the programme developers and facilitators embarked on a series of research studies to investigate various aspects of this programme. This study reports on one aspect currently under investigation: the experiences of the first cohort of participants in the enquiry-based blended-learning programme.
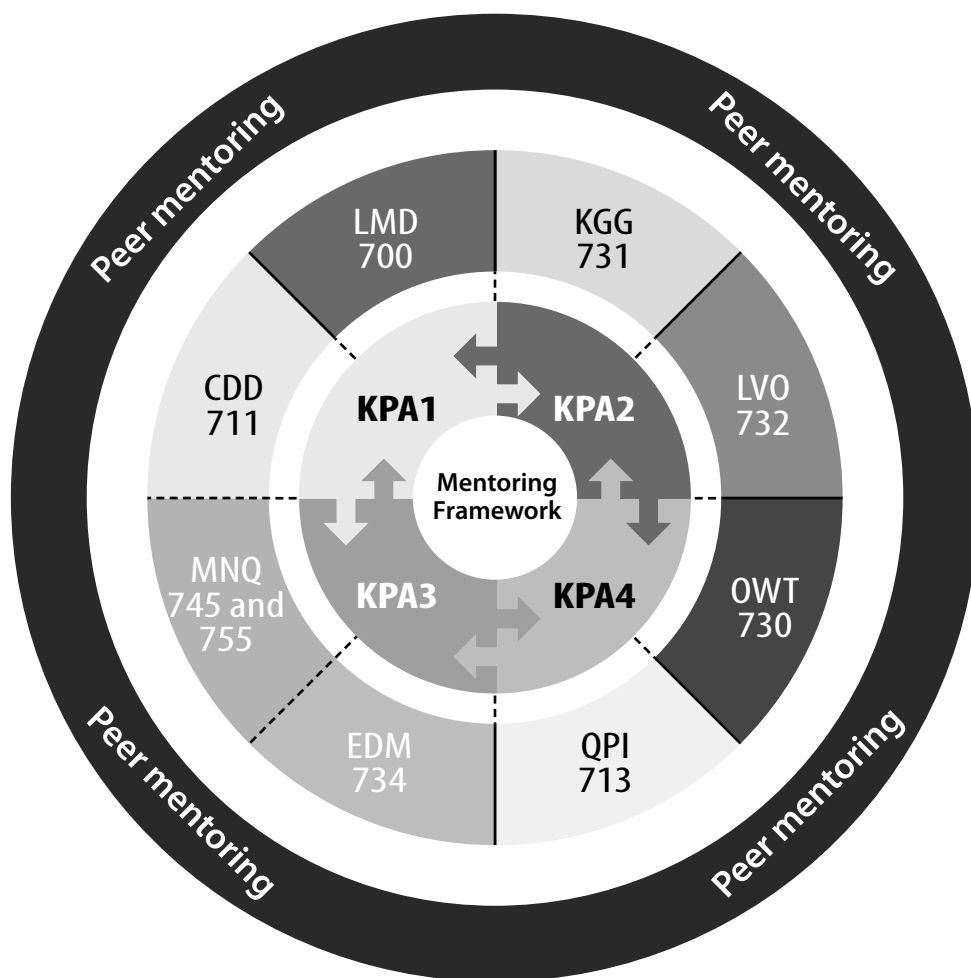
FIGURE 1: Overview of the PGDip in TVET programme and module alignment

Conceptual framework

The fundamental changes in the global economy, jobs and the industry have reshaped the nature of work, driving new and different skills compared to those required in the past (Choudaha & Van Rest, 2018). According to the World Economic Forum's (WEF, 2020) 'the world of of jobs' report, the top two skills that will grow in prominence in the next five years are critical-thinking and problem-solving skills. Newly emerging skills this year are those in self-management such as active learning, resilience, stress tolerance and flexibility – which is why, according to Gleason (2018), higher education needs to prepare thinkers of the Fourth Industrial Revolution (4IR) more adequately. These changes in the world of work drive

changes in educational practices, and for this reason authors such as Jonker, März and Voogt (2018) and Lubua (2019) suggest flexible, diverse and individualised approaches to learning. According to Chu, Reynolds, Tavares, Notari and Lee (2017), enquiry-based approaches to learning are vital for developing 21st-century skills and practices.

Simply stated, enquiry-based learning emphasises an active approach to learning, which assumes that learners are actively involved in their learning, solving problems unique to their contexts and constructing new knowledge in the process. Pedaste, Mäeots, Siiman, De Jong, Van Riesen, Kamp, Manoli, Zacharia and Tsourlidaki (2015) cite several studies that provide evidence to support the effectiveness of enquiry-based learning and state that it is generally regarded as a vital element of building a scientifically literate community. As part of an enquiry-based approach to learning, learners are normally guided through an authentic process of scientific discovery. They are encouraged to formulate problems, ask questions, construct knowledge, formulate solutions and then evaluate, refine and test their solutions. It is important to remember that enquiry-based learning is not a linear process and that it requires active engagement in a continuous cycle of exploration and refinement. Facilitating learning in accordance with this approach implies that lecturers or facilitators play a facilitating and mediating role in learning and that no 'traditional' teaching practice is involved.

Technical education is extremely important to the development of an industrial society, but in the post-industrial world employers value softer skills such as leadership skills, creativity, the ability to think outside the box and openness to multiple perspectives. These skills are poised to become more important as artificial intelligence replaces human workers in many technical fields (Lewis, 2018). According to Lewis (2018), higher education needs to emphasise pedagogy that is student-centred and individualised. Assessments are arguably the most effective when grounded in project-based learning and authentic experiences. In the enquiry-based learning approach adopted as a conceptual framework for this programme, the programme participants followed methods and practices similar to those of professional scientists in order to construct knowledge (Pedaste et al., 2015) and they were mentored to move through five distinct phases of enquiry: orientation, conceptualisation, investigation, conclusion and discussion. The cycle is often viewed as an approach to solving problems and involves the application of several problem-solving skills.

The findings on the merits of enquiry-based approaches to learning are mixed, though. Whereas some consider it to be an effective instructional approach or educational strategy (Alfieri, Brooks, Aldrich & Tenenbaum, 2011; Furtak, Seidel, Iverson & Briggs, 2012), others suggest that it may not offer any special advantages over traditional approaches to teaching and learning (Jerrim, Oliver & Sims, 2019). It has also been noted that the implementation of enquiry-based learning creates challenges such as a lack of resources and training, an over-emphasis on assessing content, the level of difficulty of this approach and the time-consuming nature of enquiry-based learning (Gutierez, 2015).

The enquiry-based approach followed in this programme has two elements that the authors hypothesised could strengthen the effects of such learning on student achievement. First, it is designed around a three-pillar mentoring framework (individual, peer and expert mentoring) and, second, the online blended-learning component has been designed to prepare and engage programme participants maximally through online learning activities (such as podcasts, videos) and professional self-assessment activities (leadership competencies and skills, readiness for learning and engaging). The learning approach of the PGDip in TVET programme aligns with Cronje's definition of blended learning, which the author has described as 'the appropriate use of a mix of theories, methods and technologies to optimise learning in a given context' (Cronje, 2020:120).

In alignment with the enquiry-based learning approach, the programme participants were given opportunities to think critically, solve real-life problems and develop technological literacy while engaging in instructional leadership design and development. In addition, the blended-learning meta-structure used in the PGDip in TVET programme emphasised active engagement: the programme participants were challenged to think, plan and make decisions strategically so as to be agents of change and to emerge as visionary leaders.

Pedaste et al. (2015) agree on the effectiveness of enquiry-based learning since it focuses on the student and is regarded as a vital element in building a scholarly community. The TVET leadership programme participants took responsibility for their learning while engaging and participating in the four contact sessions, continuous blended-learning activities and a study visit to Germany. The objectives of the study visit component were for the programme participants to engage with experts in the dual approach to vocational education in Germany and to collaborate on strategic plans that they could implement in the South African context. Unfortunately, the study visit had to be adjusted due to the COVID-19 pandemic: instead of an in-person visit, the programme participants engaged in streaming video tours of German industry and TVET college sites, using recorded or live interviews, webinars and presentations at study visit events or seminars. The programme participants also took part in collaborative sessions on Design Thinking. This contextually driven change to the programme was supported by Zhao and Watterston's (2021) view that COVID-19 constructed a distinctive opportunity for education change.

As stated previously, the programme's components were integrated and employed a three-pillar mentoring approach, namely individual professional mentoring, peer-group mentoring and KPA mentoring. Various components, activities, media, technologies and support materials were included. The meta-structure of the programme expected the participants to participate actively during, for instance, the action research, expert panel discussions, podcast discussions, reflective journal writing, the design of posters, scholarly readings and the making of videos and presentations. Instructional technology and apps such as Linoit, Mentimeter, Miro, Wiki's, Loom, Anchor, PhotoCircle and Canva were used. The programme participants engaged continuously with their peers and national, international, industry and higher education experts or facilitators.

The participants resided across South Africa and had demanding work schedules as TVET leaders. Apart from their busy schedules, they entered this programme at a time when struggles to access electricity, stable internet data, learning materials, etc, were commonplace for most learners in South Africa. Cronje (2020:117) cautions that there must be 'sensitivity to the context in which learning occurs' for blended learning to be successful.

During the programme and following the enquiry-based blended-learning approach, the participants progressed through a non-linear scholarly discovery process by formulating problems, asking questions, constructing knowledge and identifying, implementing, evaluating, refining and testing solutions. Dewey agrees that enquiry is 'a backward and forward connection, a discovery of the connection of things' (Dewey, 1916:206). The PGDip in TVET enquiry-based framework was adapted from Pedaste et al. (2015) and implemented as outlined in Figure 2.
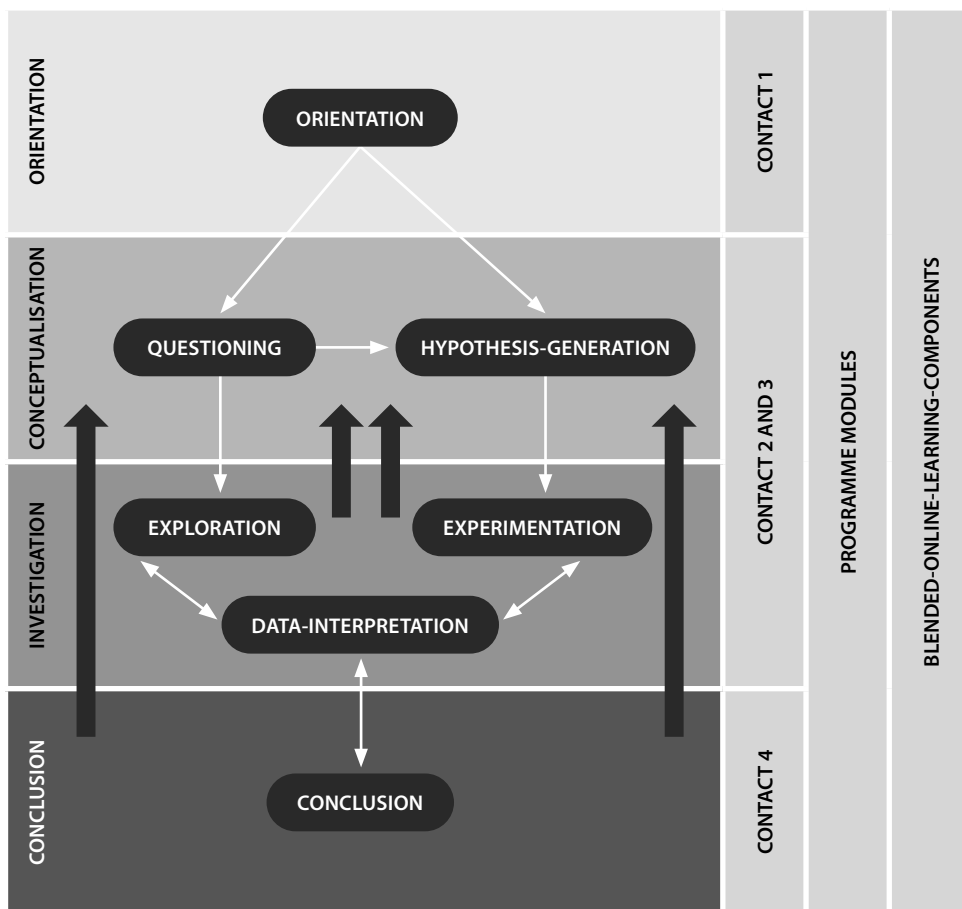

FIGURE 2: PGDip in TVET adapted an enquiry-based blended-learning framework

The programme participants progressed through four stages of the framework, as illustrated in Figure 2. During the orientation phase, the participants explored a problem regarding their strategic plan development. They reflected critically on their TVET college and stimulated curiosity and interest in their chosen problem as a means of exploring their strategic plan development.

The second phase, conceptualisation, entailed creating theory-based questions or hypotheses. This phase was divided into two sub-phases: questioning and hypothesis generation. The programme participants questioned and tried to understand the concepts connected to their identified problem. During questioning, they formulated an open question about their context. In addition, they formulated a vision for their TVET college.

In the third phase, investigation, further exploration was planned, and the data or information was collected and analysed. In the last phase of the framework process, the programme participants completed their strategic plan by drawing conclusions from the data. The overarching communication phase was an external but integrated part of the enquiry-based blended-learning process, as it was present in every phase. Throughout, the programme participants communicated and gained feedback from their peers and mentors to help articulate their understanding. Furthermore, they reflected on their learning as Leijen, Allas, Toom, Husu, Marcos, Meijer, Knezic, Pedaste and Krull (2014) advised by describing, justifying, critiquing and discussing their experiences, their learning and the meaning made.

The present study

Research theory underpinning this study

For this study, an interpretivist meta-theoretical paradigm and a qualitative methodological paradigm were used. Interpretivists believe that people construct reality through their lived experiences and that one needs to consider the context in which research is conducted in order to interpret data accurately (Willis, 2007). Interpretivists value subjectivity and believe that reality is constructed by means of individual interpretations through which people construct their own meaning of events (Mack, 2010). Interpretivists view events as distinctive phenomena that cannot be generalised and include the acceptance of multiple perspectives on and experiences of one incident (Mack, 2010). Therefore, researchers within this paradigm explore real-world situations that unfold naturally while they remain unobtrusive, non-controlling and non-manipulative observers (Tuli, 2010).

Qualitative approaches are generally preferred methods of enquiry within an interpretivist paradigm (Thomas, 2003; Willis, 2007). Such approaches often yield the rich information necessary to understanding specific contexts accurately (Willis, 2007). Qualitative research is an exploratory approach to enquiry that aims to understand the meaning that individuals or groups assign to social phenomena (Creswell, 2014).

Similarly, in this study, the authors believed that the participants had varying real-life experiences that could influence their viewpoints about the way in which this programme influenced their engagement and how it supported the development of their leadership and managerial skills. Since the participants were directly exposed to the programme, the authors believed that their personal viewpoints would inform the purpose of this study. Through qualitative enquiry, they were able to ask broad, open-ended questions that enabled the participants to respond freely in reflecting on their experiences of the programme. By exploring those experiences, the authors could reflect on the implications for further research and for enhancing the programme.

Purpose of the study

The purpose of this interpretivist, qualitative exploratory case study was to describe the experiences of the first cohort of participants to enrol for the PGDip in TVET programme in 2020, relating to the way in which the design of this programme influenced their engagement in the programme and how it supported the development of their leadership and managerial skills. Although this study is not aimed specifically at programme design improvement, it could offer insight into aspects of the programme that might need refinement and improvement based on the participants' experiences. It could also inform other programme developers who want to develop similar programmes in the future.

Method

Participants and recruitment

The project received ethical clearance from the Research Ethics Committee in the Faculty of Education. The participants were recruited during the first contact session in February 2020 before the programme commenced. The recruitment was done during a face-to-face information session before the COVID-19 lockdown came into effect. The participants received verbal and written information about the purpose of the study and the data that could be included in it. Their participation was motivated by the altruistic notion that their contribution could influence the improvement of the programme, benefitting those who would be following in their footsteps. All 29 participants opted to be included as research participants in the study. They were also informed that non-participation would not affect them academically and that they could withdraw at any time by sending an email to the programme coordinator. This was reiterated before every data-collection activity and again at the end of the programme.

Drawn from TVET colleges located around the country, most of the participants (51%) were men. One participant had a PhD and two had previously obtained Master's degrees in education. Of the participants, 12 held Honours degrees, 12 had obtained BEd degrees and two had BCom degrees. Twelve of the participants were campus managers, six were deputy principals, three were heads of school, three were heads of department and one was a TVET college principal. The participants were all older than 40, with half being over 50 and three being older than 60.

Data collection and analysis
Data were generated using reflective essays and an online group reflection. The participants were asked to reflect on the following topics:

- How the programme dealt with their needs or expectations as TVET managers (or not).
- How they experienced the design of the programme.
- Whether they preferred the blended approach instead of a traditional face-to-face only approach, and why.

The reflective essays, the recording and the transcription of the group reflection session were analysed thematically using a six-phase reflexive thematic framework (Braun & Clarke, 2020). The data were analysed inductively. Initial categories were generated, analysed for similarities and collated into preliminary codes that identified major themes.

Findings

Two major themes emerged in the data. The first related to the perceived benefits or gains the participants reported, whereas the second related to the challenges they faced or how the programme had not met their needs. The two themes are discussed under the sub-themes developing leadership and managerial skills, the blended-learning approach, and the enquiry-based approach.

Theme 1: Benefits and gains

Developing leadership and managerial skills
The TVET programme places a strong emphasis on networking and mentoring as leadership skills and the participants in the programme were exposed to various opportunities to experience the value of mentoring and networking. Concerning their networking experiences in the programme, one of the participants stated:

> [W]e always worked in isolation as TVETs; this programme has actually brought us close to even share knowledge and resources outside this programme.

Another felt that the networking opportunities reframed the way he viewed himself and his college, stating:

> … having to see myself and my college as part of a global village is quite great.

This sentiment was shared by another participant, who stated:

> I am now thinking outside my environment – looking at provincial, national, continental and global perspectives.

The programme encouraged the participants to evaluate not only their own leadership and managerial practices but also the practices that exist in their colleges. One participant stated:

> [I]t [the programme] helped me take an in-depth look at my leadership strengths and weaknesses.

Several participants commented on how the programme had helped them to develop specific skills, such as strategic planning. One participant concluded:

> The college has year after year developed a strategic plan but consistently failed to achieve the set objectives. I now understand why we failed to achieve our objectives. We only developed the plan but ignored the organising, delegating, and coordination of leadership and management tasks. Maybe it might be that we lacked knowledge on those concepts.

The same participant also concluded by remarking:

> [I]t is now up to me to be the change agent in the college by ensuring that the knowledge gained in this course is put to good use and also benefit[s] the college.

Some participants also reported developing soft skills such as being more inclusive and accepting of others, gaining more confidence, managing conflict better, involving staff, and focusing on improving staff and student morale and well-being. One participant said the following in this regard:

> I became more consultative and inclusive in decision-making processes because of this programme.

Blended learning
As stated earlier, the blended learning in this programme consisted of various activities such as self-study, podcasts, videos, assignments, mentoring, discussions, face-to-face contact sessions and a study visit to industry partners. When asked if they preferred a blended-learning approach to the traditional face-to-face only approach, the participants indicated that they preferred the blended learning. They believed the online activities augmented the face-to-face virtual contact sessions during block weeks. The following two quotations from the participants illustrate this:

> E-learning allows more effective interactions between me and my instructors with emails, discussion boards and chat rooms. Blended learning enabled me to access the materials from anywhere at any time while enjoying the benefits of face-to-face support and instruction through contact sessions.

> [P]rogramme participants from various provinces in our country could interact and engage meaningfully with learning without having to be in the same physical

room with the facilitators. Hybrid technology successfully replaced the physical classroom.

The University of Pretoria, where this programme is presented, is a contact learning institution and the initial planning for the programme was that the face-to-face contact sessions would be conducted in person on campus. Similarly, the scholarly visit to TUM in Germany would have been in person. However, this plan had to be amended due to the hard lockdown that existed in South Africa and globally for most of 2020, when this programme was launched. Both the face-to-face contact sessions and the study visit had to be moved online, with no direct in-person contact taking place between the facilitators and the programme participants. Although the participants expressed their gratitude that the programme could continue online, the message was also clear that they needed both online activities and in-person contact with their facilitators and the peer group. This is evident in the following statement by one of the participants:

> Although we could continue studying online, I was so much looking forward to experience having contact sessions at the university.

This was confirmed by another participant, who stated that they needed the human contact associated with face-to-face learning.

Another benefit that the participants reported was that the programme enabled mastery learning. They were able to learn at their own pace, in their own time, through a variety of activities. This is evident from the following quotations:

> I can tailor my learning experience while at the same time offering flexible time frames that can be personalised to me, offering me the ability to learn at my own pace.

> Learning platforms provide access to all kinds of multimedia and interactive content that significantly expand classroom face-to-face interaction.

> It was more engaging to me and enabled me to manage time efficiently. Kept me to plan and to develop self-accountability while at the same time learning skills in the use of technological devices/equipment such as computers to study.

A third benefit was that the participants believed the programme enabled them to take responsibility for their own learning and to master various skills. This is evident from the following statement:

> It challenges programme participants on how we do things in going forward as it is bringing a different dimension on how a student conducts his or her studies. The online component of this programme had a very positive impact on my studies and has taught me self-reliance and discipline skills.

Finally, the programme inspired the participants, who are teachers themselves, to use their blended-learning experiences to transform their own colleges. At the time of this study, they were struggling with the implementation of online learning that had been forced on them by the COVID-19 lockdown regulations. This is evident in the following two statements:

> The impact is so great to the extent that my college has started doing the same. I made inputs based on what I was exposed to in this programme and now for me teaching and learning has no borders.

> … as a campus manager leading one of the campuses in the deep rural province of the Eastern Cape with poor facilities and infrastructure not conducive for virtual teaching and learning, noting that most students own smart phones, I inspired lecturers to make sure they interact with students by all means.

Enquiry-based learning

The enquiry-based learning approach that was followed in this programme aimed to emphasise the participants' role in the learning process and to encourage them to explore, ask questions, share ideas and promote their critical thinking skills. Some of the participants commented on the ways in which the programme had encouraged them towards self-efficacy and to apply what they had gained from the programme in their own colleges. The following quotations illustrate this:

> It [the programme] encourages independence and innovation.

> The programme is very well suited to a business development manager who must at all times encourage innovation and creativity in the college offering.

> It [the learning approach of the programme] is the most creative way of producing learners who will be able to research and look for information whenever they are in a particular situation.

> Hybrid learning [with reference to the entire approach in the programme] is important because it breaks down the traditional walls of learning, and now with access to present-day technologies and resources hybrid learning forces time management, working independently, flexibility in your learning as [a] student and has taught me independence and discipline. Personally, it has covered all the critical skills needed by a leader in an ideal TVET college.

> Through this programme I have learned that for every challenge there is a solution. Through enquiry-based learning one can be able to understand the problem [one is] faced with, identify the reasons why the problem exists and explore possible solutions available and decide on the best solution to address the problem.

Theme 2: Challenges and unmet needs

The benefits and gains the participants in this study reported exceeded the challenges and unmet needs they shared. The researchers reflected on why this was the case and concluded that there may have been many explanations. For instance, it could be that they mostly had overwhelmingly positive experiences of the programme. Alternatively, it could be that they wanted to please the facilitators, who were also the data collectors, or that they felt they could not criticise the programme because they were sponsored financially by the DHET/ETDP SETA and had been selected above other candidates to be part of this programme. The researchers comment on this again in the 'Limitations' section below.

Developing leadership and managerial skills
Three participants reported that COVID-19 posed a significant challenge to acquiring all the necessary leadership skills. One participant believed the pandemic, with the associated lockdown regulations, to a certain extent limited his opportunities for networking and receiving mentoring. This is illustrated by the following statement:

> COVID-19 did have an impact on my progress in the PGDip programme because we could not visit Germany to be fully exposed to the dual approach system for vocational education.

A second participant noted that her progress was affected by the many changes she had to adapt to which affected her progress, such as:

> [A]djusting to work from home, attending online meetings, at times managing the crisis of infected colleagues and family.

A third participant indicated that:

> [T]he pandemic increased my workload at work and that impacted my studies negatively … and I felt overwhelmed at some point.

Some expectations of the programme regarding the development of specific leadership and managerial skills that were not met are evident in the following statements:

> Project management was not addressed. As leaders we are often expected to manage projects.

> I wish the strategic plan was aligned to monitoring and evaluation of the action plans developed.

> The programme is more focussed on teaching and learning and it does not talk of support staff of which (sic) at the college they play an important role.

> The programme did not address the capacity to deal with strikes by students and staff and the political tension that mobilise[s] and cause[s] college instability.

Blended learning

The challenges the participants experienced with the learning activities primarily related to practical matters such as having limited or no access to the internet or experiencing problems with connectivity. An unreliable electricity supply and having to balance their work lives with learning activities were challenging.

The participants dealt with many upheavals in their schedules and faced staff challenges arising from COVID-19. This is evident in the following statements:

> The important ingredient [in the programme] is the access to a stable Wi-Fi and reliable electricity connections.

> Online interaction was possible though not as convenient at times (network problems, wrong times, and congested college).

Enquiry-based learning

When they developed this programme, the devlopers were concerned about the complexity of enquiry-based learning. They felt this could be a potential barrier to the participants' learning if they had demanding work schedules and, in most instances, they had not undertaken postgraduate studies at all or recently. Some of the participants commented on how they initially felt overwhelmed by the programme and struggled to find some rhythm and routine. One participant stated that she felt overwhelmed by the programme's complexity during the orientation session, where they were introduced to the programme structure and the mode of delivery. She stated the following:

> During orientation the programme seemed complicated and I was not sure if it was a good decision for me to continue.

A few participants commented on how they struggled to adjust to the programme. One stated:

> It was a struggle at first.

Another stated their challenges a little differently:

> At the beginning of the course, I was unable to balance my work and my studies but that changed after developing a strategy to at least, in a day, read or complete an activity; that is when I started to enjoy the online learning and sharing information with some of my colleagues.

One participant highlighted various issues they struggled with in the programme:

> It [the programme] was difficult for an older learner like myself who had to make an extra effort … I felt sort of out of my depth and was shy to ask questions in front of my peers.

Discussion

The findings of this study show that the subjective experiences of the participants of the enquiry-based blended-learning design of the PGDip in TVET programme were predominantly positive. The programme encouraged the participants to evaluate themselves critically as leaders and managers and also to evaluate the leadership practices at their colleges. It challenged them to identify the problems and challenges they encountered in their colleges and to develop a strategic vision and plan to resolve them. The programme also promoted the development of soft skills such as being flexible and adapting to change, being resilient and overcoming challenges, and being inclusive in decision-making processes.

This finding is significant when one considers that this programme is an attempt to redress the lack of leadership in TVET colleges, as identified by various scholars, with a call for increased accountability and objectivity in colleges (Mohlokoane & Coetzer, 2007; Badenhorst & Radile, 2018; Robertson & Frick, 2018; Worku, 2019).

Our findings concerning the enquiry-based and blended-learning approach followed in the programme show that these approaches to learning complement each other. The combined approaches encouraged the participants to become independent, critical and self-efficacious learners. They discovered that co-constructing their learning with peers and experts in the TVET sector creates a strong community of practice that promotes their learning even during challenging times.

These findings have implications for practice. They align with Jonker, März and Voogt (2018) and Lubua (2019), who recommend flexible, diverse and individualised approaches to learning which prepare learners for the 4IR. This can be achieved by developing skills such as critical thinking, problem-solving and self-management, including active learning, resilience, stress tolerance and flexibility (WEF, 2020).

The challenges the participants shared were driven mainly by the adverse circumstances that they faced as a result of the COVID-19 pandemic. This also affected the way in which the programme was delivered. Similarly, access to resources such as electricity and stable internet connectivity played a significant role in the way the participants experienced this programme – which relied heavily on these resources. Given that for learners in South Africa these challenges are unlikely to disappear in the foreseeable future, it is essential that TVET facilitators who plan to use enquiry-based blended-

learning methods are sensitive to these challenges and plan to overcome and manage them in ways that will not compromise learning (Cronje, 2020). It is also important to note that when challenging pedagogical approaches such as enquiry-based learning are pursued, learners may feel overwhelmed and this may inhibit their growth and undermine their self-belief. It may be necessary, therefore, to normalise the challenging nature of this approach by making them aware of the level of difficulty associated with it and suggesting strategies that could possibly support them while they are adjusting to this approach (Khalaf & Zin, 2018).

Limitations of this study and future research

This study was conducted during the COVID-19 lockdown in 2020, when face-to-face contact learning was primarily converted into online modes. This had implications for the ways in which the participants evaluated the programme, since they were unable to experience the entire design of the programme, which would have included in-person face-to-face learning during week-long contact sessions on campus. They would also have experienced the scholarly in-person study visit to Germany, which had to be experienced online instead. To understand fully the ways in which the participants experience the intended design of the programme, this study may have to be repeated with a subsequent cohort now that more relaxed lockdown measures permit contact and travel. This may result in their reporting different experiences, especially their mentoring and networking experiences.

Another limitation that was identified relates to the method of data collection. As stated previously, the data were collected by two of the facilitators in the programme. In addition, the participants were asked to report on a programme that the ETDP SETA and the DHET had funded fully. It is plausible that the participants' feedback was mainly positive due to the unequal dynamics that may have existed between participants and facilitators, and the participants' need to please the facilitators and their funders could have been an inhibiting factor. Future research could include a follow-up study with the participants to gain their perspective on the ways in which this programme changed and benefitted their leadership skills after applying their newly acquired knowledge gained from the programme.

As noted, the purpose of this study was to explore the subjective experiences of the first cohort of participants who enrolled for the PGDip programme. The programme design and the way it influenced their engagement in the programme were considered. From a programme improvement perspective, this study provided a number of valuable insights. However, the study was limited to experiences that are subjective and contextually bound. Considering the need to advance research relating to the ways in which leadership skills can be developed in the TVET sector, it would be prudent to conduct studies that objectively assess the effectiveness of enquiry-based learning and blended learning, specifically in TVET leadership development programmes.

Conclusion

Exploring and describing the experiences of the PGDip in TVET participants of the enquiry-based blended-learning approach used in the programme showed that this approach to learning was well received by the participants and that they found it well suited to developing their leadership and managerial skills. The participants acknowledged that the enquiry-based blended-learning approach influenced their engagement in the programme and that it enabled them as TVET leaders to function in the South African context. The challenges that were noted with this approach were mostly related to contextual factors that could easily be managed and resolved by the facilitators of the programme. Leaders are not developed overnight and there is not one single approach that could be regarded as the best to deal positively with the leadership skills crisis in the TVET sector. However, this study suggests that an enquiry-based blended-learning approach could be one option that has the potential to develop critical and self-driven leaders in this sector.

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