PROFESSIONAL DEVELOPMENT NEEDS OF TVET COLLEGE LECTURERS TOWARDS REMOTE LEARNING: IMPLICATIONS FOR LEADERSHIP

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ABSTRACT

Professional development needs of TVET college lecturers towards remote learning: Implications for leadership.

Rapid technological development has affected the educational sector, prompting it to evolve and embrace technology as part of everyday teaching and learning. The coronavirus outbreak has exacerbated the need for educational institutions to transform from being 100% face-to-face learning institutions to ones that integrate ICT mechanisms as part of teaching and learning. As a result of the COVID-19 lockdown in 2020, universities were forced to suspend all contact learning activities and transition to online learning. However, Technical and Vocational Education and Training (TVET) colleges had to come to a complete halt because they lacked response mechanisms in the form of infrastructure, and experienced and knowledgeable lecturers. In this study, the training and resource needs of TVET college lecturers are investigated. Moreover, lecturer training guidelines for remote learning are proposed for TVET college leaders. Employing a generic qualitative research approach, within the interpretivist worldview, data gathering was undertaken through qualitative surveys and semi-structured interviews. Seventy-three TVET college lecturers participated in the survey and three TVET college Heads of Department (HODs) were interviewed from a TVET college in Ekurhuleni, Gauteng. The findings were presented using a generic qualitative research design and reporting methods. The findings of the study revealed that TVET college leaders need to furnish lecturers with resources and training in the utilisation of remote learning prior to implementation. The appropriate resources and training needed were recommended. The study also found that owing to the differing nature of the vocational subjects offered at TVET colleges, the training and resource needs of lecturers differed and therefore recommended that TVET leaders cater for the individual and subject-related needs of the lecturers. The study also recommended a distributive leadership approach to assist with the resource and training needs of lecturers, through the formation of and reliance on campus and college committees comprising internal and external stakeholders. Furthermore, training guidelines were recommended to ensure that the training of lecturers is adequate, appropriate, accredited and meets global educational standards to make sure that lecturers become 21st-century transformative intellectuals.

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LIST OF ABBREVIATIONS

COVID-19	Coronavirus Disease of 2019
DHET	Department of Higher Education and Training
FET	Further Education and Training
HOD	Head of Department
ICT	Information and Communication Technology
IT	Information Technology
NATED	National Accredited Technical Education Diploma
NCV	National Certificate Vocational
NQF	National Qualifications Framework
SAQA	South African Qualifications Authority
TVET	Technical and Vocational Education and Training
UNESCO	United Nations Education, Science and Cultural Organisation

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1. BACKGROUND TO THE PROBLEM

The novel COVID-19 outbreak resulted in enormous paradigm shifts in most areas of life. Where previously people were required to mix and work together, they were now required to social-distance and mostly, work from home. Nationwide and internationally the education and training sectors were significantly affected by the pandemic (Majumdar, 2020) with UNESCO reporting that over 95% of the student population in the world were impacted by the closure of educational institutions (Bakare, Oviawe, Ariyo, Nwachukwu, Anoure, Anayo, Nwadi, Ibidapo, Victor & Maghalu, 2020). In March 2020 when schools were closed in South Africa, traditional teaching at TVET colleges nationwide also came to a complete halt (Mhlanga & Moloi, 2020). This has slowed down learning opportunities and access to educational institutions and learning material, especially for vulnerable TVET students who generally come from disadvantaged backgrounds (Majumdar, 2020).

The COVID-19 pandemic led to UNESCO recommending a move to "distance and e-teaching and learning", and universities around the world responded positively to remote and e-teaching and learning (Bakare et al., 2020). Locally, universities such as the University of Johannesburg and the University of Pretoria suspended all contact classes and conducted teaching and learning mostly online (Mhlanga & Moloi, 2020). The University of South Africa also suspended all venue-based exams nationwide and conducted all exams online (McCain, 2020). TVET colleges, on the other hand, reopened in July 2020 with little to no change in the manner that teaching and learning transpired. Full contact classes resumed, albeit with a limited number of students in order to observe COVID-19 regulations of social distancing. This could be ascribed to TVET colleges' practice-based learning approach that favours more traditional ways of curriculum delivery. Mpu and Adu (2019) suggest that although TVET colleges are still situated somewhat differently from other Higher Education institutions with a greater preference for traditional ways of curriculum delivery, the need to adapt practices given the current challenges, is prudent.

The coronavirus outbreak has exposed and exacerbated the dire need for lecturer development in terms of 21st-century learning techniques (Ali, 2020). Juxtaposing colleges and the shift at universities has revealed the immeasurable inequities and a digital divide at TVET colleges. Developing 21st-century learning approaches and skills for curriculum delivery could advance the professional knowledge, skills and values of lecturers as well as enhance the organisational performance of TVET colleges. Consequently, the students' educational needs will be met as informed by the mandate of TVET colleges, which is to develop the country to "respond better to

the human resources, economics and development needs of the Republic and redress past discrimination and ensure representivity and equal access" (Skills Development Act, Act 97, 1998). It thus becomes clear that knowledge and understanding of the training needed by TVET college lecturers for online and remote learning are needed to support TVET college leadership planning, coordinating and monitoring such teaching and learning given the challenges faced as a result of the pandemic.

2. RESEARCH QUESTIONS

The main research question this study addressed was:

- What were the training and resource needs of TVET college lecturers?

A secondary question that the study attempts to answer was:

- What were the lessons leadership in the TVET colleges could learn to support lecturers in bridging the divide from traditional to remote learning?

3. AIMS AND OBJECTIVES OF THE RESEARCH

This study aimed to explore and describe the training and resource needs of TVET college lecturers and the possible implications for the leadership at TVET colleges when moving towards remote learning in one local TVET college. To achieve this aim, the objectives for the study were to:

- Elicit lecturers' views of what their training and resource needs were when moving towards remote learning in one local TVET college;
- Elicit HODs perspective in one local TVET college on lectures' training and resource needs towards remote learning; and
- Deduce implications for leadership at TVET colleges as well as propose guidelines for training and support of lecturers towards remote learning at TVET colleges.

4. CLARIFICATION OF CONCEPTS

4.1 Remote learning

In this study, the term remote learning refers to the teaching and learning mechanism whereby students and lecturers remain connected and actively engage in teaching and learning, while they are at home or offsite the physical classrooms of the educational institution (Flynn, 2018). Remote learning requires the use of a learning management system (LMS) that can be used by both lecturers and students for continuous teaching and learning.

4.2 E-learning or online learning

E-learning or online learning is the use of information communication and technology for teaching and learning (Naidoo & Dawuwa, 2019) and uses multimedia-enhanced features to create and combine “text, graphics, audio and animation” (Ali, 2020) to liven up lessons. The online lessons are normally recorded which allows students to have access to the lessons anytime and anywhere.

4.3 Face-to-face learning

Face-to-face learning refers to the traditional methodologies of teaching and learning (Díaz & Entonado, 2009). Students need to be present in the physical conventional classroom and the lecturer stands in front of the class to deliver a lecture. There is live interaction between the lecturer and student and between the students.

4.4 Blended learning

Blended learning is the merger of face-to-face learning and e-learning (Naidoo & Dawuwa, 2019). Face-to-face learning is reserved for the practical aspects of the subject as well as for formal assessments. E-learning covers the theoretical aspects of the subject which can be delivered without students having to be physically available in a classroom. There is synchronous interaction between the students and their lecturers as well as immediate feedback.

5 LITERATURE REVIEW

5.1 Introduction

The wide and rapid spread of the coronavirus that led to the closure of educational institutions has exposed how the face-to-face method of teaching and learning is vulnerable (Ali, 2020). The development and changes experienced currently in science and technology affect development and changes in the education sector (Geçer, 2013). This has resulted in new paradigms being adopted to continue teaching and learning processes without any hindrance. Society at large is compelled to have a “flexible and resilient” (Ali, 2020) education system, one that will not be affected by unpredictable environmental factors. A more flexible and resilient education system requires the utilisation of technology to support remote, distance and online learning altogether. Evidence has shown that weakness and lack of infrastructure, inexperienced educators, the “information-gap and the complexity of the environment” outside the education premises are still a challenge (Murgatrodt as cited in Ali, 2020).

The shift from 100% contact learning to endorse a blended learning approach requires a hands-on leadership that must be able to make informed decisions, in terms of infrastructure, software, lecturer training needs and curriculum adjustments or adaptations as well as connectivity. The reform that is needed at TVET colleges is central to the level of qualification and training of its lecturers as it determines the "strengths and weaknesses" of the system of education (Wedekind, 2016). The central aim of this section is to delve deep into interrogating the foundations of TVET colleges so as to understand how they came to be and continue to be 100% contact learning institutions. There is a lack of lecturer training and infrastructure development for e-learning, blended learning or remote learning. Researching the training and resource needs of lecturers will help TVET college leaders' endeavours to develop training guidelines that will be suitable for all lecturers. This section commences with the theoretical framework that forms the building blocks of the kind of leadership theories and other theories that will build the remote learning structure of TVET colleges. The literature review commences with the historical background of TVET colleges, the change from FET to TVET colleges and the migration to DHET, the courses offered at TVET colleges, the structure and background of TVET college lecturers. It proceeds to scrutinise the structure of remote learning at TVET colleges, leadership at TVET colleges, how to manage transformation, how to develop staff members for e-learning, the factors and strategies to consider when implementing remote learning, and concludes by highlighting the importance of abandoning 100% contact learning and embracing remote learning.

5.2 Theoretical framework

In determining the professional development of Technical Vocational Education and Training (TVET) college lecturers, it is imperative, to begin with the historical context and inception of TVET colleges as they give in-depth insight into the kind of lecturers TVET colleges possess. This also accords an opportunity to fathom the legislative framework/mandate that TVET colleges were built upon as well as their placement in the National Qualifications Framework (NQF) levels. The lack of founding structures in terms of TVET college lecturer qualifications and leadership has left them as a middle child caught between the older child being the Basic Education Department and the last-born child being the Higher Education Department. The policies, management structures and processes have been borrowed or handed down from basic education while some were made up along the way. This renders it important to look at the kind of leadership that will be most prominent at TVET colleges as they prepare to transform to remote learning institutions.

This study critically examines a pluralistic approach, integrating transformational, transformative and distributed leadership as the best-suited approaches to assist TVET colleges in moving from being 100% contact learning institutions to embracing a remote learning environment, with the focus being on lecturer resources and their training needs to enable them to be competent in a remote learning environment. The transformational leader with a clear vision goes above and beyond to motivate and inspire lecturers to yearn for change and improvement, to increase their capacity, commitment and engagement (Bass, 1985) in achieving the goals of the college. The transformative leadership approach looks at a TVET leader as a transformative intellectual (Perumal, 2014), someone with "critique and promise" (Shields, 2010), who creates a just and democratic learning environment, providing an inextricable linkage between "education [and] educational leadership" (Shields, 2010) with the wider societal context that surrounds it. Transformative leadership applies feminist pedagogical approaches of empowerment, community and leadership, which gives guidance on the teaching practices that will empower the student community to act responsibly towards each other, take ownership of their learning and understand learning as an extended societal action (Shrewsbury, 1987). The community role incorporates Bronfenbrenner's theory of ecological systems in a child's or a student's life. Remote learning will connect the student's different microsystems such as the home, college, community (internet café's, libraries, information centres, etc.) and the peers, in turn forming a mesosystem (Bronfenbrenner, 2013).

The transformative environment constructed gives rise to the third leadership theory of distributed leadership whereby the roles and college leadership are distributed to the lecturers, programme managers and HODs to assist in the growth of the college holistically which creates synergy among the contrasting work levels of the staff and enhances the performance of the college (Badenhorst & Radile, 2018). An effective leader inspires lecturers to buy into the same vision, creating a collaborative and cooperative environment, expansive involvement and confidence in each other (Hallinger & Lee, 2013). As part of remote learning, distributed leadership extends to allow students to take responsibility for their learning as it happens at the college and remotely.

Maslow's hierarchy of needs theory proposes that individuals have five tiers of needs that ought to be satisfied, starting with the lowest being physiological needs and moving up to the highest level being self-actualisation needs for staff members to be motivated. It gives us a structure of how the leaders at TVET colleges can fulfil the needs of the lecturers that have risen and have been exacerbated by the lockdown as a result of COVID-19 which has brought to light the need

to embrace a new paradigm for teaching and learning. This need necessitates training lecturers and furnishing them with appropriate resources so that they realise their self-actualisation needs. As leaders endeavour to develop lecturers in terms of training and resources for remote learning, they are in turn advancing the TVET colleges as learning organisations. According to Senge's (2006) "fifth disciplines", a learning organisation refers to the way an organisation follows to progressively create a future, by adapting the working environment to change that is contributory to continuously reshaping the working environment. Lecturers will be encouraged to expand their knowledge and skills by having the freedom to continually learn from others and "learn together" to create truly desired results, creating realities using new ideas and patterns of thinking (Senge, 2006).

5.3 The history of FET/TVET colleges

Further Education and Training (FET) colleges and TVET colleges were enacted by Parliament, informed at the macro level by the constitution of the country which enshrines the "right to basic and further education", that the state must provide progressively and "through reasonable measures" (Constitution of the Republic of South Africa, 1996, section 29). The qualifications offered at FET/TVET colleges were also shaped by the promulgation of the SAQA Act no. 58 of 1995, which gave birth to the National Qualifications Framework (NQF), which further mapped the education system of the country in its entirety (Wedekind, 2016). FET/TVET colleges were placed in the FET Band (NQF levels 2, 3 and 4). In Table 1, Pretorius and Lemmer (2004) depict the National Qualifications Framework which outlines the structure of the education system in our country and the placement of FET/TVET college qualifications.

Table 5.1: National Qualifications Framework (NQF) levels

School grades	NQF level	Band	Types of qualifications and certificates	
	8	Higher Education and Training Band	Doctorate Further research degree	
	7		Degrees, Diplomas & Certificates	
	6			
	5			
Further Education and Training Certificates				
12	4	Further Education and Training Band	School/College/NGOs Training certificates, mix of units	
11	3		School/College/NGOs Training certificates, mix of units	
10	2		School/College/NGOs Training certificates, mix of units	
General Education and Training certificates				
9 8 7	1	General Education and Training Band	Senior Phase	ABET 4
6 5 4			Intermediate Phase	ABET 3
3 2 1			Foundation Phase	ABET 2
R			Pre-School	ABET 1

Legislation dedicated specifically to TVET colleges was promulgated as a result of a merger of 153 technical colleges which fell under varying "ethnically defined education administrations" into 50 FET colleges (Wedekind, 2016). TVET colleges fall within the following the national legislative mandates:

- Further Education and Training Act 98 of 1998;
- Skills Development Act 97 of 1998;
- Further Education and Training (FET) Colleges Act 16 of 2006;
- South African Council of Educators Act 31 of 2000;
- The South African Qualifications Authority Act 58 of 1995;
- The General and Further Education and Training Quality Assurance Act 58 of 2001;
- Education White Paper 6 on Inclusive Education (2001);
- Education White Paper 7 on e-learning (2004)
- Public Service Act 103 of 1994 (as amended);
- Labour Relations Act 56 of 1999 (as amended);
- Employment Equity Act 55 of 1998;
- Public Finance Management Act 1 of 1999 (as amended) (Mpu & Adu, 2019).

The paramount aims and mandates of TVET colleges are to respond positively to the "country's labour market and community needs"; increase the value of the "country's Skills Development Strategy"; create opportunities for work and higher education; "create knowledge and development of high-level skills for academia and technical quality demands of the country" and "establish a coordinated TVET system offering programme-based vocational and occupational training" (Continuing Education and Training Act, 2006).

5.4 The change from FET to TVET colleges and migration to DHET

Colleges were under the Department of Education at a national level, administered by the Provincial Education Departments at a provincial level and governed by the College Council at a local/college level. They were called Further Education and Training (FET) colleges from the time they were launched by Minister Kader Asmal on 15 May 2003 (Kohler, 2003). The DHET (2014) states that in 2009 the president established two new departments namely: the Department of Basic Education (DBE) and the Department of Higher Education and Training (DHET). The Council of Education Ministers (CEM) requested that the Minister of Higher Education and Training (MHET) take over the functions of FET colleges and Adult Education and Training (AET) centres. Colleges were transformed into TVET colleges to make them the key drivers of the system to respond to macro resources and the skills development strategy of the country and redress past inequities (Wedekind, 2016) and also to endeavour to align the country with international practices.

Mpu and Adu (2019) posit that the migration of public TVET colleges to the DHET led to the expectation that TVET colleges would be designed as universities. This would include factors such as the development of technology, which would allow TVET colleges to be global players through the transformation of teaching strategies and syllabi to meet global standards, form international partnerships and afford equal education opportunities to everyone who met the necessary entrance requirements. To this day, TVET colleges still use more traditional methods of curriculum delivery (Mpu & Adu, 2019) and are still lagging in terms of technological advancement as compared to universities. It is also noted that TVET college lecturing qualifications are still being developed and currently there is little to no evidence of who TVET college lecturers are, their teaching methodology and their knowledge and skills (Wedekind & Bolton, 2016). This places them somewhat differently between Basic Education and Higher Education institutions. Geel (2005) and Phutsisi (2006) lament that TVET colleges are still a "black box" pertaining to their current teaching staff because TVET college lecturers seem to be left out from the reform and transformations taking place.

5.5 The courses offered at TVET colleges

TVET colleges offer two courses specially designed for differing purposes and types of students. The first one is the National Certificate and Vocational (NCV), which is designed to substitute formal academic schooling and also address the demand for quality skills (Gewer, 2016). It accepts learners who have passed Grade 9. The second one is the NATED (National Accredited Technical Education Diploma) programmes for post-school students to acquire knowledge for the workplace (Wedekind, 2016), with some engineering courses offered for students who have passed Grade 9. Table 2 provides the tabulated structure of courses/instructional programmes offered at TVET colleges by the DHET (2008; 2015).

Table 5.2: Courses/Instructional programmes offered at TVET colleges nationwide

National Certificate Vocational (NCV) Level 2 – Level 4	**National Accredited Technical Education Diploma (NATED) programmes N4 – N6**
1. Civil Engineering & Building Construction	1. Art and Design
2. Drawing Office Practice	2. Business Management
3. Education and Development	3. Clothing Production
4. Electrical Infrastructure Construction	4. Commercial Promotion
5. Engineering and Related Design	5. Educare
6. Finance, Economics and Accounting	6. Engineering Studies
7. Hospitality	7. Farming
8. Information Technology & Computer Science	8. Financial Management
9. Management	9. Hair Care
10. Marketing	10. Hospitality and Catering Services
11. Mechatronics	11. Human Resource Management
12. Office Administration	12. Interior Decorating
13. Process Instrument	13. Legal Secretary
14. Process Plant Operations	14. Management Assistant
15. Safety in Society	15. Marketing Management
16. Tourism	16. Medical Secretary
17. Transport and Logistics	17. Public Management
	18. Public Relations
	19. Textiles
	20. Tourism

The courses outlined above comprise “theoretical, practical and educational” (Wedekind, 2016) subjects that must be offered by lecturers. Some courses require lecturers to have formal teaching qualifications while others require lecturers to have an industry background (Wedekind,

2016). Transforming the courses listed above to online learning will require extensive research, funding and training as some of the courses cannot be offered online. They will need to be adapted and adjusted to fit into the new learning environment. Hence it is very important as a departure point to understand the needs of lecturers for them to be able to offer their subjects online. It is also important that the leaders at TVET colleges have proper and working guidelines of how the lecturers can be trained for the individual subjects as a "one-size-fits-all approach" (Wedekind, 2016) will not help or be workable.

5.6 The structure and background of TVET college lecturers

TVET colleges' inception did not come with a definite structure and formal qualification for TVET college lecturers. Wedekind (2016) found that TVET college lecturers have a wide range of combinations of qualifications, academic and educational qualifications and workplace experiences. TVET college lecturers are "former technical college staff (generally with a trade qualification and work experience)", qualified teachers with basic education teaching experience, recently qualified graduates from universities, universities of technology and colleges with or without teaching qualifications, as well as personnel recruited from industries.

5.7 Remote learning at TVET colleges

5.7.1 What is remote learning?

Remote learning is a mechanism whereby students and educators remain connected and engage in teaching and learning while at home or offsite the institutions' premises. They do not constantly meet in a conventional classroom but are connected by employing Information and Communication Technology (ITC). Technology tools such as discussion boards, emails, audio-bridges, video conferencing and instant messaging (Flynn, 2018) come in handy in a remote learning environment. A remote learning environment comprises engagement between the educator and the students, critically engaging with the learning materials through problem solving, discussions and role play, to encourage active participation rather than a passive learning environment.

5.7.2 The e-learning aspect of remote learning

E-learning entails using ICT to provide tuition to students (Naidoo & Dawuwa, 2019). Students have access to learning wherever they are through the touch of the button. It can be used to

provide a better comprehension of the coursework, provide simulation for varying courses and provide a detailed presentation that can aid students to better understand difficult courses. The use of online instruction or e-learning has the advantage of allowing the use of multimedia-enhanced features to create or combine “text, graphics, audio and animation” (Ali, 2020), to liven up and demonstrate classroom lessons that cannot be explained and comprehended with text only. Ali (2020) expands on this by suggesting that online learning/ICT tools help students have a better comprehension of the instructions and materials, and also implement “virtual experiments” that could be expensive, time-consuming and perilous to conduct in a physical classroom or school laboratory. Students get to replay all recorded portions of the tuition that they did not grasp clearly when they were initially explained by the lecturer.

5.7.3 Blended learning adopted to enhance remote learning

Blended learning is a merger of face-to-face learning and e-learning. Because of the practical nature of the vocational knowledge taught at TVET colleges, Naidoo and Dawuwa (2019) posit that reliance cannot be placed on e-learning only as this would constitute distance learning. We have seen with the 21st-century technological revolution and the slippery slope brought about by the coronavirus outbreak that 100% contact learning is slowly but surely becoming obsolete. The practical courses offered, inter alia, mechanical and related design, hospitality and carpentry cannot be offered online in their entirety. Naidoo and Dawuwa (2019) further suggest that face-to-face learning be solely focused on the vocations’ practical aspects and e-learning be focused on transformative or theoretical aspects of the vocation. Blended learning offers opportunities for learning anytime, in the classroom or remotely, offering synchronous interaction between the students and lecturers and provides immediate feedback.

5.7.3.1 Elements and dimensions of remote learning

Lecturers who are used to walking into a simple traditional classroom to teach must now engage in and “construct a virtual environment” of teaching and learning (Saadé, He & Kira, 2007). To achieve this, lecturers need to be experts in their subject matter but also learn theories related to “education, computer science and behaviour” (Saadé et al., 2007). They also need to be able to adjust their role and character traits, develop varying communication skills, creativity and develop broader competencies related to computers to fit into the new learning environment. New online learning elements need to be developed that will be harmonious with those of traditional learning to make remote learning possible. These elements comprise “learning

theories, learning tools and processes of communication" (Saadé et al., 2007) between students, lecturers and technologies used and whether the learning will be system- or user-centred. Saadé et al. (2007) have identified the four additional elements namely: "the human component, the design component, the instructional component and the performance component". They have also developed six dimensions of remote learning namely:

- Affect: The individual's "feelings of joy, elation, pleasure, depression, distaste, discontentment or hatred" are based on a particular behaviour (Triandis as cited in Saadé et al., 2007).
- "Learner's perception of the course": How students feel about using ICT-incorporated course learning as part of their holistic learning journey instead of 100% face-to-face learning.
- "Perceived learning outcomes": The use of learning tools to reach outcomes measured based on "performance improvement, grades benefits and meeting learning needs".
- Attitude: The students' and lecturers' attitudes towards remote learning impacts the learning and teaching received by the students.
- Intrinsic motivation: The motivational perspectives, centred on learning theories to understand behavioural intentions and how the use of technology is accepted.
- Extrinsic motivation: Motivation that focuses on the performance of the students, measured by the students' grades, rewards, prizes and others.

5.7.3.2 Characteristics of remote learning

Clear, Haataja, Meyer, Suhonen and Varden (2001) put forward five model learning concepts that incorporate the use of technology. The most prominent being the "Model C: Open learning + Class". I liken this model to blended or remote learning as it shares salient tenets, such as it being dependent on printed course guides and textbooks and other ICT multi-media interfaces. Students and lecturers come together periodically, in a specified location, such as a conventional classroom to engage in "laboratory experiments, simulations, problem-solving activities and other learning exercises". Exams are also administered in a controlled environment, under the strict and watchful eye of the lecturers.

5.7.3.3 Remote learning needs

To deliver learning there should be pertinent ICT support in terms of "infrastructure and tools, hardware and software support systems" (Ali, 2020). Software needs include having appropriate technical applications of online education. Hardware includes, but is not limited to, depending on the nature of the course and subject matter, "laptops, projectors, tablets, smartphones, iPads and interactive whiteboards" (Ali, 2020). Lecturers also need to have sufficient "broadband and connected devices" onsite and off-site for online learning (World Bank, 2020). Having all the resources does not mean ICT-integrated learning can be implemented that easily (Vrasidas,

2015); it is crucial that lecturers also receive adequate “training and support in ICT and pedagogy” (Yunus, 2007). This would also include taking care of “staff readiness and motivation needs” (Ali, 2020).

5.8 Leadership at TVET colleges

5.8.1 Leadership roles and responsibilities at TVET colleges

Leadership is seen as one of the salient factors that influence education institutions and their students’ outcomes (Bush & Glover, 2016). Robertson and Frick (2018) note that leadership at TVET colleges requires the capacity to identify and define the goals and outcomes of the organisation at the individual and institutional level, and to develop organisational strategic plans of how to achieve the set goals and desired outcomes. Prentice (1961) visualises leadership as an ability to “understand people, motivate and enlist employee participation in a way that marries individual needs and interests” to the purpose of the college. The leader needs to have “traits, qualities and behaviour” that encourage and motivate their lecturers to participate, develop and commit themselves to the organisation (Badshah, 2012). College leaders are embroiled in a reciprocal and non-coercive relationship with the staff members and the department. They also work to meet government mandates and deal with cost pressures.

Colleges operate in varying sectors such as the private (business and industries), public (business, industry, education and labour) and the community at large as well as in constant policy changes. A college leader has to direct lecturers on a mutual purpose (Rost, 1991), as they negotiate their way into integrating into the higher education sector and the multifaceted vocational offerings and the different sectors. They have unique and diverse needs and have to keep abreast of the continued improvements in teaching and learning that is influenced by many factors such as the ever-evolving market trends, industrial revolutions, meeting global educational standards and changing environmental factors. Leaders are compelled to present and represent the colleges’ interests to the local community and businesses. College leaders are also accountable for the colleges’ human, physical and financial resources and for keeping in line with “business strategy and education, educational policy and local reality, entrepreneurship and accountability, managerialism and professionalism” (Callan, Mitchell, Clayton & Smith, 2007). Leaders must have expertise in “fiscal and human resource management, public relations, collective bargaining and politics” (Robertson, 2016) and have a recent additional role of having to accommodate flexible learning and teaching mechanism, such

as online learning as well as timetabling its periods and place, whilst keeping in mind the students' limitations and aspirations (Eddy, 2010).

5.8.2 The role of leaders in professional development

An organisation's performance and well-being are dependent on innovative leadership that help to create a harmonious balance and sustain relationships between the leader and the subordinates. The same holds true for TVET colleges, and lack of this coherence and good performance results in disengagement by the lecturers, students and consequently, prospective employers (Field, Musset & Galvarez-Alvan, 2014). In a study conducted by Badenhorst and Radile (2018), it was found that a distributed leadership approach is the most prominent in colleges professional development. Leaders need to capacitate lecturers through "training, coaching and mentoring" on instructional practices. This should include all TVET stakeholders at different organisational levels so as to develop a "shared vision". Leaders are also said to achieve optimal development of staff by establishing open communication channels "vertically, horizontally and diagonally", distributing responsibilities, keeping momentum in capacitating, empowering, monitoring staff and making continuous and consistent follow-ups. Lecturers also account for all aspects of their profession, such as student performance and classroom management and administration. Leaders must have strategic operational plans that will aid in strengthening the tracking of the performance and accountability of lecturers based on the assigned distributed responsibilities and "collaborate instructional management practices". TVET college leaders play a transformative role that is required by legislation. To realise this role, they must be furnished with the right "leadership competence, knowledge, skills, attributes and attitudes" (Mpu & Adu, 2019). As transformative intellectuals (Perumal, 2014), leaders should think and function differently to be able to overcome potential technological challenges. They should align education organisational practices to ones envisaged by the market. Leaders need to create a learning management system to embrace the "distributive revolution" (Nundkumar & Subban, 2018) brought by ICT, and develop strategic plans for sustainable and meaningful organisational growth (Naong, 2016). Leaders need to support lecturers "technically, socially and morally" (Ali, 2020) to successfully deliver classes online. This extends to empowering lecturers, upskilling and building their confidence to be able to implement ICT-integrated teaching (Yuen & Ma, 2002).

5.8.3 Leaders catering for the needs of lecturers

An effective leader knows that they have to take a personal interest in their followers for their long-term development and also encourage their followers to achieve their best. This not only fulfils the individual motivation of the staff members, but it is also in the "interest of furthering organisation-wide goals" (Prentice, 1961). A leader accords followers opportunities to learn and grow themselves individually and collectively. As much as leadership at TVET colleges is complex and multifaceted, the leader needs to also focus on bringing about technological reform to teaching and learning by concentrating on catering for the needs of lecturers. The type of transformational leader that is needed at TVET colleges can motivate lecturers to do more than the usual (Bass, 1985), and be able to raise the needs level on "Maslow's hierarchy of lecturers' needs" (McLead, 2018) to the highest level, which is self-actualisation.

The coronavirus pandemic that led to a hard lockdown and compulsory requirements for social distancing has not only exposed the need for technological advancement at TVET colleges, it has also exacerbated the need for ICT-integrated learning resources and adequate training for lecturers to become competent at remote learning (Ali, 2020). The need to migrate to online/remote learning calls for the government, as the primary employer, through its college leaders to construct educational information centres and equip lecturers and students with "standardised home-based teaching and learning equipment" (Ali, 2020), and conduct online learning training for lecturers. Mmako and Schultz (2016) posit that higher education institutions are faced with a disturbing and increasing imbalance whereby the demand is very high but the institutions are under-equipped with response mechanisms, strategies (Barkhuizen & Rothman, 2008) and resources to meet the environmental demands, leaving lecturing staff with high levels of stress. Having to perform complex tasks without resources, having large classes comprising a lecturer-student ratio of ±1:35 and the lack of "capacity in academic development". Furthermore, this results in lecturers being demoralised and lacking motivation. The needs of lecturers can be catered for in terms of Maslow hierarchy of needs as depicted by McLead (2018) in Figure 5.1.

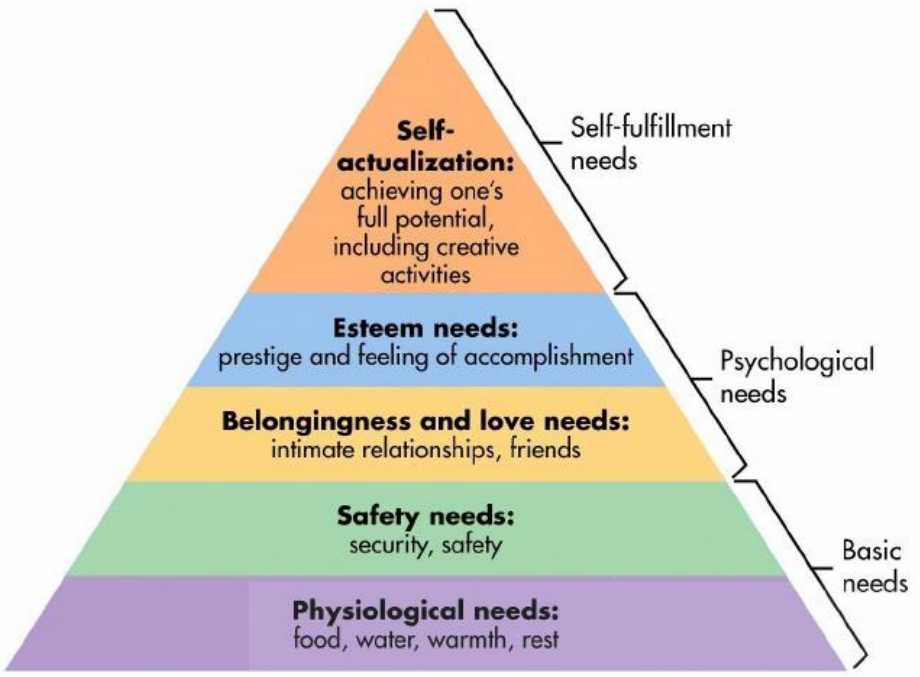

Figure 5.1: Maslow's hierarchy of needs

Source: McLead, S. (2018). Maslow's hierarchy of needs, *Simply Psychology*, *1*, 1–8.

5.8.3.1 Physiological needs

The survival needs of lecturers at TVET colleges is dependent on the basic resources that will push towards achieving the e-learning element of remote learning. The basic needs being computers, connectivity and other multimedia devices. These basic needs are the step towards the TVET college moving away from 100% face-to-face contact to remote learning which the leaders must make available for the lecturers.

5.8.3.2 The safety needs

Lecturers should spend less time on-site in front of droves of students; they should limit movements and keep all social distancing requirements. Hence the need for leaders to provide alternative means of ensuring that teaching and learning do not come to a halt as a result of the new COVID-19 restrictions through the use of remote learning. This will fulfil the lecturers' safety needs, making them feel cared for and protected from exposure.

5.8.3.3 Belongingness and love needs

Support from the leaders serves as motivation for lecturers. A transformative leader encourages inclusivity, equity and makes sure that the environment is socially just and deeply democratic (Shields, 2010). Therefore, leaders who involve lecturers in planning and understand how they

can support lecturers to perform their duties provide motivation and give lecturers a sense of belonging.

5.8.3.4 Esteem needs

Lecturers need to be trained to be subject experts in both traditional and e-learning. That will lead to the mastery, status and reputation of the lecturers being enhanced thus also enhancing the achievements of the students and the pass rate of the college. The "personal mastery" (Senge, 2006) of lecturers is closely linked to their self-esteem. When leaders support lecturers to achieve their aspirations and the goals of the organisation, this increases the lecturers' commitment to the college.

5.8.3.5 Self-actualisation

When lecturers have mastered their competency in traditional as well as e-learning and have all the resources needed, they gain reputation and respect, their self-esteem needs have been met and also heightened. It leads them to realise their potential and be at the peak of their performance. The performance of the TVET college holistically will be improved to meet international standards, 21st-century technological standards and 4th-industrial revolution standards and will transform colleges into global players.

5.9 Managing transformation

5.9.1 Transformative leadership

Transformative leadership is asserted by Shields (2010) as an intricate vehicle that links education and educational leadership, leading to an "inclusive and socially just learning environment", an even playing ground and affects deep and equitable change. TVET colleges need transformative leadership that upholds the feminist pedagogical principles of empowerment, the community and leadership. Transforming to remote learning will empower lecturers and students to take active ownership of their education. In a traditional schooling context, power is limited to certain individuals such as the principal, deputies, campus managers and the heads of departments of the college. An empowered remote learning environment will result in power being shared, between the leaders, lecturers and the students. Shrewsbury (1987) delineates empowerment as leaders recognising other people's abilities and creating an environment where they can thrive. An empowered learning environment involves students becoming fully responsible for their learning, they find their voice and capabilities, as they work

autonomously, independently and actively participating in transforming their world (Webb, Walker & Allen, 2002). Empowerment also means that lecturers create strategies of how they will find their balance between teaching in the classroom and teaching remotely.

A transformative learning environment enhances the learning process itself, builds the self-confidence of the students and also creates a "community of mutuality" (Shrewsbury, 1987) and creativity is enhanced in a consensus process. Students learn using different learning methods in the comfort of a familiar environment, which is in their home or their community. The theory of community in feminist pedagogy ropes in the parents, peers and the society at large, forming an interconnectedness beyond the walls of a physical classroom. The mesosystem of Bronfenbrenner's ecological system will be upheld, whereby different microsystems interact, the home linking with the school, peers and the students' intimate community (Bronfenbrenner, 2013). The leaders will promote the autonomy and individuality of lecturers and build a sense of connectedness with the lecturers.

The transformative leadership theory entails leaders sharing some of their power with the lecturers, while the lecturers also cascade the power down to the students, who must take active ownership of their studies, developing goals and objectives for the learning process and thus enhancing lecturers' planning and negotiating skills. A "sense of shared purpose" (Shrewsbury, 1987) is created as the leader of the college will also become an active follower, as they track the teaching and learning process, especially how lecturers are coping, the progress, and the performance of the students. A feminist context leadership creates an intuitive connection between the community and empowerment and provides mechanisms for achieving such a learning environment. Students collaborate, interact and take an active part in their learning, at their own time and pace (Ali, 2020) and promote self-directed learning.

5.9.2 The need for technological transformation at TVET colleges

The DHET perceives the traditional methodology of teaching and learning through "face-to-face techniques" (Nundkumar & Subban, 2018) to be unsustainable, considering that TVET colleges operate in an environment with limited resources. The DHET suggested that more "innovative open learning approaches" be considered to limit the risks, especially to achieve "effective resource management". Transforming to online learning will require fewer lecturers to teach onsite considering that face-to-face learning numbers are limited to observe all COVID-19 protocols. Online learning will also save on "provisioning of education and training resources" as compared to contact learning. Achieving technology transformation in this regard will make

the lecturers more knowledgeable and skilful (Marope, Chakroun & Holmes, 2015) and also adapt easily to the ever-changing emergence of technologies, which in turn fosters continuous learning. TVET colleges need to have technological learning systems that are flexible to adapt to any supply of skills to the radically and rapidly changing social and economic needs of the country (Marope et al., 2015). This transformation will also require the involvement of all labour market stakeholders to align supply with demand.

5.9.3 TVET colleges transforming from 100% contact to blended learning institutions

Blended learning is an improved methodology of learning, whereby e-learning is incorporated with the traditional classroom methods of teaching and learning (Mpu & Adu, 2019). It is also called flipped classroom and hybrid learning. A flipped-classroom approach encompasses the use of pre-recorded lessons from lecturers which students can listen to and watch over the internet (Mpu & Adu, 2019). In a blended learning classroom interaction is extended to the home, students learn, collaborate and respond to their peers and submit their work using the remote platform. To accommodate blended learning, it is required that the syllabus and teaching strategies be adapted to meet the requirements of the new learning methodology. Moving some of the subject content to an e-learning platform allows the content to be presented over a longer period as compared to the limited time in the physical classroom. Enabling education to be "seven days and twenty-four hours" (Mpu & Adu, 2019). Learning becomes independent of place and time and reaches more students than a physical classroom (Dziuban, Hartman & Moskal, 2004). The advantages of blended learning are that it brings out the best of both by combining the tenets and advantages of a physical classroom with those of e-learning. The institution will benefit in that it comes with "cost-reductions and time efficiency", for the students, it brings location convenience and one-on-one personal understanding and motivation, and lecturers will enjoy efficacy and flexibility (Mpu & Adu, 2019).

5.9.4 TVET colleges becoming learning organisations

The digital age that we are in makes it imperative for teaching strategies and physical learning structures to conform with learning organisations of the 21st century (Mpu & Adu, 2019), thus forcing all organisations, including education institutions, to change (Kiran, Agarwal & Verma, 2013). The work environment is reshaped continuously to adapt to change (Dibella, 2011). A learning organisation entails what an organisation such as a TVET college should do to facilitate the learning of its staff members. The rapid digital revolution requires continuous skilling and

reskilling of its members through “life-long learning” (Kanwar, Balasubramanian & Carr, 2019). This makes it compulsory that an organisation adopts permanent innovative ways for life-long learning, allowing its members to self-learn and also learn in teams. Lecturers will be encouraged to broaden their knowledge and skills, nurturing new ideas and patterns of thinking (Senge, 2006) that will assist the college to grow and keep abreast of ever-changing market trends. This also advances “social cohesion and democracy”, enhances skills that in turn boosts the economy and also “builds global citizenship and peace” (Kanwar et al., 2019). Amalgamating the 21st-century learning concepts with Senge (2006)’s fifth discipline of organisational learning results in the following understanding:

5.9.4.1 Shared vision

A shared vision involves a force inspired by an idea that is compelling enough to receive support and commitment from more than one individual in an organisation. It “creates a sense of commonality” and gives “coherence to activities” (Senge, 2006), and lecturers’ concentrating their energy and commitment to the college and its success through learning. In a 21st-century learning organisation, leaders develop visions in relation to others, i.e. staff, students and other education stakeholders (Jørgensen, 2011). Lecturers can share in the vision of their leaders as they form part of the vision that was created concerning them. The change that comes, results in a smooth transition because the vision is shared among the leaders and the lecturers.

5.9.4.2 Personal mastery

Learning in an organisation is dependent on individuals that learn to enhance their personal and organisational growth (Senge, 2006). The 21st century requires “greater independence and judgement and personal responsibility” (Kanwar et al., 2019). Lecturers must also have the competence to make informed decisions about the teaching and learning process as it takes place in the classroom and remotely.

5.9.4.3 Mental models

The assumptions, perceptions, generalisations and visual pictures of “how we understand how the world works” and the way we respond (Senge, 2006). Mental models include the traditional modes of teaching still used at TVET colleges. The 21st century requires models of learning that are flexible and open, not utilising the same old restrictive pedagogical learning modes.

5.9.4.4 Teams thinking

Team thinking refers to different people in a learning organisation, coming together to produce "extraordinary capabilities" (Senge, 2006), engaging in dialogues, putting ideas together, discovering insights and enhancing creativity. Transformative social learning occurs as lecturers learn in groups in their common courses/subjects. New practices are adopted and new knowledge is established during group work. Lecturers develop new innovative lesson plans, schemes of works and methods of teaching and learning and assessment can be enhanced but still be within the prescribed syllabi and assessment guidelines. This can happen when the norms are altered and new mutual expectations are formed (Jørgensen, 2011).

5.9.4.5 Systems thinking

Systems thinking refers to the body of knowledge, tools and conceptual framework forming patterns that help an organisation adapt to change (Senge, 2006). The new systems thinking will integrate "formal, non-formal and informal learning", using technology. The institution, corporations and government as the stakeholders must ensure that there are mechanisms and frameworks for the formal, non-formal and informal learning to take place (Kanwar et al., 2019) through blended learning. Conscious change brings with it new perspectives on the work tasks and new working methods come to play (Jørgensen, 2011). TVET colleges as life-long learning organisations play a crucial role in "sustaining the development agenda" as TVETs are the major producers of the country's future workforce (Kanwar et al., 2019).

5.9.5 Challenges/limitations of remote learning change

5.9.5.1 Age and competence of lecturers

Lecturers are required to manage a convergence of wide-ranging digital information, coming from a wide range of devices and sources during presentations, discussions and reflections of the group work (Bakare et al., 2020). This requires quality training in digital skills and using e-teaching. The challenge in this regard will be those lecturers who do not have the technical skills or digital knowledge required in 21st century and therefore have difficulty adapting to the shift and display inadequate competence, confidence and self-efficacy because of their age or lack of exposure to digital technology. This leads to feelings of uncertainty and ambivalence about the change (Piderit, 2000).

5.9.5.2 Limited resources and funding

TVET colleges operate in an environment with limited resources and funding (Nundkumar & Subban, 2018). Funding the acquisition of ICT resources is a challenge to the realisation of the e-learning part of remote learning. TVET colleges currently do not have the appropriate ICT resources, facilities and personnel to implement remote learning (Bakare et al., 2020). There is limited access to the internet, limited access to computer centres/classrooms, and, in most cases, there is no access whatsoever off-site campuses.

5.9.5.3 Compatible digital educational content

Organising digital educational content for TVET colleges that must also be compatible with a variety of devices and mobiles and aligned to pre-existing face-to-face curricular is very critical and not an easy task. It must ensure that students and lecturers have learning opportunities that are in parity with "broader educational objectives" (Ali, 2020) and international educational standards.

5.10 Professional development – training for e-learning

It is essential to enable lecturers to broaden their skills and professional knowledge that was developed in traditional modes of teaching and learning (Matzel & Edmund as cited in Mpu & Adu, 2019). For remote learning to take place successfully, two parallel activities must take transpire concurrently: "curriculum development" and a "national strategy of training college lecturers", within a coherent lecturer development framework (Gewer, 2010).

5.10.1 Factors of staff motivation to embrace remote learning

It is imperative that lecturers willingly embrace change for the integration of technology to be successful (Ali, 2020). Technology serves as a catalyst and will also support lecturers to prepare and deliver lessons (Sadegül Akbaba, Kalayci & Avci, 2011). As motivation to lecturers, they must be given adequate time to prepare and be supported in unsupportive curriculum design (Vrasidas, 2015) as having the resources is not enough and does not mean automatic implementation. Hence there must be other supportive factors for lecturers, such as staff readiness (Vrasidas, 2015). Rigorous "training and support in ICT and pedagogy" is essential before lecturers are expected to implement a new teaching and learning pedagogy (Yunus, 2007). Staff readiness and motivation are prominent factors that must be considered to assimilate successfully to remote learning at TVET colleges (Ali, 2020). The lecturers'

willingness and attitude towards implementing ICT has a huge impact on the students' performance (Huang & Liaw, 2005).

5.10.2 Identifying individual needs and subject-specific training

Suffice to say, for TVET colleges to be successful they need to employ lecturers with skills to perform tasks as per subject requirements and the college attaining its strategic goals. It stands to reason therefore that as times change, the individual needs and subject-specific training needs of lecturers also change which requires a tailor-made training plan. As much as there are no guidelines and policies on how to give individual training to lecturers, it is up to the leaders in their endeavours to capacitate lecturers to identify lecturers whose "skills or ability needs developing" and those that lack motivation (Dobre, 2013). Leaders have to go the extra mile in catering for the individual and subject-specific needs of lecturers, viewing it as a "true investment in human capital" (Naong, 2016). When lecturers are more developed, skilled and knowledgeable, specifically to their individual needs and specific subjects, they become more satiated and committed to their job, thus increasing their performance which consequently leads to greater organisational effectiveness (Naong, 2016) and it also sustains the future competitive advantage of TVET colleges.

5.10.3 Curriculum adaptation for e-learning

TVET college subjects are different in their offerings or delivery, some needing formal teaching qualifications while others requiring lecturers to have some industry background (Wedekind, 2016) because of the practical nature of the courses. Lecture-based subjects can easily and rapidly be moved to an online platform such as "events management and secretarial courses" (Naidoo & Dawuwa, 2019). Digitised learning contents, aligned with the curricula can also be moved online rapidly. Other curricula cannot be easily adapted or transferred to online learning (Ali, 2020). Additional factors such as "instructional approaches, content, pacing, interaction models and assessment" (World Bank, 2020) will also need careful adaptation to enable institutions to transition to online learning. The curriculum change/adaptation that needs to take place to accommodate e-learning is also influenced by the "historical, cultural and social pressures" (Mpu & Adu, 2019) of the country.

5.11 Factors to consider for TVET colleges to implement remote learning

Technology implementation is the potent vehicle for e-learning delivery and needs "close cross-collaboration" between "instructional, content, technology teams" (Ali, 2020) and educational stakeholders, needing careful decision making and coordination. The following factors are the main drivers of the change envisaged:

5.11.1 Infrastructure

The World Bank posited that the highest performing educational systems are not capacitated adequately to provide online learning for the large scale of students. The pace of technological advancement has left decision-makers unable to keep pace with the costs and infrastructural support needed (World Bank, 2020). To be able to deliver online and blended/remote learning there has to be adequate ICT support pertaining to "infrastructure, tools, hardware and software support systems" (Ali, 2020). Infrastructural development has no "one-size-fits-all" (Moskal, Dziuban & Hartman, 2013) approach, it is a continuous process that is dependent on the needs of the colleges' goals, objectives and courses offered and spans over an extended period. Moskal et al. (2013) depict the following strategic questions to be answered for infrastructural acquisition for remote learning:

- Why engage in remote learning?
- What are the "goals and outcomes to be achieved", short and long term?
- What would be the benefit for the students?
- What are the courses and programs to be offered in a blended learning format and why?
- What engagement and support do the campuses and departments need?
- How blended learning should be rolled-out in the entire college?
- Where to begin?
- What are the investment levels and returns?

5.11.2 Software

Remote learning requires software support systems that incorporate "text, graphics, audio and animation" (Ali, 2020), to liven up lessons that require or will be well explained and demonstrated with more than just text (Thomas & Israel, 2013). Having such a multimedia-enhanced interface in an educational context has many benefits such as improving students' comprehension of the instructional materials, allowing students to carry out virtual experiments that tend to be costly and perilous to conduct in a physical classroom setting (Hennessy, Deaney & Ruthven, 2006). Education institutions can also use software and learning applications that are free and readily accessible on the internet (Ali, 2020).

5.11.3 Connectivity

Lecturers should have adequate access to ample broadband and connected devices at home and at the institution to facilitate the e-learning environment and to be able to communicate with students and parents as the lack thereof will result in students not being able to learn online (World Bank, 2020). Students need to have immediate access to the learning material at home using the internet (WAN-Wide Area Network) and at the college using WIFI (Wireless Fidelity) and offline gaining access to the Local Area Network (LAN) of the college. The IT connection must be such that it supports usage for high and "low bandwidth including offline solutions" (Ali, 2020) for all digital learning materials and media. Colleges can reach out to Internet Service Providers (ISPs) like Vodacom who are readily available to support learning, to help colleges to get internet access for both staff and students that is free, zero-rated or cheaper-rated (Ali, 2020). In congruence with this, Nundkumar and Subban (2018) said that the DHET intended to collaborate with the then Department of Telecommunication and Postal Services and the Department of Science and Technology to increase access by releasing "increased bandwidth and reducing costs for educational purposes"

5.11.4 Policy

The technological advancement towards remote learning needs to be legislated because of its cost implications and to ensure it is compulsory for every role player. The study aims to understand and reveal the training and resource needs of TVET lecturers. However, that would be a futile exercise if no policy puts everything into place. There is a professional development plan and an assets and infrastructure policy, however, a new policy must be developed that marries the two together in terms of remote learning. China has initiated such a policy called, "Suspending classes without stopping learning policy" (Ali, 2020). This policy implementation gave rise to the initiative called "disrupted classes, undisrupted learning" (Huang, Liu, Tlili, Yang & Wang, 2020) providing online learning to their learners. Developing the remote learning policy will also aid in managing online learning amicably by the leaders and help with pedagogical reform in education (Ali, 2020). Policy for training and resources for remote learning must be developed prior to implementation as it must align theory with practice. It should cover the scope and extent of training and resources, issues of "intellectual property ownership, copyright, workload" (Moskal et al., 2013), and the contract, agreement and terms and conditions for the resources such as laptops and internet usage for lecturers.

5.11.5 Sustainability

The DHET acceded that face-to-face teaching and learning techniques are unsustainable and suggested that alternative sustainable and innovative techniques be sought to eliminate "potential risks to effective resource management" (Nundkumar & Subban, 2018). To sustain remote learning at TVET colleges, in addition to the colleges' IT department proactively doing regular maintenance and applying system and security updates and patches, Nundkumar and Subban (2018) suggest employing more technologies of "Cyber-Physical Systems" to decrease any risks of the e-learning systems crashing and to sustain it for a longer period. The DHET project of "Capacity building of TVET colleges lecturers through a sustainable national open learning management system" (Adendorff & Van Wyk, 2016) can be useful in offering formal, informal, open-learning and open-source training to lecturers to keep on par with the ever-changing trends of technology. In general, it will help lecturers to keep up with the times.

5.11.6 Funding/financing

Copious realities need to be considered for remote learning to be successful, such as infrastructure, connectivity, software demands and lecturer capability development through intense and extensive training, adapting the curriculum, learning material development and others as they all intensify operating costs (Nundkumar & Subban, 2018). The DHET has promised to offer support to TVET colleges in this regard through "policy development and funding mechanisms" (Nundkumar & Subban, 2018) in addition to colleges forming partnerships and sponsorships with service providers. Deciding whether to see the implementation of remote learning as an investment or expense stems from the institution answering whether it is worth it for the institution to improve teaching and learning practices through increased college development; using classroom resources more efficiently; providing opportunities for convenient and flexible learning for students and increasing access to TVET colleges through growing enrolment numbers (Moskal et al, 2013).

5.12 Strategies for training and implementation of remote learning

Mhlanga and Moloi (2020) say that strategies that have been implemented successfully for remote learning by several universities were to move most if not all learning activity to digital platforms. The Department of Basic Education also published "textbooks, worksheets, revision booklets and study guides on their websites". The tools that are used for online learning include "internet websites, YouTube, Microsoft Teams, Skype, WhatsApp groups and Zoom". UNESCO

(2020) has also developed a “hybrid learning strategy” that combines both remote and traditional face-to-face learning, ensuring learning continuity and also improved student experience which could be adapted for TVET colleges and consists of the following steps:

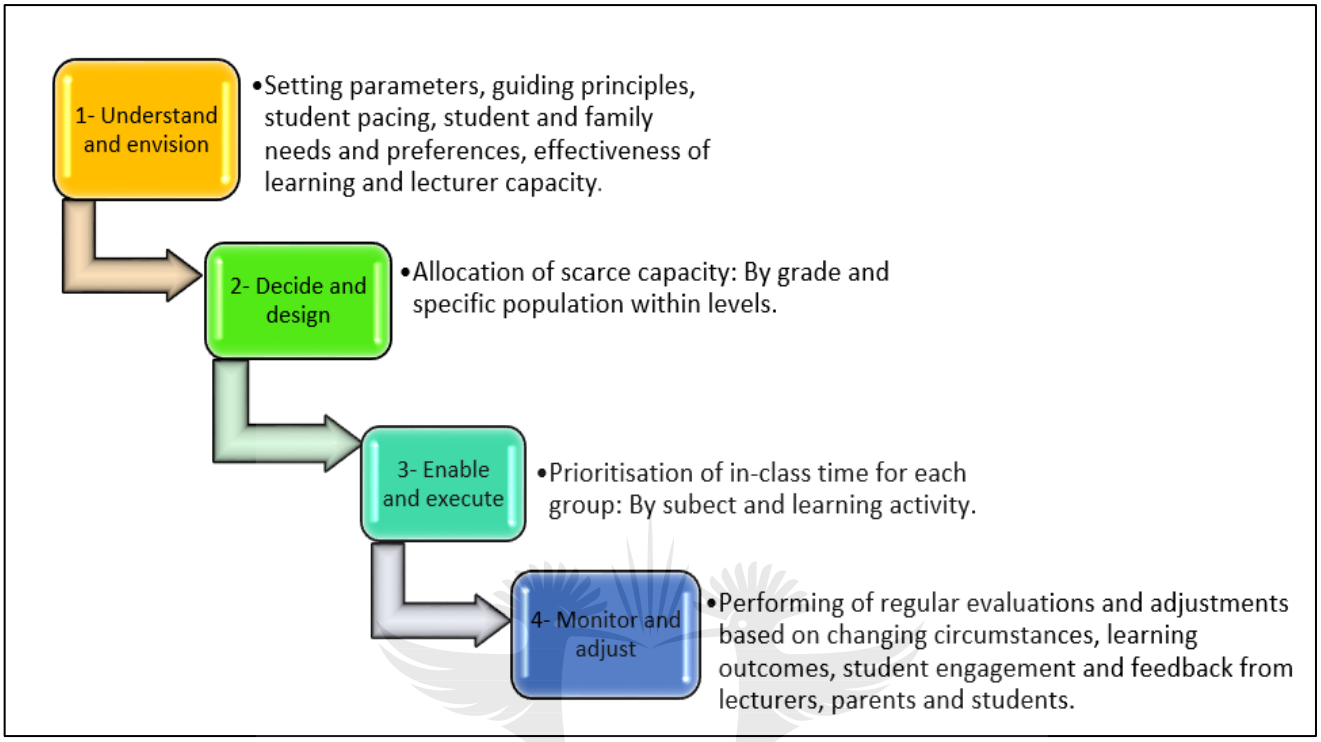

Figure 5.2: Strategy to implement remote learning (Hybrid learning strategy)
Source: UNESCO (2020). *COVID-19 response – hybrid learning as a key in ensuring continued learning*.

Training offered to lecturers is based on fulfilling section 22 of the Skills Development Act. Research and analysis must be conducted to determine the “skills development needs of the country, sector or the organ of state” (Skills Development Act, 1998). In a nutshell, all colleges as organs of state must conduct their research and analysis and then develop their training plan/strategy as per the needs of the institution. As we have learnt that when it comes to training for remote learning a “one-size-fits-all approach” (Wedekind, 2016) will not be feasible as the needs of lecturers vary. It is therefore my contention that college leaders are responsible for developing their own training plan/strategy.

5.13 Conclusion

This chapter critically dealt with the importance of TVET college’s transformation in adopting a different paradigm of teaching and learning by moving away from 100% contact learning and moving towards blended remote learning. The transformation in education from the inception to

migration of TVET colleges to DHET makes it noticeable that there is still no structure for courses and qualifications designed especially for TVET college lecturers to offer all courses as outlined in this study. Paterson (2016) reported that the DHET is still in the process of developing formal "professional level qualifications" and a comprehensive qualification structure for TVET college lecturers, which leaves TVET leaders relying on the Skills Development Act provision for lecturer development. Kooij, Jansen, Dikkers and de Lange (2010) hold that when a leader has highly committed human resource practices that include "training and development", it creates a strong bond and attachment of the lecturers to the college as it heightens motivation, job satisfaction, employee retention and other desirable individual-level outcomes" and motivates lecturers to feel highly confident to perform innovative tasks. Furthermore, in preparing to migrate education outside 100% traditional physical classrooms, coordination, thought and careful decision making on the part of TVET college leaders is essential. The move requires pluralist approaches to leadership incorporating transformational, transformative and distributed leadership styles.

An ICT-immersed learning environment needs optimism, belief and motivation as the digital revolution synergises educational interests and ambitions of both the students and lecturers. Adopting remote learning as an education system is a necessity to keep abreast of the "rapid emergence of new technologies" (Ali, 2020). It is therefore important to cater for the resource and training needs of lecturers, as they are at the forefront of teaching and learning. When TVET colleges do not realise this transformation, it will have far-reaching and undesirable consequences for all. Lecturers will remain undeveloped, demotivated and demoralised and TVET colleges will become irrelevant as they will not be on par with business and industries (the supply will not be aligned to demand). Society will continue to be stratified, having copious citizens especially the young not being able to take an active part and benefit from new technology opportunities and who cannot compete in the global market. Literature furthermore supports that not adopting an ICT-immersed learning environment will also increase the digital divide which is a social equity challenge (Marope et al., 2015) still experienced in our country.

The next chapter will explain in detail the research methodology employed in this study.

6 RESEARCH METHODOLOGY

6.1 Introduction

Research, also referred to as investigation or enquiry, is described by McMillan and Schumacher (2014) as a "systematic process" that is followed to accumulate and analyse data logically for a

"specific purpose", to help inform the final decision towards a particular course of action (Merriam & Tisdell, 2015). A research methodology includes the design of the study, the chosen methods and techniques best suited to the study as well as the reasons why these choices and specific procedures for data collection were made (McMillan & Schumacher, 2014). This chapter presents the selected paradigm, approach, design and methods used to address the questions of the study. In addition, the strategies used to establish rigour and trustworthiness are considered. Ethical considerations for conducting the study are also described. The chapter culminates with a summary of the chapter.

6.2 Research paradigm

The primary aim of the study was to explore the training and resource needs of TVET college lecturers regarding remote learning and the possible implications of this for TVET college leadership. An interpretivist paradigm was considered most suitable for the study. A paradigm describes the worldview of the researcher (Mackenzie & Knipe, 2006). The paradigm, as a conceptual lens, will thus influence the methodological choices for data collection and the meaning or interpretation of the research data analysis (Kivunja & Kuyini, 2017). The interpretivist worldview holds an assumption that "reality is socially constructed" (Merriam & Tisdell, 2015). Reality does not exist in a single sense, but there are multiple ways of interpreting a single event/reality. Interpretivism allows individuals to "seek an understanding of the world they live and work in" (Creswell, 2013). The research develops subjective meanings based on unique experiences, which are multiple and varied. Research using this paradigm thus takes an in-depth look at the complexity of the subjective and negotiated views through social, historical and cultural events of the research participants.

In the case of this research a subjective meaning was developed that TVET colleges lack technological transformation, are still 100% contact learning institutions as compared to universities, and do not have the resources and training to transform to be remote learning institutions. Research approaches are defined generally as "plans and procedures" that are followed, step by step, starting from the "broad assumptions" until we arrive at the detailed method to be used for "data collection, analysis and interpretation" (Creswell & Creswell, 2017). The approach utilised in the study was informed by the philosophical assumptions of the researcher, the procedures used in the inquiry, the research problem being addressed, the researcher's personal experience and the perceived audiences of the study. The research design refers to the type of inquiry situated in quantitative, qualitative and mixed methods approaches that provide definitive guidance for proceedings to be followed in a research study. With relevance to the

current study, insight into the research problem was conducted through interaction with a TVET college through a qualitative survey and qualitative semi-structured interviews with the HODs of three different departments at a TVET college. Participants' views were therefore crucial in describing the training and resource needs of lecturers in respect of remote learning and the implications of this for leadership from the HODs' perspectives in one local TVET college.

The primary aim of the research is to explore the needs of TVET college lecturers in terms of the resources and training required for remote learning. It also forms part of the broader agenda which is staff professional development and the transformation of TVET colleges into 21st-century learning institutions, so that they are in line with industries and businesses and become global players in the skills development of the country and its workforce.

6.3 Research approach and design

Qualitative research is used when studying any phenomenon in its natural setting. Creswell and Creswell (2017) describe qualitative research as an "approach for exploring and understanding" the meaning groups and individuals "ascribe to social; or human problems". As the focus of this study was on exploring the training and resource needs of TVET college lecturers towards remote learning from the lecturers and the HODs' perspective, this approach was considered appropriate to arrive at possible answers.

Subsequently, a qualitative research design was considered. A research design refers to the type of inquiry that is going to be employed, to give this research study a direction for the procedures to be followed. Yin (2014) regards the research design to be the outline of the methods used to gather and critically analyse the data to answer the research question. A generic qualitative design was employed for this study, as a generic study claims no specific methodological viewpoint and attempts to understand the phenomenon from the perspectives of the participants (Caelli, Ray & Mill, 2003). Generic research is not bounded or restricted sufficiently to be classified as a research methodology itself, however, it can use traits of other research methods to create a unique methodology that will be suitable for a specific research study (Kahlke, 2014).

6.4 Methods

Methods are generally viewed as all the techniques used to answer the research question (Wilson & MacLean, 2010). These methods include how the participant selection took place and how data were collected and analysed

6.4.1 Selection of site and participants

A research sample refers to the group of participants or subjects selected to take part in the study. Participants take part voluntarily and are the main sources from where data were collected for the study (McMillan & Schumacher, 2014). The earmarked population for this study was lecturers and HODs at TVET colleges making the transition to more remote learning due to the COVID-19 pandemic. One TVET college in Gauteng was conveniently selected as the site for the study. Convenience sampling is a nonprobability technique used for selecting participants that are expedient and accessible for the study. It is the most preferred sampling method in qualitative research studies, due to its limited "practical constraints, efficiency and accessibility" (McMillan & Schumacher, 2014), and it also helps the investigator to comprehend the existing relationships between the phenomenon of study and the participants. The accessible population for the study thus became all the campuses of one TVET college in Gauteng. One campus was conveniently selected as the site for the study as the researcher had access to the site and the possible participants.

The sample for this study was a purposively selected one. A purposive sample is a type of sampling that gives leeway to the researcher to single out the groups or individuals who will be knowledgeable and insightful regarding the phenomenon of interest (McMillan & Schumacher, 2014). Yin (2011) delineates purposive sampling as a population of the research that was chosen deliberately to yield the most "relevant and plentiful data". The purposively selected sample comprised 73 TVET college lecturers in one campus of the accessible TVET college campuses situated in Ekurhuleni, Gauteng. The purposive sample consisted of 73 lecturers, of whom 17 were from the NATED-Engineering Department, 21 from the NCV-Business Studies Department and 35 from the NATED-Business Studies Department, as well as three HODs respectively from each of these departments.

The TVET college lecturers were considered appropriate as a sample, as the aim of the study was to understand the different needs of the lecturers in terms of resources and training for remote learning as they stand in their differing subject offerings. The assumption was that the needs of the lecturers would be different, depending on the nature of the courses and subjects

that they offer. I reasoned that understanding the needs of the lecturers for remote learning from the standpoint of the lecturers would assist TVET college leaders to apply appropriate measures when procuring resources and developing a training strategy/plan for the lecturers rather than applying a “one-size-fits-all” approach (Wedekind, 2016).

The three departmental HODs from the respective departments were considered as information-rich participants who would share their perceptions and experiences as the leaders in this transition towards remote learning. These participants would be able to shed light on how the HODs had been affected, and on the resources and training needs of the lecturers in their departments. It was reasoned that the HODs’ perspectives on these aspects would aid in achieving the third objective of this study, which was to propose guidelines for training and support of lecturers moving towards remote learning by leadership at TVET colleges.

6.5 Contexts of study (including biographical details of the participants)

TVET colleges are still 100% contact learning institutions post the 2016 function shift of migrating TVET colleges to the DHET. In 2020 there was a coronavirus outbreak that resulted in a hard lockdown globally, which also saw all education departments having to suspend all contact learning activities. The function shift came with the perception that TVET colleges would be transformed to be like universities in terms of teaching and learning strategies and technological advancement. The coronavirus pandemic exposed and exacerbated the need for TVET colleges to transform from being 100% learning institutions to becoming e-learning or remote learning institutions. We have witnessed how universities seamlessly transitioned from contact learning to e-learning, yet to date, TVET colleges are still 100% contact learning institutions. This study aims to understand what the training and resources needs are of TVET college lecturers for remote learning and the implications of this for TVET college leadership. The study focuses on understanding the needs of the lecturers and then proceeds to engage with the HODs to understand their perception of the needs of the lecturers in their department, and how they support or plan to support the lecturers. Finally, the study comes up with suggestions that will help develop training guidelines for remote learning.

The study was conducted at a TVET college campus in Ekurhuleni, Gauteng. Grollman and Rauner (2007) describe TVET college lecturers as teachers or lecturers who work in a formal college setting, “giving instructions in vocational courses”. The following tables summarise the demographic information of TVET college lecturers and HODs respectively.

Table 6.1: Demographic information of the lecturers

1.	**Department**				
	NATED-Business Studies		NATED-Engineering		NCV
	35 lecturers		*17 lecturers*		*21 lecturers*
2.	**Age**				
	18 - 24	25 - 34	35 – 44	45 – 54	Above 54
	0	*17 lecturers*	*18 lecturers*	*28 lecturers*	*10 lecturers*
3.	**Gender**				
	Female			Male	
	42 lecturers			*31 lecturers*	
4.	**Highest education level**					
	Certificate	Diploma	Degree	Honours Degree	Master's Degree	Doctorate
	2 lecturers	*12 lecturers*	*29 lecturers*	*30 lecturers*	*0*	*0*
5.	**Lecturing experience at TVET college**				
	1 – 4 years	5 – 9 years	10 – 14 years	15 – 20 years	Above 20 years
	6 lecturers	*39 lecturers*	*10 lecturers*	*12 lecturers*	*6 lecturers*
6.	**Computer training/knowledge**			
	Basic		Moderate	Expert	
	19 lecturers		*42 lecturers*	*12 lecturers*	

Table 6.2: Demographic information of the HODs

Participant	Gender	Age	Qualification	Years' experience as a lecturer	Years' experience as a HOD
HOD 1	Female	45 – 54 years	BCom HED	10 – 14 years	10 – 14 years
HOD 2	Female	Above 54	BA Honours	Above 20 years	10 – 14 years
HOD 3	Female	45 – 54 years	ACE	15 – 20 years	1 – 4 years

6.6 Data collection method

Data collection for this study included a qualitative survey completed by purposively selected TVET lecturers in order to describe lecturers' views on their needs in moving towards remote learning, and semi-structured qualitative interviews with purposively selected HODs to elicit their views on this topic.

Dimond, Fiesler, DiSalvo, Pelc and Bruckman (2012) hold that face-to-face or traditional ways of conducting interviews may not always be practical, especially when the participants are not at a reachable distance. Given the current COVID-19 regulations, alternative ways to collect the information via convenient alternatives like e-mails, instant messaging, telephones and multiple other communication media were considered for this study.

Qualitative surveys are a data collection technique that collects data regarding the present conditions or events of a group of participants (McMillan & Schumacher, 2014). Qualitative surveys are mostly used to gain some insight into current events, experiences, "beliefs and attitudes of the participants". The format of the survey consisted of a section for biographical details and statements concerning the main aspects related to needs and resources in moving towards remote learning (see Appendix 3). Participants could respond by indicating their level of agreement with the statements according to a Likert-type scale. The survey was structured into three sections. Section A solicited the biographical information of the lecturers, Section B was based on the training needs of the lecturers and Section C was based on the resource needs of the lecturers. The survey was distributed through an online platform, using Google forms because of COVID-19 social-distancing regulations. It was distributed to lecturers via email and a link to the form was sent via WhatsApp.

The use of Google forms also came with the advantage that the data collected is immediately simplified into MS Excel graphs, to make interpretation and analysis easy. The lecturers had to give consent, agreeing to take part in the study before going through the survey (see Appendix 3). All participants returned their completed Google surveys which were summarised into graphs that were used for interpretation and analysis.

Qualitative interviews are a data collection method that mainly solicits people's views, opinions, perceptions or perspectives and is seen as a "primary method used in qualitative research" (Schultze & Avital, 2011). Qualitative interviews are seen as the most direct interaction between a researcher and the participant and an attempt to tap into the perspective of the participant to provide a deep description of the aspect under study (McMillan & Schumacher, 2014; Oltmann, 2016). Oltmann (2016) further mentions that a general expectation for good qualitative interviews is that they should be face-to-face interviews but that other formats of interviewing such as telephonic interviews have become increasingly common. A semi-structured interview was considered most appropriate for the study. Semi-structured interviews are a mix of "more or less structured interview questions" (Merriam & Tisdell, 2015). The interview script contained open-

ended questions and possible probing questions (see Appendix 4) in between. The questions were flexible, were guided by the interview schedule and had no predetermined order or wording. The interviews were conducted face-to-face with the three HODs and social distancing and sanitising regulations were observed. Conducting face-to-face interviews allows for the presence of visual cues, such as facial gestures and body postures as a means of "non-verbal communication strategies" (Silvester, Anderson, Haddleton, Cunningham-Snell & Gibb, 2000), as well as social cues, which allow the interviewer and interviewee to monitor the behaviour of each other, allowing the interviewer to be cognisant of those unspoken words during the interview. The interviews were approximately 45 minutes each.

6.7 Data analysis

Data analysis refers to how the collected data are going to be narrated and analysed in a sufficient, detailed and accurate manner using data excerpts to substantiate the interpretations made (McMillan & Schumacher, 2014). Data analysis aims at finding answers to the stated research question through a structured, iterative process to arrive at patterns that are formed and followed.

6.7.1 Data analysis of the qualitative survey

The numeric responses of the qualitative survey were reported narratively in the form of numbers and percentages. The data analysis was divided into three sections namely: demographic information and level of computer skills/knowledge; training needs and resources needs. The survey results and the additional perceptions of the lecturers were incorporated with the overall interpretation and findings, including the interview data and literature.

6.7.2 Data analysis of the qualitative interviews

The main technique used to analyse the data was thematic analysis. Thematic analysis is explained by Braun and Clarke (2006) as a qualitative data analysis method that allows for the identification, analysis, arranging and reporting of data that has been arranged into themes and patterns, after the data corpus has been critically reflected on deliberately and rigorously. The analysis took place through six steps, namely:

a) "Familiarising myself with the data"
   I immersed myself with the data collected from the transcribed interviews with the HODs by reading it repeatedly, to search for and recognise salient themes and meanings.

b) "Generating initial codes"

After reading and rereading, codes were extracted comprising interesting data which needed to be analysed. Full and equal attention was paid to collate the interview data with the survey and the literature. Repeated patterns were recognised as I worked through the data systematically and then formed the training guidelines that I needed to develop to meet my objective.

c) "Searching for themes"

The different codes as listed were re-analysed to form salient themes. The codes were combined into relevant themes. An MS Word table was used to group the codes then create overarching themes and sub-themes mainly and deliberately informed by my objective. The unused themes were used to form "miscellaneous" themes which might be useful in the future.

d) "Reviewing the themes"

I had a second look at the formed themes, ensuring that all the themes had meaningful coherence. The available themes were then analysed for meaningfulness, and after all the reworking and rereading a thematic map was formed.

e) "Defining and naming themes"

The formed themes with their descriptive names were analysed data for meaningfulness based on my objectives. The analysed work was searched for coherence and "internal consistency". Narratives were formed based on the collected data of the interviews incorporating the survey data as well as literature.

f) "Producing the report".

The established themes and the narratives developed from the data formed this research report that answers the research questions. The report ought to will be "concise, coherent, logical" and should not be repetitive (Braun & Clarke, 2006).

6.8 Trustworthiness

Trustworthiness or rigour alludes to the standard of confidence in the research data, its interpretation and the methodology utilised to ensure that the study is of good quality. It also entails the protocols and procedures used to make the study worthy by its intended readers (Connelly, 2016). Lincoln and Guba (1985) posit that the trustworthiness (validity and reliability) of "naturalistic inquiry" consists of measures for credibility, transferability, dependability and

confirmability. The trustworthiness of the study was maintained in accordance with Lincoln and Guba (1985) as follows:

Credibility indicates the "truth-value" of the findings, and I triangulated the findings from the qualitative surveys with all lecturing staff, with findings from individual semi-structured interviews with the HODs. I made use of member checking of the transcribed interviews. I also ensured peer review by discussing all analyses and findings with the research supervisor.

Transferability indicates the possible transfer to other contexts. As this study was conducted at one specific campus, I made use of a detailed description of the planning and implementation of the study, as well as carefully reflecting on what the issues are that need to be considered when interpreting the findings in this specific context. The detailed participant description and setting selection, the data-collection and analysis procedures, and critical interpretation of findings may allow for the transfer of such studies to other similar TVET college campuses.

Dependability shows that findings are accurate, consistent and likely to be repeated. All the data collection protocols were observed, and they were followed by coding and quality checks using the "thematic analysis" steps outlined by Braun and Clarke (2006). In-depth descriptions of the "overlapping methods" (Shenton, 2004) (qualitative survey and interviews) used allowed for the study to be repeated and the same results produced. An audit trail of the entire research process is available.

Confirmability provides evidence that the study attempted to be truthful as to the findings and that researchers report on the study as objectively as possible. As I am a lecturer at the TVET college, and the participants are known to me, I had to ensure that I reflected on findings using available evidence in the form of literature and collected research data. To guard against possible researcher bias (personal assumptions, values, biases, characteristics and preferences) I ensured that the research methods employed (triangulation) were described adequately and all the research data was kept safely for future reference and/or analysis as well as to have an "audit trail" (Shenton, 2004). The qualitative survey was shared with three fellow colleagues from three different TVET colleges, to give guidance and feedback on whether the survey was in any way subjective. Their feedback and suggested changes were applied in the survey to ensure that it was transferable and not biased.

6.9 Role of the researcher

Qualitative research aims to explore, comprehend and find the meaning of how “individuals or groups ascribe” to everyday human and “social problems” (Creswell, 2013). As a researcher, I am a human instrument of data collection (Simon, 2011), therefore, my aim as the researcher of this study is to gather, analyse, interpret and reflect on the collected data in order to understand the resources and training needs of TVET college lecturers towards remote learning and the implications of this for leadership. Greenbank (2003) holds that the researcher as the data collector needs to explain explicably all the “relevant aspects” regarding themselves and the role they play regarding all aspects of the study. I am a computer studies lecturer at a TVET college, responsible for the student's achievements, skills and knowledge in computer applications, making sure that their education journey is successful, and fulfilling all my classroom administration within the stipulated timeframes. My relationship with the research participants is a professional one; we are colleagues within the same education sector. The HODs are the immediate leaders after the program managers who are also lecturers. My role as a researcher in the study was, however, neither as lecturer nor as subordinate to the HODs, but merely as a researcher and a collector of data, analyst and interpreter to understand a phenomenon.

My expectations are to see TVET colleges advancing to the 21st-century teaching modes, capacitating lecturers with needed resources and training to migrate from 100% face-to-face teaching to facilitating remote learning. My experience as a computer studies lecturer, seeing and understanding first-hand the sudden impact of the cessation of 100% contact teaching brought about by the COVID-19 lockdown, qualifies me to conduct the research. As the primary research instrument in the research, my background as a lecturer should be treated as a bias (Maxwell, 2012). The way I interpret the data, my beliefs, assumptions and bias could affect the way the data is analysed (Strauss & Corbin, 1998). I have identified that the following biases might influence this research:

- My lack of resources as a computer studies lecturer and not being able to reach out to students except through face-to-face contact from the time of the hard lockdown in March 2020 until the present.

- My first-hand experience as a university student of how universities were able to transition seamlessly to e-learning within a short space of time.

- My expectation to see TVET colleges transform their teaching and learning strategies and technological advancement like universities have done, since they belong to the same department (the DHET).

- My experience at the college seeing how most lecturers are not computer literate and require assistance to carry out their classroom administration.

As a means to reduce bias in the final results of the study, all the data collected including survey summary charts, excerpts of additional comments, interview transcripts and audio have been made available to validate all the responses received from participants and the findings of the study (Maxwell, 2012). Furthermore, to guard against possible researcher bias (personal assumptions, values, biases, characteristics and preferences) I ensured that the research methods employed (triangulation) will be described adequately and all the research data will be kept safely for future reference and/or analysis as well as to have an "audit trail" (Shenton, 2004).

6.10 Ethical considerations

Research ethics are the considerations of what is wrong and right regarding conducting the research study. Ethical considerations ensure that the conduct of the research/researcher conforms to "generally accepted norms and values and are morally acceptable" (Mouton, 2013). The research conducted conforms to the following norms and standards:

6.10.1 Informed consent, permission and future interest

At the beginning of the online survey questionnaire, before the first section opened, the lecturers were required to give consent to take part in the study voluntarily after they had read through the information about the study (see Appendix 3). The HODs who took part in the interviews were given the "informed consent" and the "video, audio or photographic recording" permission forms from the University of Johannesburg to sign and to give their consent. Samples of the consent forms used are attached to the report as Appendix 5, however, the completed and signed forms are available with the research to keep the identity of the HODs who took part in the study confidential. The information in the consent forms was adapted to accommodate the participants' level of language and comprehension, making sure that they understood what the study was about and that they were voluntarily taking part in a study without coercion and not under duress. The participants were informed that they could request access to the research report before it is published but they did not take up that option. The permission to conduct the research at the college was applied for and granted. The written permission letter was attached to the research report as Appendix 2. The research participants were all over the age of 18 years, therefore did not require parental consent and/or supervision.

6.10.2 Potential risks

The study had a low potential health risk as there was limited face-to-face contact between the participants and the researcher as the qualitative survey was conducted online instead of in face-to-face interviews. Where face-to-face interviews were conducted, the participants did not experience any discomfort and harm and all COVID-19 protocols were observed i.e., social distancing was observed during the interviews and the researcher and participants sanitised their hands before and after the interview. The recording device was also sanitised after each interview.

The personal information of the research participants will be kept confidential, the signed consent forms will also be kept with the researcher. The Google forms survey utilised is programmed not to collect the e-mail addresses of the respondents or their names, to keep their responses strictly confidential and anonymous. The research participants were kept abreast of the proceedings of the study, to make them feel at ease and willingly participate in the study. The research findings and conclusion will be made available to all participants who wish to be kept informed.

6.10.3 Ethical measures

The identity of the lecturers that took part in the survey is completely anonymous and the online form did not collect lecturers' e-mail addresses. The names of the HODs are completely confidential and have been removed from the interview transcripts. All the names of the participants are known to the researcher but will not be revealed to the university or the college. However, because of the nature of their position, they could be identifiable by a person who knows the TVET college campus. The names of the departments are mentioned to provide context to the study, however, the names mentioned during the interviews have been removed and replaced with pseudonyms.

6.10.4 Potential benefits

The study is worthwhile and will benefit all the lecturers and HODs who have participated in the study as it will make them more aware of possible needs and strengths in their institution in moving towards remote learning. Apart from the institution becoming more relevant to teaching and learning, given the current state of affairs, leadership may also be assisted in developing unique teaching and learning strategies and the proposed training guidelines will come in handy for other TVET colleges.

6.11 Summary

Chapter 6 constitutes the methodological aspects of the research study. The study was located in an interpretivist worldview, embraced a qualitative research approach, and a generic qualitative research design was employed as it was best suited to arrive at answers to the research questions. The sampling of the study comprised lecturers of three different departments at a TVET college campus in Ekurhuleni, Gauteng as well as HODs of three different departments at the same college. The sampling was purposive, as it was reasoned that the selected participants would be most appropriate for the aim of this study and would provide rich views and information about the issue. Data collection occurred using a qualitative survey and qualitative, semi-structured interviews. The data were analysed applying thematic analysis. Trustworthiness measures, namely: credibility, transferability, dependability and confirmability were adhered to, to ensure trustworthiness. All ethical considerations were considered, starting with applying for clearance with UJ, to applying for permission to conduct research at the college. The safety, well-being and confidentiality of all the participants were maintained and all additional documentation has been attached to this research report as appendices for an audit trail.

In Chapter 7, I will critically present the findings and interpretation of the data gathered during this study.

7 FINDINGS AND INTERPRETATION

7.1 Introduction

Chapter 7 details the results of the analysis of collected data for this study titled: **Professional development needs of TVET college lecturers towards remote learning: Implications for leadership.** In the previous chapter, a detailed discussion of the research design and methodology employed in this study was rendered. An exploratory generic qualitative research design was used to explore the resource and training needs of TVET college lecturers for remote learning. The focal point of this chapter is to present the results of the analysis and to interpret the findings of the study. The data was gathered through a qualitative survey and qualitative semi-structured interviews. The obtained data were analysed using the steps of thematic analysis as explained in section 6.7. The themes and sub-themes identified will now be presented and discussed with supporting literature assimilated to support the findings of the study.

7.2 Findings from the qualitative survey

Seventy-three TVET college lecturers participated in the completion of the qualitative survey out of a possible 90 lecturers, which calculates to an 81.1% response rate. To protect the privacy and confidentiality of the lecturers no names and email addresses were collected when conducting the survey. The respondents' additional written responses reported are unedited and therefore they might not be grammatically correct.

Analysis of the responses of the qualitative survey was structured and discussed according to the following:

- Demographic information and level of computer skills/knowledge
- Training needs
- Resources needs.

The graphical summary of the survey responses is included in Appendix 7 and will be referred to in the discussion.

7.2.1 Demographic information and level of computer skills/knowledge

The survey was conducted with the lecturers at a purposively selected TVET college campus in Ekurhuleni, Gauteng. Seventy-three (81.1%) of the lecturers completed all the compulsory questions and responded to the optional questions in the survey. Of the 73 respondents, 17 (23.3%) were NATED-Engineering lecturers, 21 (28.8%) were NCV lecturers and 35 (47.9%) were NATED-Business Studies lecturers. In terms of age, 28 (38.4%) lecturers were in the age range of 44–54 years, followed by 18 (24.7%) in the 35–44 years, then 17 (23.3%) in the 25–34 years and lastly, there were 10 (13.7%) lecturers in the above 54 years' age range. In terms of gender, 42 (57.5%) of the respondents were female and 31 (42.5%) were male. The most impressive finding was the fact that in terms of qualifications 30 (41.1%) of the lecturers hold an honours degree, followed by 29 (39.7%) with a bachelor's degree, 12 (16.4%) with diplomas and 2 (2.7%) lecturers holding a certificate. In terms of experience, 39 (53.4%) of the lecturers have a lecturing experience of 5–9 years, followed by 12 (16.4%) with 10–14 years of experience, 10 (13.7%) with 10–14 years of experience, 6 with (8.2%) 1–4 years' experience and also 6 (8.2%) with 20 years and above of experience.

In terms of the computer skills/knowledge of the lecturers, it was found that 42 (57.5%) of the lecturers have moderate skills/knowledge, followed by 19 (26.1%) with basic knowledge and 12 (16.4%) with expert knowledge.

The graph below summarises the computer training/knowledge level of the lecturers:

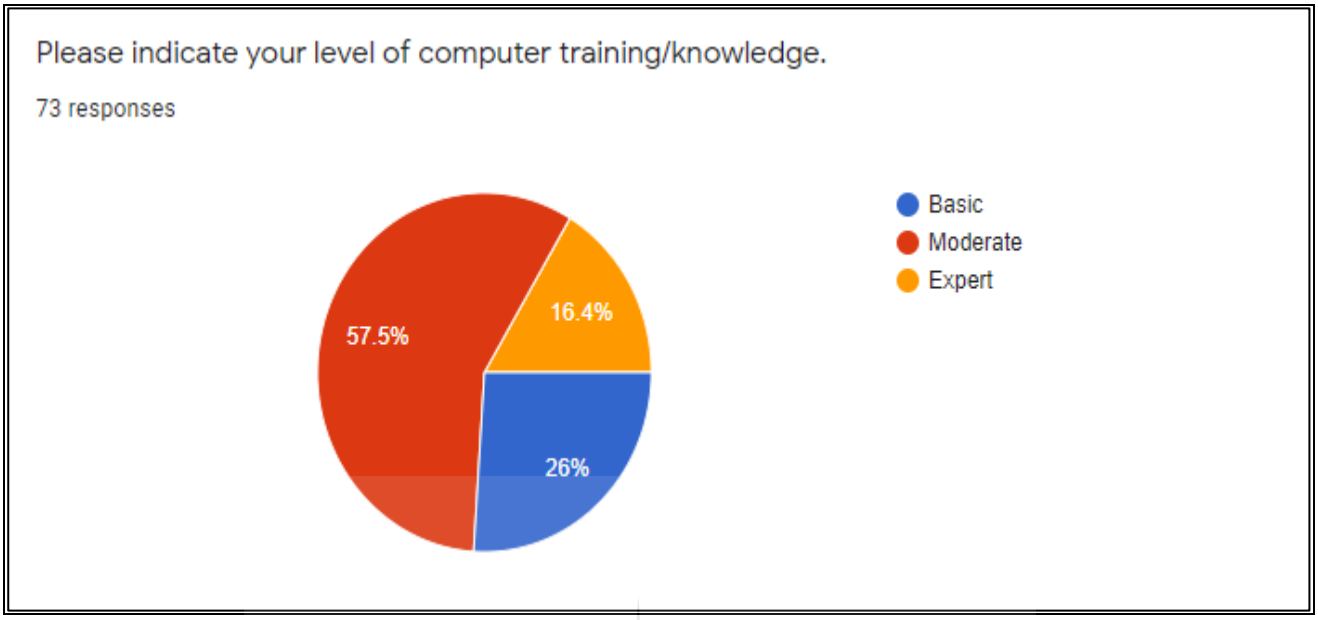

Figure: 7.1: Computer training/knowledge of lecturers

Regarding the aforementioned and Figure 7.1, it is clear that the level of computer skills needs to be addressed as such skills are a basic requirement for the shift from face-to-face to remote learning to be possible and successful.

7.2.2 Training Needs

With reference to Appendix 7, participants mostly agreed that they needed training in specific computer programs to enable them to work remotely. In respect of reporting the results, the categories “completely agree” and “agree” were consolidated into the category indicating agreement. Regarding MS Word, 41.1% of the lecturers agreed that they needed training, whilst 27.4% disagreed and 12.5% indicated that training in MS Word did not apply to their subject offering. In terms of MS Excel and MS PowerPoint, many lecturers (67%) agreed that they needed training, whilst 11% disagreed and 6.8% indicated that it was not applicable. The results show that 75.3 % of the lecturers indicated that they needed training in connecting to the college network, be it a wired or wireless connection as this would be required if they were to work independently on- or off-site.

Lecturers were in strong agreement that they needed training in online teaching approaches (80.9%) and aligning digital educational content to existing curricula (83.5%). Lecturers also indicated with strong agreement (80.8%) that they needed training in video conferencing and

presenting lessons online. Given that TVET colleges are generally more practical in their pedagogy owing to the nature of the courses and subjects they offer, the migration towards more remote learning would require such training for the learning to take place successfully online. Lecturers clearly indicated they needed training in graphics and demonstrations on online learning (87.8% in agreement), in creating interactive e-teaching content (86.2%) and in online collaboration (76.7%). Lecturers indicated their need for online learning activity management (80.8%); assessment of learning activities with the right online tools (83.5%); coordinating and monitoring assessment (83.6%); and assessing, grading and capturing of marks online (78.9%).

Lecturers were also in strong agreement (78.1%) that they must be able to set official, two-way communication channels with students, using e-mails and the learning platform tool; and be able to provide feedback (83.5%). Furthermore, lecturers agreed that simulations (74%) and e-assessments (80.8%) needed specialised software and/or add-ins. When remote learning takes place, lecturers need to be competent in setting lessons for face-to-face and remote learning. Respondents agreed (76.7%) that they needed to be subject experts to know which content would be delivered face-to-face and which content would be delivered remotely. Owing to the practical nature of TVET colleges, it would be an added advantage to have and use interactive whiteboards. This has an advantage for both face-to-face and remote learning. The lesson can be recorded as it takes place and then uploaded onto the online learning site, for students to have access to it anytime and anywhere. Of the lecturers who responded, 75.3% agree that they indeed needed training on using interactive whiteboards. Fewer lecturers indicated the need for additional training on using data projectors, video cameras, speakers and microphones: 54.8% of the lecturers agreed that they needed training in data projectors, while 56.2% agreed they needed training on video cameras and only 46.5% indicated they required training on the use of speakers and microphones.

Moving to online learning will require TVET colleges to have a learning management system, e-learning sites, software and tools. However, other open-sourced software, apps and sites can be used as additional or main support, depending on the discretion of the college. The lecturers indicated that they needed expert training in the readily available applications and sites to present their subjects remotely. The readily available sites received the following responses: MS Teams: 61.6%, Zoom: 56.2%, YouTube: 52.1%, Skype: 37% and 5% of lecturers opted for training in other online platforms.

7.2.3 Resource needs

For remote learning to take place, a desktop or laptop computer with high-quality capabilities is essential according to 91.7% of the responding lecturers. A high percentage (90.4%) of the lecturers indicated that they had a desktop or laptop that is adequate for remote learning. Fewer lecturers (84.9%) agreed that interactive whiteboards are essential for remote learning. As far as the necessity of using data projectors for remote learning, 71.2% of the lecturers agreed, 13.7% of the lecturers somewhat agreed and 15.1% disagreed that it is essential in their subject offering. Most lecturers (91.8%) agreed that video cameras were essential for recording and enhancing lessons and that recorded lessons should be uploaded on the e-learning site, leaving 8.2% agreeing somewhat, but no one disagreeing. Most lecturers are in strong agreement that video cameras (91.8%), speakers and microphones (97.2%), and light pens and scanners (93.2%) are essential, leaving only a small fraction of lecturers somewhat agreeing and almost no one disagreeing with their essentiality for remote learning.

In terms of broadband internet access, 94.5% of lecturers agreed that is a basic requirement. For fast and strong internet access, 97.3% of lecturers agreed that broadband internet access is a requirement and 94.6% agreed that 24/7 off-site access was essential. When asked if the college/campus had an adequate online learning platform, 63% of lecturers disagreed, 19.2% said they completely agreed and 11% agreed somewhat. Regarding the need for multimedia projectors with white screens as being essential for remote learning, 87.6% of lecturers agreed, with 9.6% partially agreeing. Interactive software as a need for remote learning received 98.6% of agreement from the lecturers. Additional storage devices serving as backups and storage media that can be moved around and accessed anytime received 93.2% of lecturers in agreement. The idea of installing electric and network points at strategic areas around the campus and in the classrooms was met with 90.4% agreement and 93.1% agreed with regards to having network points. Having links to educational websites, digital libraries and e-journals at the touch of a button are regarded as an advantage for both lecturers and students to have access to resources by 95.9% of lecturers, leaving just 4.1% somewhat agreeing.

Next, we are going to take a critical and reflective look at the interview data, linking it with the survey data and literature.

7.3 Findings from the interviews

The semi-structured interviews were conducted one-on-one with three HODs at the TVET college campus. To maintain the privacy and confidentiality of the college and the participants, the actual

names of the college, campus and the HODs are not mentioned. The responses of the HODs were not edited and are reported verbatim which may not always comply with grammar principles. The interview audio transcripts are included in Appendix 8.

The focus of the interviews was to explore the HOD's perceptions and experiences regarding the needs of the lecturers in their departments as well as possible leadership issues relating to how the lecturers in their departments could be supported towards remote learning and teaching. The following themes were proposed to organise the analysed data from the interviews (see Table 5).

Table 7.1: Themes from interview data analysis

MAIN THEMES	SUB-THEMES
TRAINING NEEDS OF LECTURERS	• Computer training received by lecturers. • Training received by lecturers for remote learning. • Practical subject lecturers receiving the same training as theory lecturers. • Support received by lecturers with limited computer skills.
RESOURCE NEEDS OF LECTURERS	• Hardware needs for remote learning. • Software needs for remote learning. • Data and connectivity for remote learning.
LEADERSHIP APPROACH FOR REMOTE LEARNING	• Ways of identifying and meeting the training needs of lecturers. • Strategies for remote learning. • Balancing face-to-face learning and remote learning content. • Verifying if the training offered is relevant and of a good quality and standard. • Ways to try to meet the needs of lecturers at TVET colleges.

A detailed discussion of the themes and sub-themes is presented using the following keys to represent the three HODs' from different departments. HOD 1, HOD 2, and HOD 3. Verbatim quotations from the transcribed interviews will be presented with the letter L which indicates line, and the line number in numeric format. An example would be the key HOD 1 L7 which indicates the data was generated from the interview with HOD 1 and the line referred to it in the interview is line 7.

The presentation of the findings from the interviews follows from the following pattern:

- The interview data in terms of the identified themes are discussed with reference to the verbatim responses;
- Hereafter, the appropriate findings from the survey data with the lecturers that relate to this finding are also integrated. The findings will be represented using the following legend: L=Lecturer; 1=the number of the lecturer survey.
- The literature will also be used to justify the findings throughout.

7.3.1 The training needs of lecturers

The training needs for lecturers to move towards remote learning include pedagogical training, basic computer training, e-learning platform training and other subject-specific training. The expectation was that as I was considering opinions of both lecturers and HODs from the different departments at one TVET college, a "one-size-fits-all" training approach would not be suitable as Wedekind (2015) premised, but possibly be nuanced within the following sub-themes:

- Computer training received by lecturers

The rapid advance of the "digital revolution requires continuous skilling and reskilling" of lecturers through "life-long learning" (Kanwar, Balasubramanian & Carr, 2019). Lecturers may therefore require training to use a computer to prepare lessons, carry out administration duties, access the remote learning platform, present and record lessons for the students using digital tools and programs. Lecturers should be able to adapt to the changing times and be competent enough to provide detailed feedback to the students online, and also be competent in two-way communication with students and. The HODs interviewed stated that although training was offered for the departments, the training needs of the lecturers were not necessarily met. The HODs stated that:

> *"… they said who wants Excel training? So everybody will say yes, they only gave the opportunity to program managers."* (HOD 1 L174–176)

> *"We did request that a lot of our lecturers requested training in computers. But it hasn't been addressed yet."* (HOD 1 L190–191)

This is echoed by the findings in the survey data from the lecturers, where they indicated that 57.5% have moderate computer training/knowledge and when we look further, more than 50% of the lecturers agreed that they needed training in MS Excel and MS PowerPoint, and about 40% agreed that they needed training in MS Word. Lecturers also commented in the open-ended questions that they felt that they lacked skills and required training. They stated:

> *"Computer skills are really limited."* (Lecturer 16)

> *"No full formal training for computer related courses, rely on personal, peer and inservice."* (Lecturer 25)

> *"In my teacher training years (1983 to 1987) Colleges and Universities did not train teachers in computers. I had register in typing … later N4 and N5 Computer skills. Even currently we NOT trained in remote learning."* (Lecturer 37)

> *"As lecturers we need more training as we approach 4IR."* (Lecturer 71)

> *"We really need to keep up with technology as almost everything is going to need someone to be equipped with technology."* (Lecturer 47)

> *"Technology is the way to go and we need to face the fact that most of our lecturers are not computer literate and now is the time to change and be ready with technology."* (Lecturer 47)

One HOD was also of the opinion that if and when training was offered, it was not that beneficial.

> *"Some of them went for ICDL. And they did Excel… it wasn't very successful."* (HOD 2 L91–92)

It also appeared that a lack of coordination of the training was experienced as another HOD commented that although training was offered, she was not sure who was invited to the training:

> *"If I remember very well, last year, there was training for Excel, how to use an Excel [spreadsheet]. I think they were also invited on that training."* (HOD 3 L107–108)

The additional comments from the lecturers indicated a potential strength in this specific TVET college as they are of the opinion that lecturers are also eager and open to learning new ways of teaching and learning, not only to comply but also to enhance themselves and stay relevant with the changing times. The potential motivation of lecturers to move forward to becoming proficient in remote learning and technology is evident in comments like:

> *"I am a very detailed person who gives attention to details and I should safely say I'm a perfectionist. When given support, I do my best."* (Lecturer 13)

> *"I am a hard working person and willing to learn some information."* (Lecturer 42)

> *"I have moderate experience with computers as I only get a chance to teach part-time."* (Lecturer 47)

> *"I am an accounting lecturer and enjoy learning computer practice."* (Lecturer 70)

This bodes well for this specific TVET college as Coughlin and Lemke (1999) state: "the key to success isn't in the computers … It is liberated educators' whose understanding and creative use of technology can help them to achieve the undreamed-of level of excellence for themselves and their students." As seen in the data, lecturers are prepared to be involved in their own training and development and according to Bigum (2000) unless educators are adequately prepared with required computer/IT skills, schools are wasting time and money.

Lastly, Russell, Finger and Russell (2000) argue that computer skills should no longer be seen as a "minimum standard for teachers", but rather as a professional development continuum, to keep pace with "rapid changes in technology", which is essential for TVET college lecturers to transition towards remote learning.

- Training received by lecturers for remote learning

Remote learning training comprises training lecturers to be experts in their subject matter, but lecturers also need to learn "education, computer science and behaviour" (Saadé et al., 2007) related theories. They should be able to adjust their role and character traits, develop varying communication skills, creativity and develop broader competencies relating to computers to fit into the new learning environment. Lecturers are currently faced with an array of unprecedented expatiations of linking academics with technology (Roney, Donnelly, Dove, Tiffany-Morales,

Adelman & Zucker, 2002). Evidence shows that lecturers need training in one or more of the prerequisites for the e-learning part of remote learning to take place. Regarding the training already received by the lecturers, the HODs said:

> *"They [lecturers] had training last year for Teams, Microsoft Teams, … But I can tell you now if you have to ask a lecturer now to connect to Teams that we have a meeting, half of them won't know. And the other half, didn't have a laptop. So they will join with the desktop and not have any sound. So I just feel we we are forgetting that the lecturers, we assume lecturers know, but they don't. So we need to train them constantly."* (HOD 1 L237–243)

> *"There was training … eh Brightspace. It was something to do with classroom management on the computer. I was, I must honestly say Department A didn't attend the thing at all, the timing was very bad."* (HOD 1 L303–305)

> *"It was only Teams that I know of …The other ones [lecturers] had just did their thing and try to do their own thing."* (HOD 2 L85–86)

From HOD 1 and HOD 2, we have learnt that some lecturers received training in MS Teams, but the training was not successful. It is therefore still a need to be fulfilled by the college for its lecturers. It is inevitable that 100% face-to-face learning should come to an end and that TVET colleges need to have a remote learning platform. Vrasida (2015) says that there is a need for supportive factors for lecturers to be competent and such factors include staff readiness. To ensure staff readiness, TVET college leaders need to ensure that lecturers receive "adequate training and support in ICT and pedagogy" (Yunus, 2007). This extends to empowering lecturers, upskilling and building their confidence to be able to implement ICT-integrated teaching (Yuen & Ma, 2002).

Taking a look at the survey responses, the majority of lecturers (more than 70%) strongly agreed that they needed training on teaching approaches to present their subjects online. They needed to know how to align digital educational content to existing curricula; how to use video conferencing to present lessons online; how to create graphics, audio and animation to liven up lessons; how to create online tutorials; how to create interactive e-teaching content; how to collaborate with students and how to manage, evaluate, grade, coordinate and monitor online lessons and assessments. More than 80% of lecturers also agreed that they needed training on setting official, two-way communication channels with students and how to provide feedback. Furthermore, 61.1% of the lecturers agreed that they required training in MS Teams as well as other software that can be used for educational purposes. Figure 7.2 is a graph generated from the survey showing the online learning platforms that lecturers require training in.

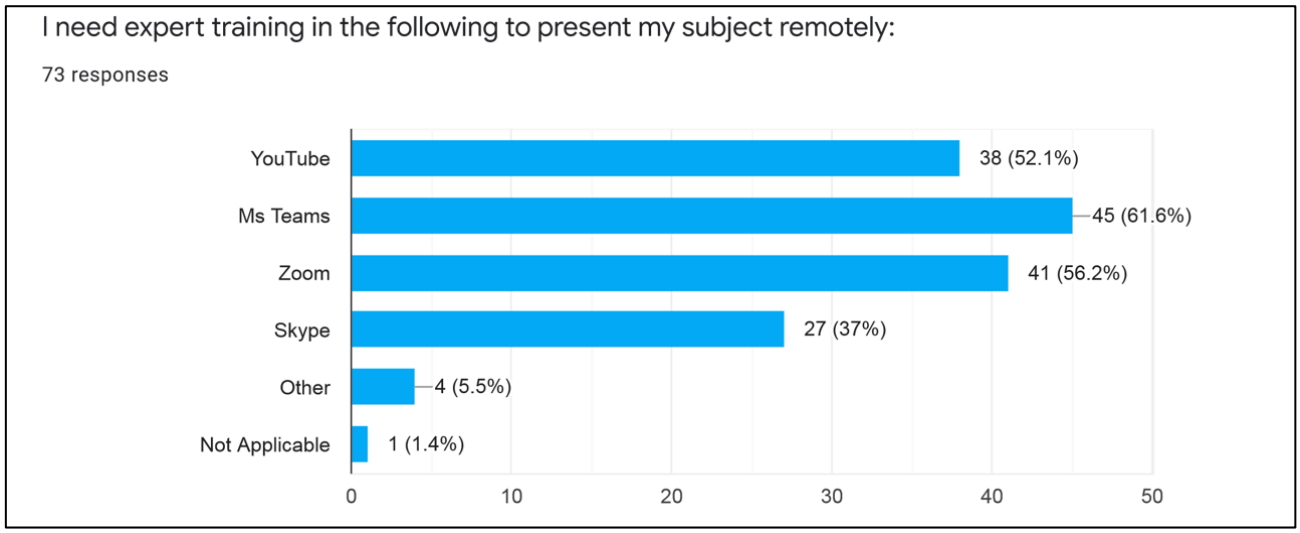

Figure 7.2: Online software tools for remote learning that lecturers require training in

The above graph gives us an overview or idea of the training needs of lecturers for remote learning to take place, according to the lecturers. It extends to show the yearning desire and eagerness that lecturers have in being competent enough for remote learning. And lastly, the desire and eagerness of being trained are also voiced in the lecturers' comments regarding the need for and importance of remote learning training:

> *"Upskilling in lieu of the new ICT Developments for efficient subject matter delivery is a must."* (Lecturer 46)

> *"I am a hardworker and I believe that the world is changing and we can't ignore that … Remote learning is a necessity to our today's life."* (Lecturer 57)

> *"E-Teaching seems to be the new normal, therefore as educators our competency in digital teaching can never be said to be enough."* (Lecturer 23)

> *"Through remote learning, some learners may encounter challenges retaining learned content. I need sufficient skills to develop curriculum that will engage and motivate my learners to fully participate. I need to develop skills to help learners to fully engage according to their individual learning abilities as they are different."* (Lecturer 13)

> *Online teaching is a must especially taking into consideration that Covid-19 is here to stay. So training is needed."* (Lecturer 49)

> *"I need training on how to present lectures online as we are now moving toward 5th generation and we need to keep up with technology as TVET colleges. Covid-19 was an eye opener for such as most of the colleges were not ready for online learning."* (Lecturer 46)

> *"Remote learning training is also very important to me."* (Lecturer 35)

- Practical subject lecturers receiving the same training as theory lecturers

The nature of courses and subjects that are offered at TVET colleges vary, some are "theoretical, practical and educational" (Wedekind, 2016), resulting in lecturers needing training that will vary depending on their subject offering. Some subjects will require the use of multimedia-enhanced features to create or combine "text, graphics, audio and animation" (Ali, 2020), to liven up and demonstrate classroom lessons that cannot be explained and comprehended with text only. Ali (2020) explains that online learning/ICT tools help students have a better understanding of the instructions and materials, and also implement "virtual experiments" that could be expensive, time-consuming and perilous to conduct in a physical classroom or school laboratory. When the HODs were asked if lecturers should receive the same training, they said:

> *"No I think you need to train different lecturers because different ways, because a lecturer who doesn't know computer must first be taught the basics, and then go on to remote learning. Well, a lecturer who knows a computer well can just go on to remote learning and show be shown the different techniques."* (HOD 1 L327–330)

> *"Yes, I think so … Remember, for practical, I am just thinking now. Yes. so, for computer, you can give them the background and the theory part*." (HOD 2 L105–106)

HOD 1 and HOD 2 hold differing views regarding the training to be received by lecturers, depending on the varying nature of the subjects offered. Contrasting the HODs' responses and the survey responses from the lecturers, regarding their subject requiring simulation software and e-assessment software, more than 90% of the lecturers agreed that they would need additional supporting software training owing to the nature of their subjects.

HOD 3 explained that in the department they only teach students the theory part of the subject and the practical part is dealt with when they do their in-service training. HOD 3 said:

> *"Fortunately enough in our department here we're teaching only theory even if the subject are more practical but its theory."* (HOD 3 L69-70)

This means that all the lecturers in this department might have almost the same subject training needs.

Lastly, lecturers are faced with daily challenges based on the differing subject offerings. The following lecturers have voiced their training needs based on the subject matter they deal with daily:

"I need to be trained on how to use the overhead projector." (Lecturer 15)

"I need training in advanced excel." (Lecturer 28)

"How to create youtube videos." (Lecturer 59)

"How student can create or load companies on Sage pastel for themselves." (Lecturer 2)

"How to interpret computer language." (Lecturer 51)

"I would like to be trained by an actual person in front of me and not remotely." (Lecturer 16)

"more training on PLC" (Lecturer 66)

- Support received by lecturers with limited computer skills

While some lecturers will be able to adjust and transition seamlessly to remote learning, some will require the college leaders to take a personal interest in them for the long-term development of the college. A good leader also accords followers opportunities to learn and grow themselves individually and collectively. In the challenges and limitations of the study (section 5.9.5), we have learnt that there are those lecturers who belong to a generation that doesn't know, understand or use technological devices. From the survey responses, 26% of the lecturers had basic computer knowledge. The challenge in this regard is that lecturers with limited or no computer training background will have a hard time adapting to the shift and getting adequate competence, confidence and self-efficacy because of their age and lack of speed in learning. This is also because 13.7% of lecturers are above the age of 54 years which may lead to them feeling uncertain and ambivalent about the change (Piderit, 2000). These lecturers need continuous support until they can be competent and confident enough for remote and e-learning altogether. Regarding the training and support given to older lecturers, the HODs said:

"It is very difficult because a lecturer would say to me, we don't have Wi-Fi. So I said we don't have Wi-Fi you are talking about internet. So they confuse Wi-Fi with the internet and don't really know how it works. What I normally do is ask them to go to a computer lecturer if they need to do tasks there and then collaborate … But the collaboration hasn't happened yet. We need the younger lecturers, they are so keen to do that because it makes sense not to work hard and to work smarter." (HOD 1 L276-284)

"… they [older lecturers] had one training on Microsoft Teams. And that was that, it was just to assist them for meetings, but not for actually designing and have a visual lesson how to know how to do visualization." (HOD 2 L78–80)

> *"…if they've got any challenges of how to print we've got IT here, IT manager here. If now I can't be able to help them. Maybe they can't print, they are having challenges then I will just ask IT manager to come and assist them, I will also assist them if I know how."* (HOD 3 L80–83)

The role played by the HODs in supporting older lecturers in this regard is inadequate, it requires support and assistance to come from the primary leaders, in a form of professional development of the college. The revolution that we have seen of ICT serves as a challenge for educators' professional development, this challenge constrains the possibility of lecturers developing "new and innovative computer-supportive pedagogical practices" (Hakkarainen, Muukonen, Lipponen, Ilomäki, Rahikainen & Lehtinen, 2001). The rapidly changing "economic, professional and political" world brings with it constant and unstoppable technological advancement which requires modern society to acquire "knowledge and develop skills of adaptability, flexibility and cooperation" (Tente & Moustakas, 2019) to survive and evolve. This unstoppable evolution requires the enrichment and renewal of existing knowledge and skills through lifelong learning, regardless of age, skills, knowledge and profession. The prevalent new world order requires every lecturer to participate in every stage of their lives, rather than having to separate lecturers into those who are competent or incompetent with the use of modern ICT means and tools.

Lecturers have to learn technical skills appropriate enough to use ICT tools productively, they should furthermore be able to "instruct and guide the students to use ICT purposefully and generatively" (Hakkarainen et al., 2001). Lecturers not only have to become familiar with ICT, but they also need to attain the pedagogical expertise essential for conductively working with new technology-based learning environments. Lecturers need to explore and develop new teaching and learning pedagogical methods to facilitate higher-level knowledge acquisition skills and the college leaders are the enablers of lecturers acquiring all the skills and knowledge needed by lecturers.

Lastly, HOD 2 holds the opinion that it is up to the lecturers to willingly ask for additional support and training that they need for their subject needs. HOD 2 said:

> *"It boils down to me, you cannot support somebody that doesn't want to be supported. And that comes with the attitude of the lecturers."* (HOD 2 L62–64)

Lecturers have shown the willingness and enthusiasm to learn, however, there are inadequate structures and guidelines at the moment that informs how or where the lecturers could get the support. This is echoed in this comment made by lecturer 37:

"In my teacher training years (1983 to 1987) Colleges and Universities did not train teachers in computers. I had register in typing … later N4 and N5 Computer skills. Even currently we NOT trained in remote learning." (Lecturer 37)

7.3.2 The resource needs of lecturers

Resources for remote learning are very important, as there is no way that lecturers can perform their teaching and learning duties without having adequate resources. ICT support from the college in terms of "infrastructure and tools, hardware and software support systems" (Ali, 2020) is very pertinent. The hardware required includes, depending on the nature of the course and subject matter, "laptops, projectors, tablets, smartphones, iPads and interactive whiteboards" (Ali, 2020). Lecturers also need to have sufficient "broadband and connected devices" onsite and off-site for online learning (World Bank, 2020). The following sub-themes will give us an idea of what the HODs and lecturers had to add regarding the resources needed for remote learning.

- Hardware needs for remote learning

Hardware and software are the vehicles that will connect the lecturers to the students on- and off-site the campus. There are varying hardware and software resources that are essential for remote learning to take place. The HODs opinions regarding hardware resources were as follows:

"Well, they now got the laptops and they got data, they got routers, . . . I think what now the devices that they need is printers because now it's a different case." (HOD 1 L350–353)

HOD 1 says that the college has given lecturers laptops and routers to use for remote learning. When we take a look at the survey, 91.7% of lecturers were in agreement that a desktop or laptop computer is essential for remote learning. Furthermore, 90.4% of lecturers agreed that they have a desktop or laptop computer that is adequate for remote learning. This is a step in the right direction as the TVET colleges prepare to migrate from 100% face-to-face learning to remote learning.

"Remote learning resources are a prerequisite for remote learning to be a success." (Lecturer 70)

"It is no longer a luxury to have the above resources, it is a necessity." (Lecturer 20)

The aforementioned opinions from the lecturers speak volumes, as indeed lecturers must be furnished with all required resources before any implementation can take place.

> *"I think like, a video camera? I don't know nowadays, what do they use, you know, but for me, I think it must be a video camera, because you have to stand in front of the class. And somebody needs to video you so that you can send that to the students."* (HOD 2 L137–140)

> *"The college was going to make videos, lecturers they were going to set up at M-Campus because M-Campus has a multimedia centre."* (HOD 1 L416-417)

HOD 1 and HOD 2 said that lecturers would need a video camera to record their lessons. I concur with this notion as the recorded lessons can be useful to the students, both in class and remotely. The recording of lessons through video can take different forms. Firstly, through video-taping a live session as the lecturer is standing in a classroom conducting a lesson, demonstration or an experiment. Secondly, through recording the screen of the computer or laptop as the lecturer is demonstrating a lesson through a computer, which will require the recording device to be embedded on the computer or laptop and this functionality is available using *Zoom, MS Teams and MS PowerPoint.* The other hardware devices needed by lecturers are the printers to provide hardcopies of presentations and notes to the students. I perceive both printers and video cameras as important in the sense that they can both provide students with the means to study remotely, i.e., students can get hard copies of the lessons, notes, demonstrations etcetera or they can watch the recorded lessons. This also allows the learning content to be presented over a longer period as compared to the limited time in the physical classroom, thus enabling education to be "seven days and twenty-four hours" (Mpu & Adu, 2019). Learning becomes independent of place and time and reaches more students than it would in a physical classroom (Dziuban, Hartman & Moskal, 2004).

> *"The only device I can think of is that when that guy came and make made a demonstration. I don't know what they call the thing. The one way you can present the textbook on the screen."* (HOD 2 L223–225)

> *"Something scanner thing…"* (HOD 2 L229)

Taking a closer looker at how a scanner can be beneficial for learning remotely, I found that a scanner is a computer input device that converts a hard copy or image from printed media into an electronic computer file. It is utilised to access information by integrating it with other technology devices (Sah, 2010). Scanners are important for lecturers as they help convert

important teaching and learning material from paper to digital format, which can also be sent to students through the remote/e-learning platform, such as reference material scanned from a textbook. With reference to the survey, 93.2% of lecturers agreed that light pens and scanners are essential for remote learning which concurs with HOD 2's comment that indeed they are needed for remote learning.

Lastly, Lecturer 3 suggested that colleges also look into using Ultrabooks for remote learning:

> *"Ultrabook is suitable for online or remote learning."* (Lecturer 3)

Ultrabooks are in the category of laptops but are thinner and serve to bridge the gap between tablets and conventional laptop computers. They are said to have better video performance, storage and memory and have larger screen sizes (Jackson, 2012). These added advantages mean more performance time for the lecturers and having a better quality video means that lecturers can create better quality videos for the students.

- Software needs for remote learning.

Remote learning requires software support systems that incorporate "text, graphics, audio and animation" (Ali, 2020), to liven up lessons that require or will be well explained and demonstrated with more than just text (Thomas & Israel, 2013). The lecturers need to be competent and confident enough to use these teaching and learning interfaces and must have unlimited access to them. During the discussions regarding the software for remote learning, that will aid lecturers to present their lessons successfully the HODs said:

> *"There was another one. I'll just, I don't know if it was Moodle . . . But apparently Brightspace, and it's not a company. It's a software program that you buy through someone else. Because I've been doing some research on that. But I know previously, Moodle was one of them."* (HOD 1 L363–367)

> *"But I'm just thinking about training like PowerPoint and things like that to make your lesson more presentable."* (HOD 2 L140-142)

> *". . . we've got the publishers that are coming. With these publishers, they're coming with the, with the software of which now at least now will give us the videos where it is going to be easy for us to show the students.* (HOD 3 L156–158)

The HODs mentioned software like *Moodle, BrightSpace* and *MS PowerPoint* as some software programs that can be utilised by lecturers for remote learning. Looking at the survey, in terms

of the interactive software for remote learning, 98.6% of lecturers agreed that it is an essential requirement. The same applies to the use of electronic simulation software which 93.2% of lecturers agreed was essential. There is no clear and preferred software as the honours of selecting the appropriate software, which will serve all the teaching and learning needs of the college, lies with its leaders.

There is a dire need at TVET colleges for software programs that will be compatible with the courses and subjects that are offered. It is therefore up to the leaders to conduct a study, in search of suitable software or software developers that will be best suited for the college. There is an unprecedented increase in the number of online, open-source software. Pappas (2015) outlines the top open-source learning management systems, they include, inter alia, *Moodle*, *Chamilo, Open edX, Totara Learn* and *Canvas.* These software packages are also compatible with mobile smartphones and are user friendly.

> *"I want to be linked to educational websites."* (Lecturer 35)

Many learning sites are coming online that lecturers are not aware of, sites related to TVET colleges, such as the *Future Managers Website.* Such sites serve as a source for additional references that lecturers do not have immediate access to. TVET colleges can form a partnership and collate these websites for the lecturers and load links for lecturers on the teaching and learning site, to save lecturers time when combing through droves of internet sites for relevant sources. Educational sites also have updates to all the market trends that will also aid in keeping the lecturers up to date. Having access to other educational sites serves as an advantage to the lecturers which will also extend to the students. Students will know which sites to visit which are relevant to them to get information relating to their studies.

- <u>Data and connectivity for remote learning</u>

Connectivity is among the most important factors to be considered for remote learning. World Bank (2020) posits that lecturers should have adequate access to broadband and connected devices at home and the institution for the e-learning environment and be able to communicate with students and parents as the lack thereof will result in students not being able to learn online. Our focal point as a point of departure is to make sure that lecturers are ready with all the resources they need for remote learning. Upon interacting with the HODs regarding data and connectivity, they said:

> *"Well, they now got the laptops and they got data, they got the routers, they gave them."* (HOD 1 L350–351)

". . . the lecturers are having the resources now they do have the laptop, they do have the data." (HOD 3 L27–28)

"They give them the data. So far, everything is fine. No one came in report that their data they are not working. Fortunately enough, the Head Office, they give them the laptop with the data." (HOD 3 L260–262)

"Well, the connectivity has improved, ehm, in a sense of, the internet was upgraded and all those things." (HOD 1 L496–497)

"There is an IT manager that manages it. And when they have request from lecturers, you can go through the IT manager and through procurement." (HOD 2 L284–285)

It was impressive to note that lecturers are provided with data and connectivity as a means to connect and interact both at home and on the college premises and that there is an IT manager on site who is responsible for all data and connectivity issues. In the survey, three consecutive questions were asked regarding the importance of the internet connection for remote learning. Figures 7.3–7.5 are summarised pie graphs of the responses received:

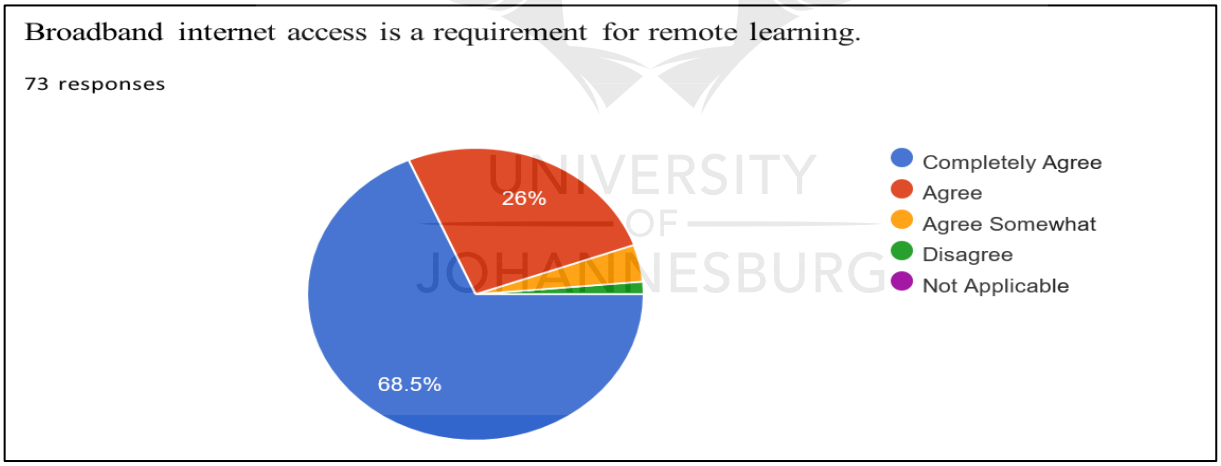

Figure 7.3: Broadband internet access responses from lecturers

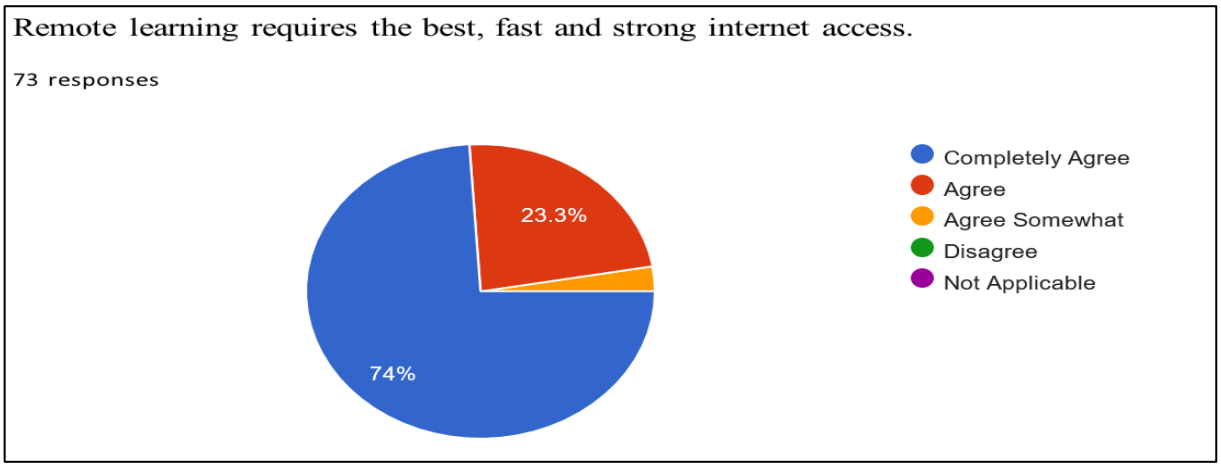

Figure 7.4: Best, fast and strong internet access responses from lecturers

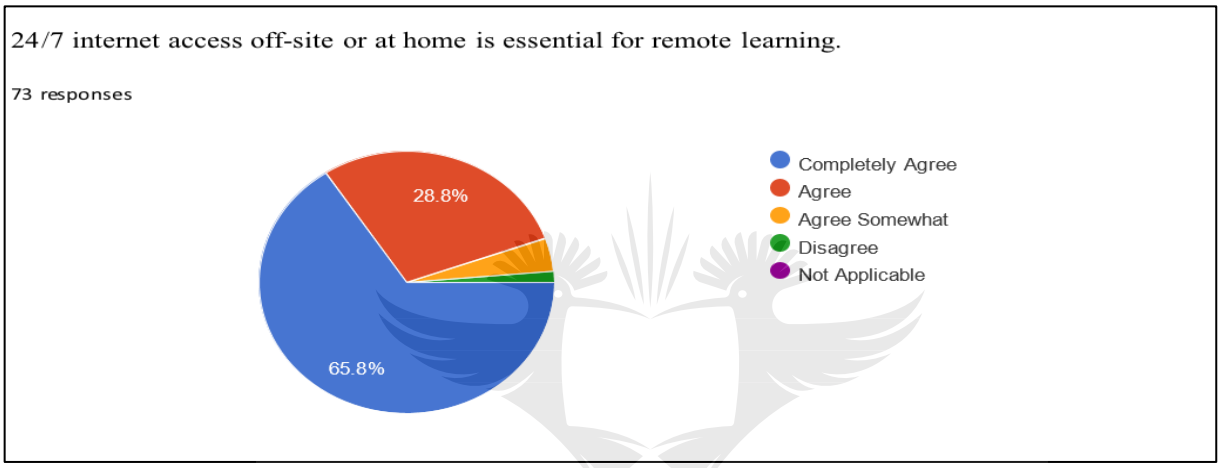

Figure 7.5: 24/7 internet access off-site responses from lecturers

From the three graphs above we deduce that more than 90% of lecturers combined agree to the importance of having an adequate internet connection for remote learning. Lecturers added their voices as an over-emphasis of the importance of having adequate internet access:

> *"Network connection at strategic points is essential especially for easy internet connectivity by students."* (Lecturer 50)

> *"Wi-Fi is also needed."* (Lecturer 52)

> *"We have been issued with data so we do not need LAN."* (Lecturer 41)

The lecturers have gone to the extent of expressing a passion and concern about the relevant resources that are needed for remote learning, with one lecturer saying that the routers are enough, they do not need wired connections. Lecturers go as far as thinking of the resources for students as they also form an integral part of remote learning.

> *"So for NCV there's no training, I'm mean people, we assume people know how to use data. How to connect and honestly, not all of us know technology."* (HOD 1 L193-194)

Lastly, HOD 1 raised an important point that lecturers having the resources does not automatically imply implementation; lecturers need to be trained to connect to the internet. With reference to the survey, 75.3% of lecturers agreed that they needed basic training in the computer network connection.

7.3.3 The leadership approach for remote learning

The technological change that is required at TVET colleges is not only dependent on lecturers' belief in their ability and willingness to implement the envisioned change, but also on the development of the appropriate skills that are essential to implement such change (Roney et al., 2002). There are various measures that leaders need to put in place to try and meet the lecturers halfway, in making the lecturers' plight an easy one to manoeuvre. The following are salient subthemes that were developed from the interviews.

- Ways of identifying and meeting the training needs of lecturers.

It is essential to enable lecturers to broaden their skills and professional knowledge developed in traditional modes of teaching and learning (Matzel & Edmund as cited in Mpu & Adu, 2019). For lecturers to embrace the envisaged change willingly, they need to be competent and confident enough to partake in the change. The starting point is to identify the training needs of every lecturer – some needs might be the same, whilst some might differ. The HODs had different approaches to identifying the training needs of the lecturers in their departments:

> *"… remember the training, it starts at campus level, you need to tell, or sit with the lecturers and say, what training do you need? And then go and look at what training you can give them to show them."* (HOD 1 L478–482)

> *"I think you need to train lecturers because different ways, because a lecturer who doesn't know computer must first be taught the basics, and then go on to remote learning. Well, a lecturer who knows a computer well can just go on to remote learning and show … be shown the different techniques."* (HOD 1 L327–330)

> *"Yes, so, for computers, you can give them the background and the theory part … but the practical part is still a challenge."* (HOD 2 L106–108)

> *"Or I will see in general and then when they come to me I will note it down and then I will just compile this, okay, maybe five lecturers they don't know how to do this, then I will ask for the training for that."* (HOD 3 L118–120)

We can deduce that the HODs mean that the campus leaders must sit with the lecturers and determine their individual training needs, then the lecturers must receive training according to their individual needs.

> *"In terms of that, it is individual because if if the lecturer is coming with a problem I am attending [to] the problem per individual."* (HOD 3 L88–89)

> *"I'm preparing that if now any lecturers that's going to encounter any problems with, I'm supposed to escalate to the DCM looking for the training for the lecturers. So far we didn't have any training."* (HOD 3 L53-55)

HOD 3 goes the extra mile to try and accommodate lecturers who request individual support and then escalates the lecturer's training needs and support to the Deputy Campus Manager (DCM) of the campus.

> *"… we need both training for using a laptop thoroughly, they must know what is happening with the laptop, it also train you for using under e-learning."* (HOD 3 L61–62)

HOD 3 is also of the opinion that the lecturers in the department need training on how to use a computer/laptop and then to get training on a remote learning platform that the college will choose to use for everyday teaching and learning.

Training and support from college leaders are essential before lecturers can be expected to implement a new learning paradigm. From the literature we have learnt that, as much as there are no guidelines and policies on how to give individual training to lecturers, it is up to the leaders in their endeavours to capacitate lecturers to identify lecturers whose "skills or ability need developing" and those that lack motivation (Dobre, 2013). The HODs, as the leaders of the different teaching and learning departments, must go the extra mile in making sure that the individual and subject-specific needs of the lecturers are catered for.

> *"The approach towards realisation of online/remote lecturing and learning requires positive buy-in of both technology-inclined and technology-disadvantaged lecturers and the positive/progressive support of the Senior Institutional Management."* (Lecturer 46)

I concur with Lecturer 46 and add that, the buy-in that is required from lecturers stems from the leaders through management support making sure to avail all the support needed for the change to take place in the form of rigorous training and the availability of resources. The lecturers need to have self-efficacy or the belief in the significance of the change as part of individual change readiness. They need to believe and value the change as part of developing the change valence (Weiner, 2009). This would lead to lecturers perceiving or judging themselves on whether they are ready, confident and competent in implementing the change (Weiner, 2009). The lecturers' efficacy would be high once they have the confidence to implement the change. The lecturers should have the appropriateness (Armenakis, Harris, Holt & Hubert, 2007) or belief that the change is needed and that they would indeed benefit from it, as well as the students and will improve teaching and learning holistically.

- Strategies for remote learning.

The different departments had to implement strategies or plans, making sure that teaching and learning take place in and out of the college premises even before the college had a remote learning management system, to make sure that they keep the ball rolling. The HODs together with the lecturers in the departments came up with plans and they are as follows:

> *"… we have regular meetings where I encourage lecturers and I also made them set up a remote plan, for now, the four days a week why we all the five days a week that they come to college is not a problem, the other four days, and the fifth day we try to tell lecturers you know what week need to give lecturers what I'm telling them because we don't have a Friday class give them stuff the Thursday. Plan ahead, you give them things to do so that they can do it and engage you on WhatsApp, this this the only platform we have in WhatsApp."* (HOD 1 L389–395)

From HOD 1 we learn that lecturers are involved in planning what the students will be given as part of what they will learn at home on the times that they will not be at the campus. In a way, this approach embraces distributed leadership. Badenhorst and Radile (2018) denote that distributed leadership occurs when a leader establishes open communication channels "vertically, horizontally and diagonally", distributing responsibilities, keeping momentum in capacitating, empowering, monitoring staff and making continuous and consistent follow-ups. They encourage lecturers to use all the channels available to them and then account for all aspects of their profession, such as student performance and classroom management and administration. The lecturers develop strategic operational plans for their subjects that will aid

in strengthening the tracking of the performance and accountability based on the assigned distributed responsibilities and "collaborate instructional management practices".

> *"… you had to go to a Head Office where you had to put the lesson on the College group and on Facebook for … for students to access. I think if I think from the college side that was the only time when they really tried to … to incorporate everybody at the college to reach those students, but I mean, its per subject, it was one, it was one lesson per subject."* (HOD 2 L196–200)

> *"There was a management plan where you had to submit per subject. And then we chose a lecturer. And that lecturer, had to go to S-Campus to do that lesson."* (HOD 2 L205–207)

> *"Ah what we did the lecturers will prepare the notes before because they know because last time they were platooning last year. So what they do, they will prepare the notes for today for maybe the group A that come. Then they will give them now tomorrow they're not going to come to utilize those notes at home. That that's how we've done it."* (HOD 3 L194–198)

> *"And then the college came up and said let lecturers start making notes and assignments and tests that we can load it on the college website."* (HOD 1 L44–45)

Lastly, all the different aforementioned plans that HODs tried to put in place were all to achieve one goal which was continued teaching and learning, even though there is still a lack of training and adequate resources for the lecturers and the students. A transformational leadership approach came to play in this regard as the leaders went out of their way to motivate lecturers to do more than the usual and go the extra mile for the sake of the students.

- Balancing face-to-face learning and remote learning content

The practical nature of the vocational courses offered at TVET colleges doesn't allow for all the course content to be offered online. Naidoo and Dawuwa (2019) have suggested that the theory part of the courses can be moved online, whilst all the practical aspects of the courses would still be offered on a face-to-face basis. Lecturers need to have the insight when planning their subject offering to balance what they can offer to the students face-to-face and what can easily be tackled online. Upon interacting with the HODs regarding how to balance the subject offerings and who decides what should be taught where, HOD 1 said:

> *"Well, for me from the beginning, we said that a subject like computer ODP [Office Data Processing] is impossible to unless you make a video and they*

> *have physically their own computer, . . . But a subject like maths and accounting will, I don't, there is some of the things that you can send students notes with, you know, basic things to BODMAS and how does it work and everything."* (HOD 1 L442-448)

HOD 1 perceives that computer-related subjects cannot be offered remotely altogether whilst subjects like Maths and Accounting can have some of their basic concepts offered online.

> *"I think it will be the choice of the lecturer that knows the subject. Only the lecturer will be able to determine which part to do remote and which part to do face-to-face."* (HOD 2 L245-247)

> *"This, you know, you know anything about that the program managers and just with the coordinators of the subject, they will sit down in the subject committee. And then they will decide from the subject committee to say maybe module one, it could go to remote learning, and then module two, then we can interact with the student. That's the decision that is taken from the subject committee."* (HOD 3 L227–231)

From HOD 2 and HOD 3, it is apparent that the lecturers in their subjects and course committees are the ones responsible for balancing which content will be best offered face-to-face or remotely.

Lastly, it must be emphasised and understood that these measures of making sure that teaching and learning take place whatever the case may be, were all contingency measures. Lecturers need formal pedagogical training. The training will make them competent enough to know which content must be dealt with in the classroom and which content can be dealt with online to ensure that the students are not compromised in the process and that the level of instruction they receive is of a good standard.

- <u>Verifying if the training offered is relevant and of a good standard</u>

The training offered for lecturers preparing for remote learning cannot be offered in isolation; it needs to meet certain standards. TVET colleges are seen as global players as they are the main producers of the labour force of the country. The remote learning platform, as well as the training offered to the lecturers for teaching and learning, should therefore be of a global educational standard. It is imperative that when leaders select a learning site and train the lecturers, they make sure that the service provider has the best to offer the college. The HODs said the following regarding making sure that lecturers received training of a global standard:

> *"See the problem is you have to start [at] the beginning, and build it up. So you can't just throw people at the deep end, and say listen, load all your stuff*

on the platform and this is what to do. And you need to mark the students here and there. Everybody is not on that level, so, what you need to do is start with the basics, and go with it, if there is a lecturer like Mr E, who are more advanced, because remember he did some courses at Wits and all this, those lecturers are ready . . . So what I think we need to do, is engage Universities to see how their remote learning was successful." (HOD 1 L472–487)

"You must investigate, you must check make sure your research is very important to make sure your research don't … don't just take in your remote learning enquire from the TVET. I mean from the universities because in the universities, they are using e-learning is so good, you must make sure that whatever that they're going to have is going to empower lecturers." (HOD 3 L243–247)

HOD 1 and HOD 3 perceive that universities are suitable institutions to assist TVET colleges to receive training that is of a global standard because universities already offer online courses and have up-and-running learning management systems.

"I think you can look at the content that they're going to present. How do you evaluate if its going to be on par? I think it depends on the content. There must be like a syllabus or a structure that you can evaluate before the time to determine if it's going to be on standard or not." (HOD 2 L269–272)

HOD 2 said that the training provider must have a curriculum that must be evaluated first to see if it meets the required standards before training. The training to be offered to lecturers at TVET colleges is important as it sets the standard of the remote learning that will be offered to students and also sets the knowledge and skills that will be given to the lecturers. Leaders at TVET colleges have their tasks cut out for them on this one as this can either make or break the college. Section 22(2)(a) of the Skills Development Act posits that the functions of the Skills Development unit in an organ of state such as public TVET colleges are to "research and analyse the labour market to determine the skills development needs" (Skills Development Act, 1998). When the need has been established it needs to align the training or service providers contemplated in section 17(1)(c) that are accredited and recognised in terms of the South African Qualifications Authority Act or other regulatory bodies of training providers. In so doing, it will be easy for TVET colleges to choose and conduct research about a training provider by checking their curriculum and performance in general, to see if they can meet the needs of the college as well as the global learning standards.

Lastly, when HOD 3 was asked if she had an example of a university that has a remote learning platform that is of a good global standard, she responded by saying:

> *"Uh, I do have that is the Pearson University … Pearson University. You know, their standard is very good. They are … they are giving the students the learning, ah, e-learning also they are writing their tests there you know the standard is good to sort of ask them if it was my making."* (HOD 3 L252-255)

Prior to the Covid-19 pandemic, universities had pre-existing experience with teaching and learning technologies and were able to move to online learning quickly by expanding their existing technologies (Ali, 2020). This enabled them to respond more positively to the changing circumstances than the TVET colleges. This puts them in a much better position to advise and assist TVET colleges about migrating to remote learning.

- Ways to try and meet the needs of lecturers at TVET colleges

Leadership at TVET colleges is multifaceted and requires innovative leaders that can identify needs and then define goals and outcomes to meet those needs, both at the individual and institutional level (Robertson & Frick, 2018). There is also a need for leaders to keep abreast with improving teaching and learning techniques as they are influenced by the ever-evolving market trends, industrial revolutions and meeting global educational standards. Recently, there has been an over-arching need that a new, resilient and flexible teaching and learning mechanism to be embraced. In so doing, it requires an "all-hands-on-deck" approach, as the decision-making and implementation of a new teaching and learning mechanism requires a collective. A distributed leadership approach was suggested as an appropriate leadership style that could help with the change. Leaders need to work harmoniously with lecturers and other stakeholders at different organisational levels. The HODs have suggested various ways that TVET colleges can adopt in marshalling this monumental change.

> *"Well, you know what happened previous years at the college, when we had this Cap budget, when they gave us money to restructure the college. It was run by a committee. It was, there was someone at the head of the committee and he had people working with him. And that is what we have to get, is a committee to say, it's an ad-hoc committee, let's get all the experts for e-learning, lecturers, external people and so what do we need and engage universities and all the people that have successfully done that, and say what have you done? Let's get together and make the change."* (HOD 1 L552–559)

> *"I think the committee must start from the campuses, per campus. Let us have the committee for the campus. Because now I cannot take somebody from A Campus and pass and make a committee for B Campus. Let us have a committee from B Campus. After B Campus, all these committees initially,*

> *every campus form one committee for the Head Office serve now you will know I will come up with something that is happening in B Campus, they will come up with something that is happening in A Campus, maybe we are going to have something that is common. Then it's going to be much easier for them so that we can see because now, we are saying we're running short on this. At C Campus they are not running out of the same thing. They are covered."* (HOD 3 L322–330)

The HODs suggested the formation of working committees at campus and college levels. The formation of committees comprising various stakeholders is a form of distributed leadership, as the leaders would depend on others for collective decision-making. This synergy, collaboration and participation would include people that have already implemented the change such as university personnel, as well as HODs who are the leaders close to the lecturers. They know and understand the needs of the lecturers more than anyone else. The roles needed to be played to ensure that remote learning is realised are complex, uncertain and are in a rapidly changing environment and require coordination and collective intelligence in decision-making and problem-solving (Gronn, 2008). College leaders cannot bear all the burdens, pressures and demands associated with providing support to lecturers embarking on remote learning, therefore having working committees will have to suffice. When people come together holistically to "work, plan, learn and act" (Dinhan, Aubusson & Brady, 2009) they generate further leadership capacity within the individual or the college.

> *"I would appoint these computer companies or IT companies so that somebody can take responsibility for it on the campus if there's a problem."* (HOD 2 L321–322)

> *"I will I will get people in to show them how to do proper these things. On different subjects."* (HOD 2 L328–329)

HOD 2 perceives that having external service providers to be in charge of the learning management system will help capacitate TVET colleges for remote and e-learning. The opinion may mean that another education institution like Pearson University is in charge of the LMS at a TVET college. This perception is very broad, and in my opinion, it will need a feasibility study to be carried out to determine if it can hold any water.

Lastly, HOD 2 mentioned a very important fact that can be considered for the future:

> *"They must go back to the decentralisation of decision-making. Where each campus is responsible for the decisions as it was before, when [everything] worked 100% well."* (HOD 2 L373–375)

Decentralisation refers to the “devolution of decision-making authority” (Marishane, 2007) from the central office to the local education institution. In this case, it is from the college level to the campus level. Decentralisation in regard to the leadership or management of remote learning will make campuses within the same college operate on uneven grounds. Whilst this campus is doing one thing, the other is doing a different thing. We have learnt from the literature that TVET colleges are faced with undefined organisational and leadership structures, which have rendered TVET colleges to appear to be backward when compared to universities. This perception is an enormous setback for TVET colleges, more than what we are seeing right now. Decentralisation is a good practice that will bring more autonomy to individual campuses in a college and can be considered once TVET college structures are defined and watertight and they have remote- and e-learning management systems that are up and running.

7.4 Summary

This chapter focused on the findings and interpretation of the collected data for the study from the qualitative survey and the qualitative interviews. Various themes and sub-themes emerged with the following main themes developed from both the surveys as well as the interview data that were analysed and interpreted infused with literature:

- Training needs of the lecturers
- Resource needs of the lecturers
- Leadership approaches for remote learning

The following chapter will deal with the summary, recommendations and will consolidate the study by focusing on the main findings in relation to the research questions.

8 SUMMARY, RECOMMENDATIONS AND CONCLUSION

8.1 Introduction

The revolution of ICT that is witnessed today poses a major challenge for most lecturers’ professional development (Hakkarainen et al., 2001). Lecturers are required to learn and utilise technical skills adequate to use ICT productively for teaching and learning. Furthermore, lecturers are required to acquire pedagogical expertise to fruitfully utilise technology-based teaching and learning environment. These lecturer skills must in the end be able to “facilitate

higher-level knowledge acquisition skills" (Hakkarainen et al., 2001) for students to adapt constructively to the knowledge society. Currently, lecturers lack the vital technical expertise in ICT which has significant constraints to the possibility of developing new and innovative computer-supported pedagogical practices at TVET Colleges. Thus, this study sought to investigate the training and resource needs of TVET College lecturers for remote learning, and then explore the views of TVET College leaders about the implications for leadership to support the needs of the lecturers for remote learning.

This final chapter reflects on the important aspects of the study. The chapter provides an overall summary of the findings of the study, conclusions related to the research questions and recommendations and limitations of the study as well as the recommendations for further possibilities as suggested from this study.

8.2 Summary of the study

This study aimed to explore the training and resource needs of TVET college lecturers for remote learning as well as possible implications and guidelines for TVET college leaders in their endeavours to develop, capacitate and empower lecturers to be competent for both face-to-face and remote learning. The study was located within an interpretivist worldview and was a generic qualitative research study. Qualitative surveys in a form of an online questionnaire were conducted with 73 TVET college lecturers in Ekurhuleni and semi-structured one-on-one interviews were conducted with three HODs of three different departments of one TVET college campus in Ekurhuleni, Gauteng.

Chapter 1 of the study provided the background of the research problem and the motivation for the study. Chapter 2 outlined the research question, while Chapter 3 dealt with the aims and objectives of the study. Chapter 4 clarified important concepts used in the study and Chapter 5 dealt with important literature concerning the history and background of TVET colleges, lecturer training and resource needs for remote learning, leadership approaches to ensure the smooth transition towards remote learning, challenges/limitations for TVET colleges to implement remote learning and possible strategies for training towards remote learning in TVET colleges.

Chapter 6 focused on the research methodology, while Chapter 7 dealt with the findings and interpretation of the data that was collected through the qualitative survey questionnaire and the semi-structured interviews. Salient themes and subthemes were also presented in Chapter 7.

The main findings of the study were:

It was quite clear that TVET college lecturers involved in the current study have differing abilities, experiences and needs with regards to training in specific readily available applications, in the adequate use of online teaching approaches, aligning of curricula to digital content, online assessment and online communication.

Lecturers also indicated that resources such as computers, interactive whiteboards, data and video projectors, and supporting resources such as scanners, lightpens and sound equipment are all essential elements of successful remote learning.

Lecturers were adamant that adequate bandwidth, particularly off-site was needed to move towards remote learning. They also indicated that the current provision for broadband internet access at the TVET college was unsatisfactory.

Lecturers were also clear on the need to have safe backup and storage facilities at their disposal as well as infrastructure such as adequate and strategically placed electrical access points and digital library services at the disposal of lecturers and students.

HOD perspectives

The HODs indicated that computer training was offered to lecturers but that the training offered did not necessarily meet the needs of the lecturers in terms of preparing them for remote teaching and learning. It also appeared that the training offered lacked coordination.

HODs indicated that lecturers were very committed and eager to learn new ways of teaching and learning to meet the needs of the ever-changing landscape of teaching and learning in the 21st century. HODs were also of the opinion that training needs for different subjects varied and that training had to be tailored for such diverse needs.

HODs made mention of the leadership implications that the move towards remote learning has for lecturers who are not necessarily native to computer technology. Leaders needed to take a much more personal interest in the lecturers' long-term development, by creating flexible scaffolding opportunities for lecturers who had little or no experience with teaching via digital interaction. Continuous support was considered a crucial leadership task for leaders at TVET colleges. The important role of primary leaders to support the HODs was also an important implication mentioned.

8.3 Recommendations

8.3.1 Recommendation 1: Training needs of TVET lecturers

It is recommended that TVET college leaders provide the required training for the lectures. As identified in the findings (section 7.2.2 and 7.3.1), the training of lecturers will vary, depending on the computer skills and knowledge of the lecturers and on the nature and needs of the subject that they are offering. The training provided to the lecturers is recommended to be in the flow provided below:

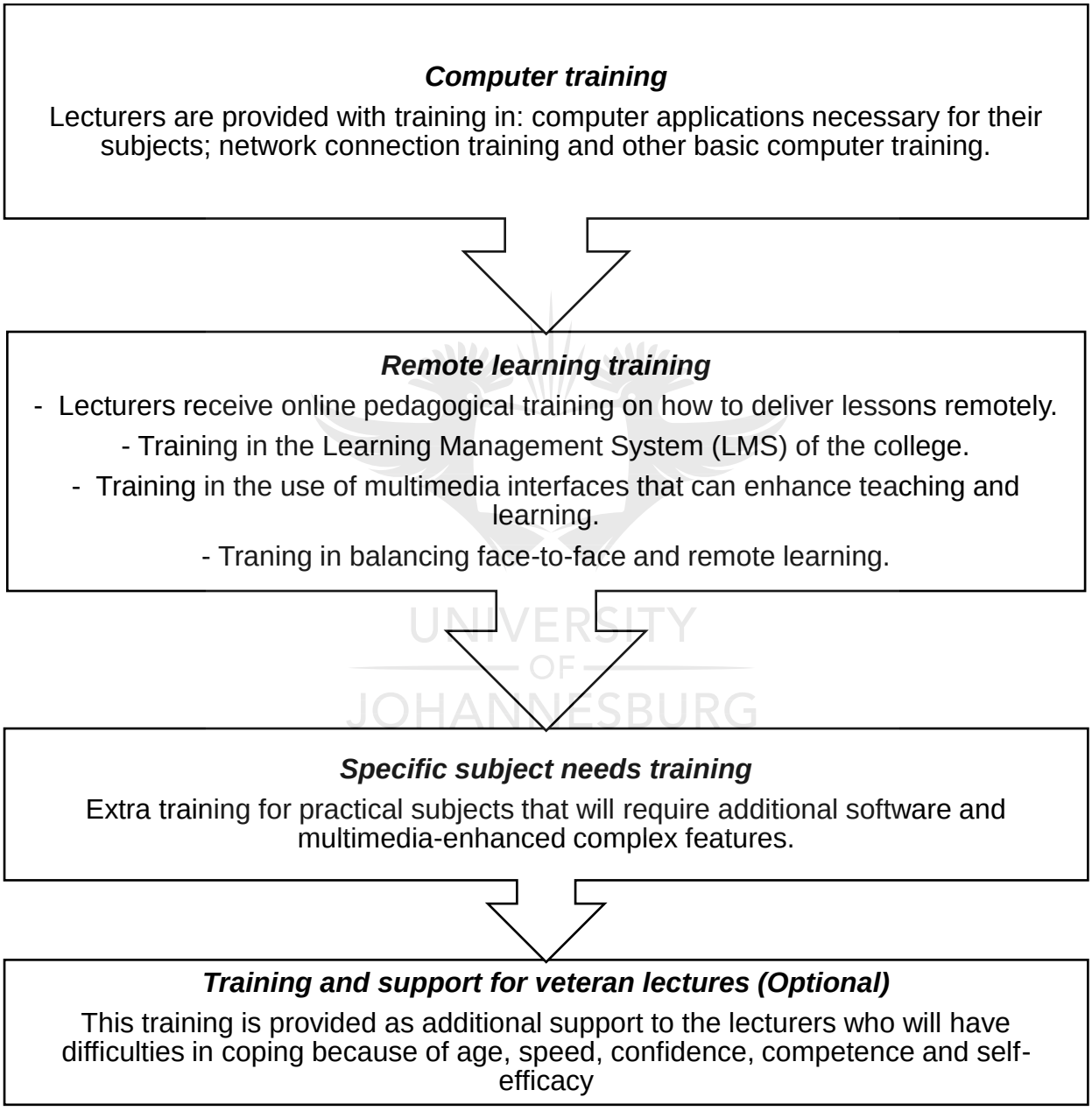

Figure 8.1: Training flow for lecturers for remote learning

The training may not follow this exact flow as other lecturers who already have moderate and expert computer knowledge and skills can start by receiving remote learning training.

8.3.2 **Recommendation 2: Resource needs of lecturers**

It is recommended as identified in the findings (section 7.2.3 and 7.3.2) that lecturers be furnished with all the hardware and software resources that they will need for remote learning before implementation is expected. In this regard, the three types of resources needed by lecturers are hardware, software and connectivity. Below we take a look at the recommended resources, based on the survey responses and the interview interactions.

Hardware

- Laptop computers or Ultrabooks with high-quality features and capabilities
- Video cameras
- Speakers and microphones
- Lightpens and scanners
- Printers
- Interactive whiteboards
- Data/Multimedia projectors
- Additional external storage devices (External hard drives, flash drives or cloud storage)

Software

- Microsoft Office package
- E-learning (Learning Management System) software
    - Interactive software
    - Simulation software
    - Assessment software
- Communication and feedback software
- Links to educational websites, digital libraries and e-journals

In terms of software, the college might need just one learning management system that will have enabled capabilities for all the other mentioned applications, or it might need two, such as a college website linking the LMS. Of the software to be used, lecturers and HODs recommended specific software or sites, the ones most recommended are:

- MS Teams
- Zoom
- YouTube
- Skype
- CAD Software
- BrightSpace

Connectivity

Wireless: Onsite using college Wi-Fi
Offsite using routers

Wired: In the computer classrooms and offices

8.3.3 Recommendations 3: Leadership approach and training guidelines

Leadership approach

It is recommended as identified in the findings (section 7.3.3) that TVET colleges embrace a distributive leadership approach to assist with meeting the resource and training needs of lecturers towards remote learning as well as to transform successfully from 100% face-to-face learning to remote learning. Distributive leadership means that decision-making powers will not be a task of a few individual leaders. Leaders relinquish their decision-making powers to a collective. Committees need to be set up at the campus and college levels. At the campus level, the committee comprises the DCM, HODs and the program managers. At the college level, the committee comprises the DCMs from campuses, centralised college leaders and external bodies such as e-learning university personnel as well as researchers who can assist colleges to appoint appropriate service providers holistically.

The training guidelines for remote learning

It is recommended that TVET colleges provide adequate and rigorous training for lecturers for remote learning to create self-efficacy, change valence (Weiner, 2009) and the appropriateness (Armenakis et al., 2007) that is required for the transformation to take place successfully. It is therefore recommended that TVET colleges utilise the following training guidelines.

1. Conduct a needs analysis for the college:
    a) Align to market trends.
    b) Align to industrial revolutions.
    c) Align to global educational standards.

2. Define the goals and outcomes to meet the college need.

3. Conduct a needs analysis of the lecturers:
    a) Form college and campus committees.
    b) Research the training needs at the campus level.
    c) Research the resource needs at the campus level.
    d) Present the training and resource needs to the college committee.

4. Evaluate the training and resource needs of the lecturers.
5. Narrow down the training needs of the lecturers.
6. Request for training service providers.

7. Evaluate the service providers:
    a) Verify registration and accreditation with SAQA and other registration bodies.
    b) Check if the curriculum of the service provider meets the prescribed need.
    c) Double-check the general performance of the service provider.

8. Appoint the service provider.
9. Conduct the training.
10. Evaluate the training received by lecturers:
    a) Test lecturer competence, confidence, appropriateness, self-efficacy and valence.
11. Provide additional training and support if necessary.

8.4 Limitations of the study

A challenge or limitation of qualitative research is that it focuses on the participants' "subjective meanings, actions and social context" (Fossey, Harvey, McDermott & Davidson, 2002) as it is experienced and understood by them, and it is also subjected to investigator bias (Stiles, 1999). In this study, the investigator established the following biases that might have influenced the research findings.

- The preconceived notion of what the resource and training needs of TVET colleges are;

- Training procedures that need to be followed to capacitate lecturers with pedagogical and other expert skills and knowledge to take part in remote learning.

Overall, the study consisted of the following limitations:

- The findings of the study were limited to responses of one TVET college in Ekurhuleni, Gauteng. The projected sample size of the lecturers for the qualitative survey was 90, with only 73 lecturers responding.

- The survey was supposed to be conducted face-to-face with the lecturers to facilitate two-way interactions and discussions and to answer any questions requiring clarification. However, because of the COVID-19 pandemic, the survey was conducted online. Lecturers did not get the opportunity to ask questions and some lecturers did not provide additional views/opinions that they could have articulated in a face-to-face interaction.

- Owing to the limited time available to complete the study, the interviews were limited to three HODs: the HOD-NATED Engineering Studies; HOD-NATED Business Studies and HOD-NCV Business Studies. The study could have been extended to include HOD-NCV Engineering Studies and ICT; NATED-Hospitality studies as well as the HOD-Skills Development Centres to get the in-depth perceptions of the HODs from all the different departments at TVET colleges.

It is recommended that for future research the investigator extend the sample size to include all lecturers in a college to accommodate all the different learning departments as well as the HODs in these departments.

8.5 Recommendation for further research

The study explored the training and resource needs of TVET college lecturers and then developed training guidelines for remote learning. Monumental transformation is needed at TVET colleges involving acquiring infrastructure and personnel for e-learning as well as providing students with learning resources.

1. It is therefore recommended that a future study be conducted on investigating the infrastructure and personnel TVET colleges need in order to accommodate the e-learning or online learning aspect of remote learning. It is essential that ICT support is provided for the online learning aspects of remote learning. Ali (2020) highlighted that there are deficiencies including weakness and/or lack of "online teaching infrastructure". Worldbank (2020) observed that even the highest performing education systems may not be well enough equipped for online learning to large-scale numbers of students. The integration of ICT instructional devices for academic courses has escalated unprecedentedly and at a rapid rate, which has left college leaders unable to cope. This transformation requires "thought, coordination and careful decision-making" (Ali, 2020) thus necessitating an in-depth investigation of how it can be achieved. Infrastructure in this regard will include, inter alia, ICT equipment, software and connectivity, and personnel will include ICT administrators, technicians, network developers, system developers, maintenance and support personnel and other education administrators. The magnitude of remote learning transformation cannot be achieved in isolation, it, therefore, requires researchers to do field studies to assist TVET colleges.

2. The students at TVET colleges in South Africa mostly come from disadvantaged backgrounds with low socio-economic status. They face a collage of challenges and mostly depend on the state through NSFAS (National Student Financial Aid Scheme) for their education provision. The very nature of their background and socio-economic status means that they will have the obvious challenge of having limited to no access to devices and will experience connectivity issues (Naidoo & Dawuwa, 2019). TVET colleges migrating to remote learning without having support for the students will result in academic exclusion which is an infringement of the student's constitutional right to "further education, which the State, through reasonable

measure, must make progressively available and accessible" (Constitution of the Republic of South Africa, 1996 section 29(1)(b)). An empirical study should be conducted to investigate the learning devices and connectivity solutions that TVET students need for remote learning.

8.6 Conclusion

TVET colleges are the primary skills drivers and the forefront producers of the workforce of the country. The deadly COVID-19 pandemic and rapid technological revolution have led higher education institutions to move away from face-to-face learning to embrace a more resilient and flexible teaching and learning system to curtail the spread of the coronavirus and to move with the changing times. A resilient and flexible teaching and learning paradigm that will also be compliant to the new living conditions imposed in an effort to contain the rapidly spreading global coronavirus requires the integration of ICT in teaching and learning so that students can have access and learn remotely from the institution. Lecturers are the key stakeholders in implementing ICT-integrated learning successfully (Ali, 2020). Reciprocally, lecturers need to be supported accordingly by their leaders. The training and resource needs of lecturers cannot be overstated in this regard, because lecturers need to be experts in their subject matter, educational pedagogy, computer science, other behavioural theories and have varying communication skills to fit into the new learning environment. The study aimed to investigate the training needs of the lecturers towards remote learning from the perspective of the lecturers and their HODs as the first line leaders of the lecturers, and then propose training guidelines and support for the lecturers towards remote learning to the college leaders.

This exploratory qualitative investigation found that it is mandatory that lecturers receive resources and training prior to the remote learning transformation implementation. It also found that owing to the differing nature of the vocational subjects taught at TVETs and the varying computer skills and knowledge of lecturers their training needs will differ. The ICT resources that they need also differs depending on whether a subject is theoretical or practical. TVET college leaders are responsible for making sure that lecturers are supported and receive the training and resources they need for remote learning to take place, but because of the magnitude and requirements of remote learning, the leaders cannot keep up. A distributive leadership approach was proposed whereby the college leaders will rely on campus and college committees to know and cater for the individual training and resource needs of lecturers.

Furthermore, training guidelines were also proposed to the college leaders that will ensure that lecturers receive training that is appropriate, accredited and meets global educational standards. It is hoped that the study has a contribution to make in helping policy-makers and decision-makers at college, provincial and national levels in advancing TVET colleges from being 100% face-to-face learning institutions to embrace the 21st-century learning paradigm that will help bridge the technological divide gap between TVET colleges and universities and to help TVET colleges to keep pace with industries and the ever-evolving market trends, as TVET colleges feed industries and business with their workforce. It is also hoped that the study has helped TVET colleges' professional development in empowering and capacitating lecturers to be 21st-century transformative intellectuals and the country as a whole to sustain its development agenda.

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Yuen, A., & Ma, W. (2002). Gender differences in teacher computer acceptance. *Journal of Technology and Teacher Education, 10*(3), 365–382. Available from: https://www.learntechlib.org/primary/p/15142/

Yunus, M. M. (2007). Malaysian ESL teachers' use of ICT in their classroom: Expectations and realities. *ReCALL: The Journal of EUROCALL, 19*(1), 79–95. doi: https://doi.org/10.1017/S0958344007000614

APPENDICES

APPENDIX 1: Ethics clearance

NHREC Registration Number REC-110613-036

ETHICS CLEARANCE

Dear Nonhlanhla Venice Nyembe,

Ethical Clearance Number: Sem 1-2021-075

Topic: Professional development needs of TVET college lecturers towards remote learning: Implications for leadership

Ethical clearance for this study is granted subject to the following conditions:

- If there are major revisions to the research proposal based on recommendations from the Faculty Higher Degrees Committee, a new application for ethical clearance must be submitted.
- If the research question changes significantly so as to alter the nature of the study, it remains the duty of the student/researcher to submit a new application.
- It remains the student's/researcher's responsibility to ensure that all ethical forms and documents related to the research are kept in a safe and secure facility and are available on demand.
- Please quote the reference number above in all future communications and documents.

The Faculty of Education Research Ethics Committee has decided to Approved

☒ Grant ethical clearance for the proposed research.

☐ Provisionally grant ethical clearance for the proposed research

Recommend revision and resubmission of the ethical clearance documents

Sincerely,

Prof Mdu Ndlovu

Chair: FACULTY OF EDUCATION RESEARCH ETHICS COMMITTEE

14 April 2021

NHREC Registration Number REC-110613-036

The Faculty of Education Research Ethics Committee comments:

It is a High benefit and Low risk project. It is approved and has possible solutions for the COVID-19 restrictions as the student can use online tools. Just convert the questionnaire to an online format to avoid all the issues in page 6 including the interviews (e.g. Zoom) please.

The application is a high benefit - low risk study and should be approved. The researcher may reconsider the method of conducting the survey. This may easily be done remotely in light of the current Covid-19 climate.

APPENDIX 2: Permission letter

[redacted]

10 May 2021

23 Silica Avenue
Dersley Park
Springs
1559

Dear Ms. NV Nyembe

CONFIRMATION TO CONDUCT RESEARCH AT [redacted]

1. This letter serves to confirm that Ms. Nonhlanhla Venice Nyembe, Identity Number: 8908230326080, persal/employee number: 26977621 is hereby granted permission to conduct her research at Benoni Campus in order for her to complete her studies. It is advised that during this period, COVID-19 regulations must be adhered to at all times during the course of conducting the abovementioned research.

[redacted] If you have any questions regarding permission that is granted to Ms. NV Nyembe, please do not hesitate to contact the HR Office, [redacted]

Yours in Higher Education and Training.

_____ _____

[redacted]

APPENDIX 3: Survey questionnaire

PROFESSIONAL DEVELOPMENT NEEDS OF TVET COLLEGE LECTURERS TOWARDS REMOTE LEARNING: IMPLICATIONS FOR LEADERSHIP

Dear Participants

I, *Nonhlanhla Venice Nyembe*, hereby request you to participate in a research study that aims to explore the training and resource needs of TVET college lecturers for remote learning. This information will assist TVET college leaders understanding the training and resources needs for lecturers, then enhance their skills development strategies and also contribute to future planning and implementation as TVET colleges endeavour to migrate from being 100% contact learning institutions.

This study forms part of my minor dissertation for Master Education in Educational Management at the University of Johannesburg and is supervised by Doctor M. Van Der Merwe.

Please pay careful consideration to the following questions, answer them sincerely and then comment on your personal needs. The feedback you give must be in a constructive way that can be used to better the future of TVET college lecturers. You are welcome to express your views and give as many details as possible.

Thank you once again for agreeing to participate in this exercise. The questionnaire should take about 30 minutes to complete. Your participation in this study is voluntary and be assured that any information you supply will be treated with the utmost confidentiality, and you will not be identifiable in any way.

Investigator: NV NYEMBE

Date: _____

Please mark the checkbox. I hereby:

☐ Agree to voluntarily take part in the aforementioned research project as a participant.

SECTION A: DEMOGRAPHIC INFORMATION

Please mark the applicable block with an "X"

3	What is the name of your Department		
	NATED-Business Studies	NATED-Engineering	NCV

4	What is your age?				
	18 - 24	25 - 34	35 – 44	45 – 54	Above 54

5	Which gender do you identify most with?		
	Female	Male	Don't want to say

6	What is your highest education level?					
	Certificate	Diploma	Degree	Honours Degree	Masters Degree	Doctorate

7	What is your lecturing experience at TVET college?				
	1 – 4 years	5 – 9 years	10 – 14 years	15 – 20 years	Above 20 years

8	Please indicate your level of computer training/knowledge		
	Basic	Moderate	Expert

Please include any other information about yourself you deem important for me to know in the space provided:

_____

_____

_____

_____

SECTION B: TRAINING NEEDS

Please answer the following questions by indicating your level of agreement with the statement made. Be as honest as you can in terms of your own needs in this respect.

		COMPLETELY AGREE	AGREE	AGREE SOMEWHAT	DISAGREE	NOT APPLICABLE
9.	I need basic computer training in MS Word.					
10	I need basic computer training in MS Excel.					
11	I need basic computer training in MS PowerPoint.					
12	I need basic training in computer network connection.					
13	I need training on teaching approaches to present my subject online.					
14	I need training on how to align digital educational content to existing curricula.					
15	I need training in video conferencing to present lessons online.					
16	I need training to create graphics for online learning to liven up lessons and create demonstrations.					
17	I need training to create audio for online learning to liven up lessons and create demonstrations.					
18	I need training to create animations for online learning to liven up lessons and create demonstrations.					
19	I need training on creating online tutorials so students can learn remotely.					
20	I need training on creating interactive e-teaching contents.					
21	I need training on how to collaborate with my students online.					
22	I need training on how to manage learning activities online.					
23	I need training on how to evaluate e-teaching activities using compatible tools and techniques.					
24	I need training on how to coordinate and monitor assessments online.					
25	I need training to assess, grade and enter student marks online/remotely.					
26	I need training on how to set periods and limits for online learning.					
27	I need training and support on setting official two-way communication channels with students: e-mails or e-learning platform communication tool.					
28	I need training with the e-learning communication tool to provide feedback on assessments.					
29	My subject will require simulation software that I will need training for.					
30	My subject will require e-assessments software that I will need training for.					
31	I need training in time management for blended learning (Half face-to-face, half remote learning).					
32	I need training on how to set time instructions for students for all online learning activities and e-assessments.					
33	I need additional training on how to use interactive whiteboards.					
34	I need additional training on how to use data projectors.					
35	I need additional training on how to use video cameras.					
36	I need additional training on how to use speakers and microphones.					

37	I need expert training in the following to present my subject remotely:			
	YouTube	MS Teams	Zoom	Skype
	MOODLE[1]	BrightSpace[2]	Other	Not Applicable
38	If other, please specify			

Please indicate anything else in the space provided concerning your training needs:

_____

_____

_____

SECTION C: RESOURCE NEEDS

Please answer the following questions by indicating your level of agreement with the statement made. Be as honest as you can in terms of your own needs in this respect.

		COMPLETELY AGREE	AGREE	AGREE SOMEWHAT	DISAGREE	NOT APPLICABLE
39	A desktop computer or laptop with high-quality features and capabilities is essential for remote learning.					
40	I have a desktop computer or laptop computer that is adequate to engage in remote learning.					
41	Interactive whiteboards are necessary for remote learning.					
42	Data projectors are essential for remote learning.					
43	Video cameras are essential for remote learning.					
44	Speakers and microphones are essential for remote learning.					
45	Light pens and scanners are essential for remote learning.					
46	Broadband internet access is a requirement for remote learning.					
47	Remote learning requires the best, fast and strong internet access.					
48	24/7 internet access off-site or at home is essential for remote learning.					
49	The campus/college has an adequate online learning platform.					
50	Multimedia projectors with white screens are essential for remote learning.					
51	Interactive software is essential for my subject for remote learning.					
52	Electronic simulation software is essential for my subject for remote learning.					
53	Additional external storage devices are needed for creating backups.					
54	Power points are needed in strategic points around the campus and the classrooms.					
55	Links to educational websites, digital libraries and e-journals are essential for remote learning.					

Please provide comments on any of the above that you wish to bring to my attention:

_____

_____

[1] ***Modular-Oriented Dynamic Learning Environment.***

[2] **A Learning Management System for academic staff and students.**

_____

56	Any additional comments:

APPENDIX 4: Interview schedule

PROPOSED INTERVIEW QUESTIONS

(Semi-structures interview for Head of Departments)

Opening

A. (**Establish Rapport**) Greet and introduce myself in my capacity as a Master's Degree student and explain the background of the research.

B. (**Purpose**) I am conducting a semi-structured interview with you as a TVET college HOD at the College, to explore your perception regarding the training and resources needs of lecturers for remote learning in your department.

C. (**Motivation**) I hope to use this interview to understand how you as the leader of the department aim to ensure that lecturers are furnished with the training and resource needs for remote learning and I also hope to use this information to develop guidelines for training of lecturers for remote learning.

D. (**Time Line)** The interview should take approximately 45 minutes.

E. (**Transition):** The recent outbreak of the corona-virus has not only exposed but also exacerbated the need that has always been there, for TVET colleges to adopt another paradigm for teaching and learning and move away from being 100% face-to-face contact learning institutions. The focal point of our discussion is on the lecturers needs in terms of training and resources as the college and DHET plans the shift to promote more remote learning paradigms.

The Body

1) Have the lecturers commenced with remote learning?
2) How do you think lecturers are coping with teaching remotely at this TVET college at this time?
    a. How are/will lecturers that are experiencing challenges with remote learning are/will be supported? ie. Competency issues, hardware and software challenges.
3) Can you tell me about what you think the needs of lecturers are to teach remotely at this TVET college considering specifically the subject offerings of the department?
    a. How do you support veteran lecturers who are BBC (Born Before Technology) in your department?
    b. What additional support is given to lecturers in catering for their individual needs in your department?
4) What kind of training have lecturers received to teach remotely at this TVET college in your view?
    a. What type on computer training have your staff received in your department?
    b. Are all lecturers given the same trainings or is the training level on a case by case basis?
5) How do you think lecturers are being supported to transition to remote teaching and learning at this TVET college?
    a. Which interactive hardware devices have been procured to support lecturers for remote learning?
    b. Which software specifically related to the subject you head has/should been given to lecturers as support for remote learning?
    c. How are lecturers accessing the remote learning platform when working from home?
6) How have you experienced the move to remote learning as the HOD at this TVET college campus?
    a. Can you tell me more about what you are doing in your own department regarding:

i. What strategies have you applied in your department to ensure that all lecturers are compliant and reach the optimal level of remote learning training?
ii. If there are any outstanding physical resources needed by lecturers for remote learning. How do you ensure that they are procured and reach the lecturers timeously?
iii. As a leader, how are you going to assist your staff balance remote learning and face-to-face learning?
iv. How have you ensured that the remote learning training received by lecturers meets global standards?

7) Can you tell me more about how the issues of connectivity and data-availability is attended to at this TVET college?

8) A final question:
   a. How do you think this TVET college campus is transitioning to remote learning?
   b. What in your opinion does leadership need to put in place to achieve the transition to remote learning at this institution?

APPENDIX 5: Letters of consent

(For all participants, parents, guardians and other stakeholders)

Faculty of Education Research Ethics Committee

NHREC Reference Number REC-110613-036

INFORMED CONSENT/ASSENT FORM

Project Title:

Professional development needs of TVET College lecturers towards remote learning: implications for leadership

Investigator:

NONHLANHLA VENICE NYEMBE

Date:

22 July 2021

Please mark the appropriate checkboxes. I hereby:

☐ Agree to be involved in the above research project as a **participant**.

☐ Agree that **my staff** may be involved in the above research project as participants.

☐ **I have read the research information sheet pertaining to this research project (or had it explained to me) and I understand the nature of the research and my role in it.**
I have had the opportunity to ask questions about my involvement in this study.
I understand that my personal details (and any identifying data) will be kept strictly confidential.
I understand that I may withdraw my consent and participation in this study at any time with no penalty.

Signed consent available with the researcher

Signature: .....

Please provide contact details below ONLY if you choose one of the following options:

☐ Please allow me to review the report prior to publication. I supply my details below for this purpose:

☐ Please allow me to review the report after publication. I supply my details below for this purpose:

☐ I would like to retain a copy of this signed document as proof of the contractual agreement between myself and the researcher

Name: .....

Phone or Cell number: .....

e-mail address: .....

SECTION E: Separate signatures required for consent/assent to use video, audio or photographic recording
(For all participants, parents, guardians and other stakeholders)

Faculty of Education Research Ethics Committee
NHREC Reference Number REC-110613-036

VIDEO, AUDIO OR PHOTOGRAPHIC RECORDING

By law, separate consent or assent must be provided to indicate willingness to be video / audio recorded or photographed. Please provide your consent / assent on this form:

Where applicable:

☐ I willingly provide my consent/assent for using **audio** recording of my/the participant's contributions.

☐ I willingly provide my consent/assent for using **video** recording of my/the participant's contributions.

Signature (and date): ***Signed consent available with the researcher*** .....

Signature of person taking the consent (and date): .....

APPENDIX 6: Turn-it-in result

Research report 2

ORIGINALITY REPORT

4%	3%	1%	%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	hdl.handle.net Internet Source	1%
2	Wahab Ali. "Online and Remote Learning in Higher Education Institutes: A Necessity in light of COVID-19 Pandemic", Higher Education Studies, 2020 Publication	<1%
3	journals.co.za Internet Source	<1%
4	researchspace.ukzn.ac.za Internet Source	<1%
5	sevgiligiyim.com Internet Source	<1%
6	sacpo.co.za Internet Source	<1%
7	www.tandfonline.com Internet Source	<1%
8	scholar.sun.ac.za Internet Source	<1%

9	Saade, R.G.. "Exploring dimensions to online learning", Computers in Human Behavior, 200707 Publication	<1 %
10	Scholar.ufs.ac.za Internet Source	<1 %
11	gala.gre.ac.uk Internet Source	<1 %
12	www.papercamp.com Internet Source	<1 %
13	mafiadoc.com Internet Source	<1 %
14	dl.dropboxusercontent.com Internet Source	<1 %
15	www.ecdoe.gov.za Internet Source	<1 %
16	ujcontent.uj.ac.za Internet Source	<1 %
17	uir.unisa.ac.za Internet Source	<1 %
18	www.lmip.org.za Internet Source	<1 %
19	Sandhya Devi Coll, Richard K. Coll. "Enhancing Science Learning through Learning	<1 %

	Experiences outside School (LEOS)", Brill, 2019 Publication	
20	businessperspectives.org Internet Source	<1 %
21	www.cdc.gov Internet Source	<1 %
22	amarearningzone.blogspot.com Internet Source	<1 %
23	repository.up.ac.za Internet Source	<1 %
24	twb.in Internet Source	<1 %
25	books.aosis.co.za Internet Source	<1 %
26	www.coursehero.com Internet Source	<1 %
27	www.palminfocenter.com Internet Source	<1 %
28	Samar A Ahmed, Nagwa Nashat Hegazy, Hany W. Abdel Malak, Cliff W. Kayser et al. "Model for Utilizing Distance Learning post COVID-19 using (PACT)™ A Cross Sectional Qualitative Study", Research Square, 2020 Publication	<1 %

29	Wei-Lun Chang, Li-Ming Chen, Yen-Hao Hsieh. "Online to offline social interaction on gaming motivations", Kybernetes, 2021 Publication	<1 %
30	docplayer.net Internet Source	<1 %
31	lib2.znate.ru Internet Source	<1 %
32	www.anzics.com.au Internet Source	<1 %
33	www.cge.org.za Internet Source	<1 %
34	www.saqa.org.za Internet Source	<1 %
35	www2.indstate.edu Internet Source	<1 %
36	Aris Alea Lapada, Frosyl Fabrea Miguel, Dave Arthur Roldan Robledo, Zeba Farooqi Alam. "Teachers' Covid-19 Awareness, Distance Learning Education Experiences and Perceptions towards Institutional Readiness and Challenges", International Journal of Learning, Teaching and Educational Research, 2020 Publication	<1 %

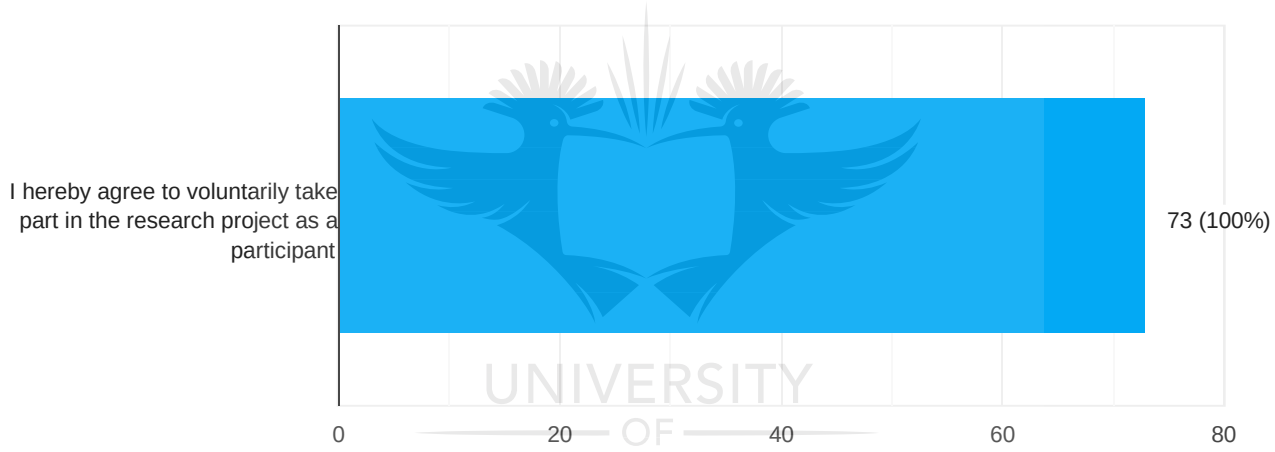
37	Glenn Russell. "Information technology skills of Australian teachers: implications for teacher education", Technology Pedagogy and Education, 7/2000 Publication	<1 %
38	M. Botha, J. G. Maree, M. W. de Witt. "Developing and piloting the planning for facilitating mathematical processes and strategies for preschool learners", Early Child Development and Care, 2005 Publication	<1 %
39	finance.mpu.gov.za Internet Source	<1 %
40	westcol.co.za Internet Source	<1 %
41	"Learning Technologies and Systems", Springer Science and Business Media LLC, 2021 Publication	<1 %

Exclude quotes	Off	Exclude matches	< 5 words
Exclude bibliography	Off		

APPENDIX 7: Qualitative survey summarised (graphical) results

Please mark the check box

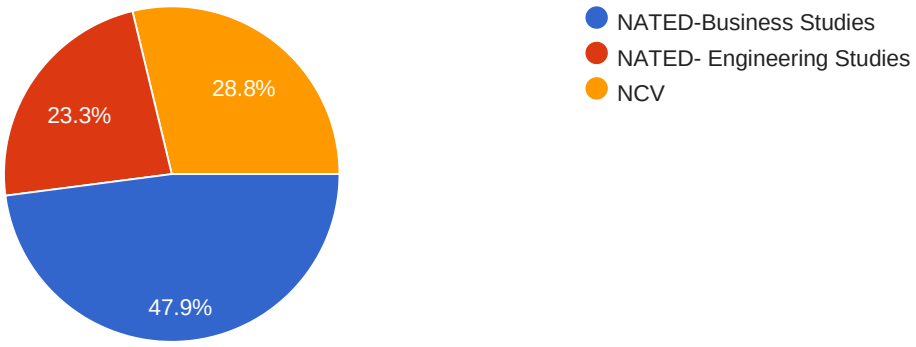
73 responses



SECTION A: DEMOGRAPHIC INFORMATION

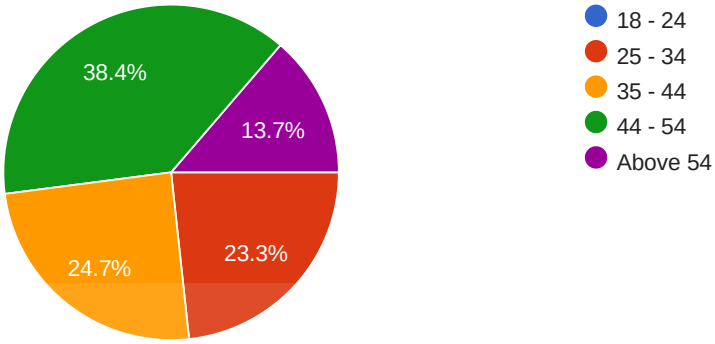
What is the name of your department?

73 responses



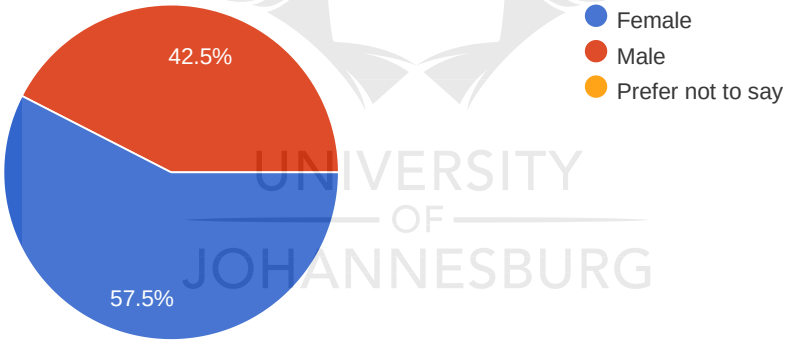
What is your age?

73 responses



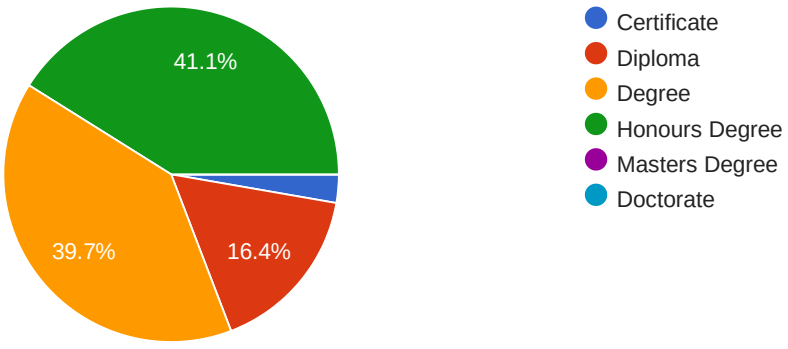
Which gender do you identify with?

73 responses



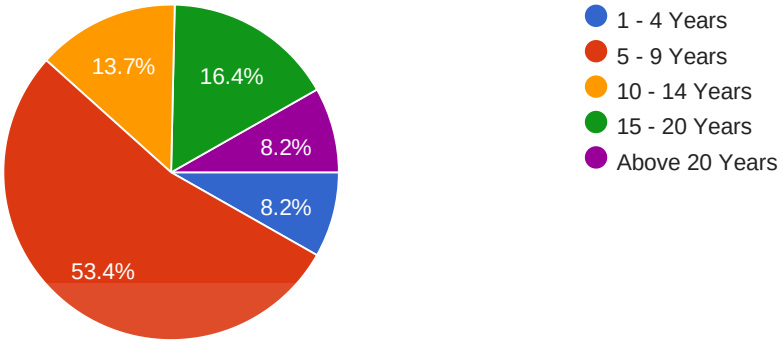
What is your highest education level?

73 responses



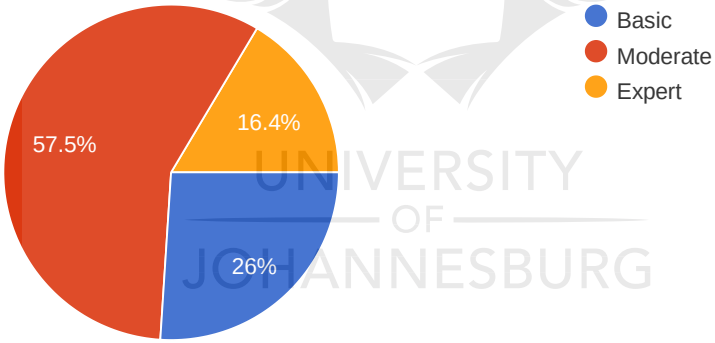
What is your lecturing experience at TVET College?

73 responses



Please indicate your level of computer training/knowledge.

73 responses



Please include any other information about yourself you deem important for me to know in the space provided:

20 responses

I am a very detailed person who gives attention to details and I should safely say I'm a perfectionist. When given support, I do my best.

COMPUTER SKILLS ARE REALLY LIMITED

i am currently involved in a beauty industry, doing make-up, nails and body massage.

No additional information

No full formal training for Computer related course, rely on personal, peer and inservice.

None

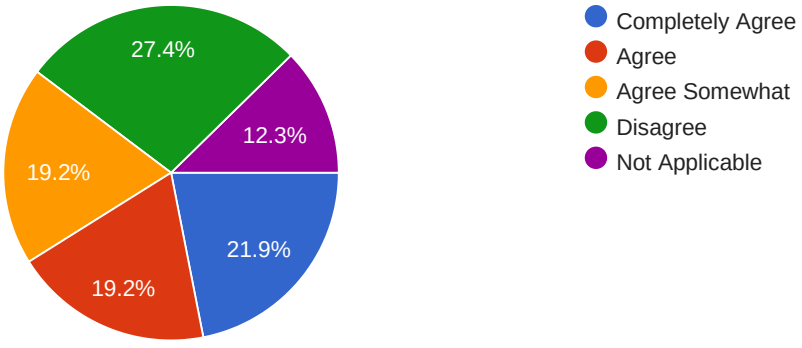
I am a very dedicated person

In my teacher training years (1983 to 1987)Colleges and Universities did not train teachers in computers. I had register in typing... later N4 andN5 Computer skills. Even currently we NOT trained in remote remote learning.

SECTION B: TRAINING NEEDS

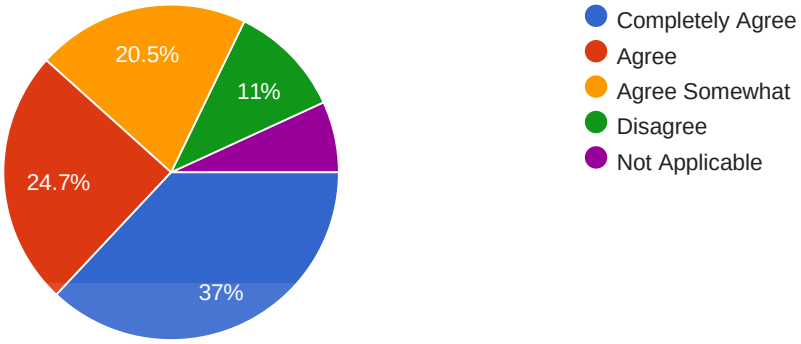
I need computer training in Ms Word.

73 responses



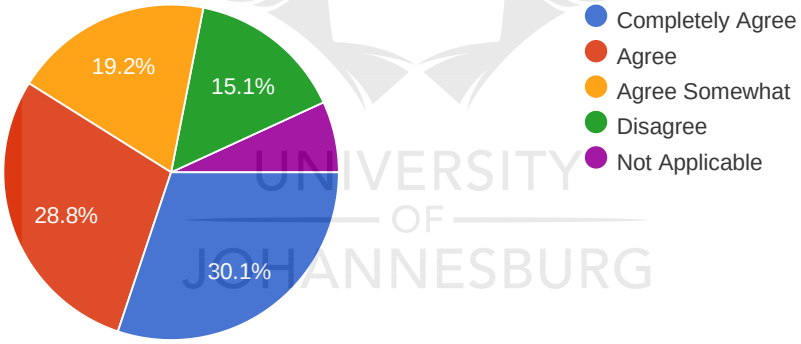
I need computer training in Ms Excel.

73 responses



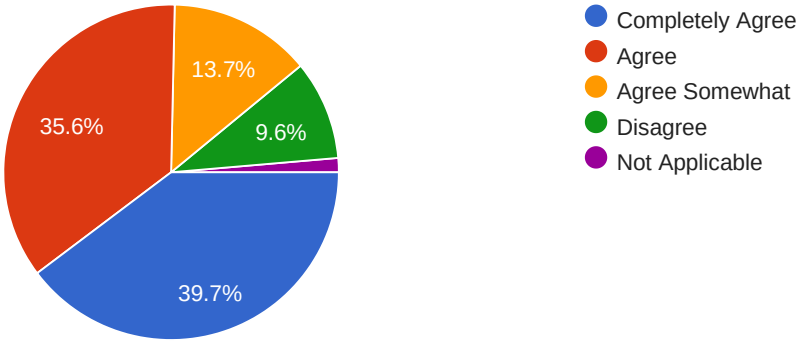
I need computer training in Ms PowerPoint.

73 responses



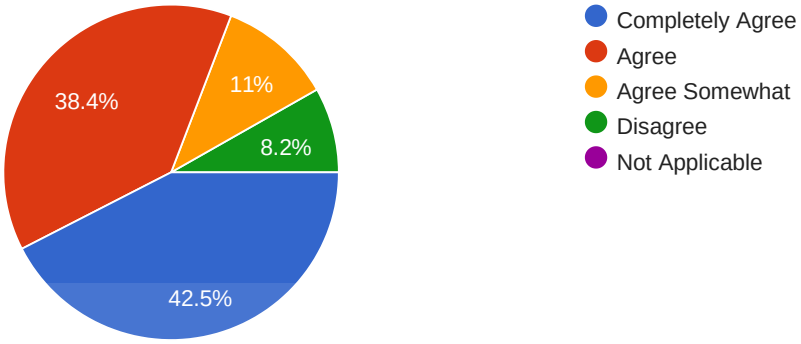
I need basic training in computer network connection.

73 responses



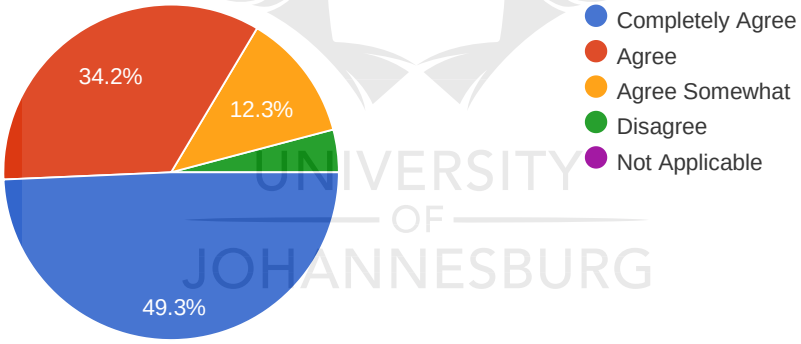
I need training on teaching approaches to present my subject online.

73 responses



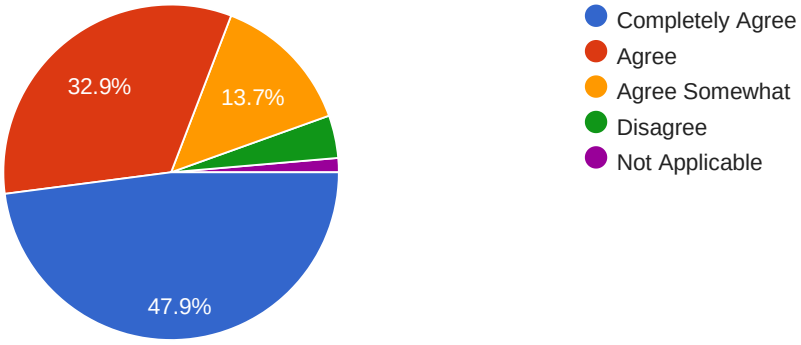
I need training on how to align digital educational content to existing curricula.

73 responses



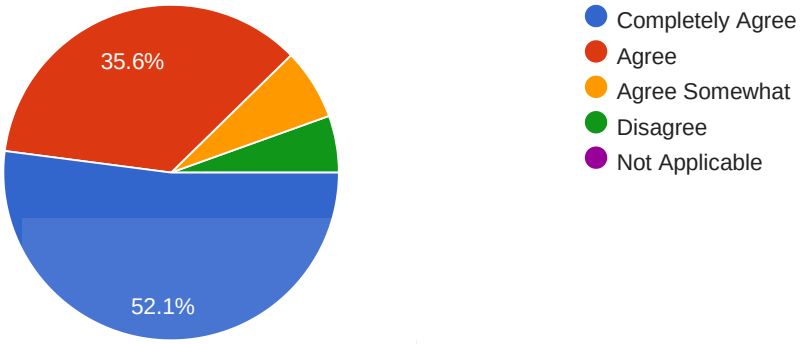
I need training in video conferencing to present lessons online.

73 responses



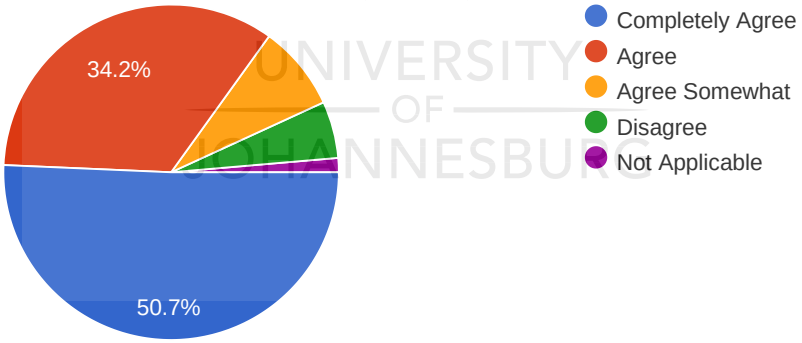
I need training to create graphics for online learning to liven up lessons and create demonstrations.

73 responses



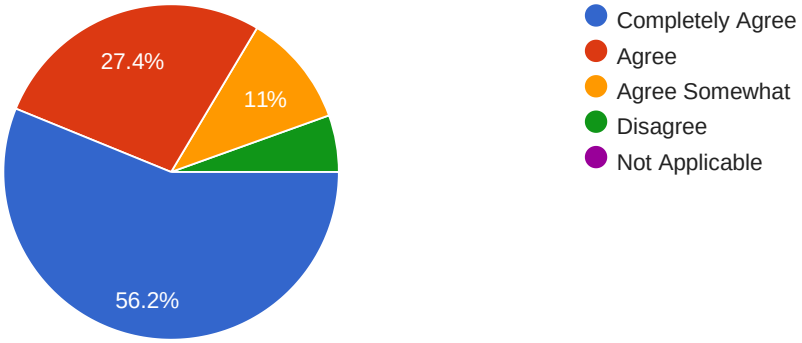
I need training to create audio for online learning to liven up lessons and create demonstrations.

73 responses



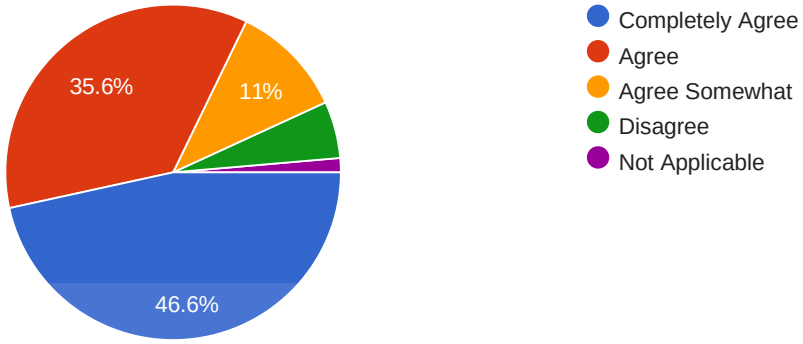
I need training to create animation for online learning to liven up lessons and create demonstrations.

73 responses



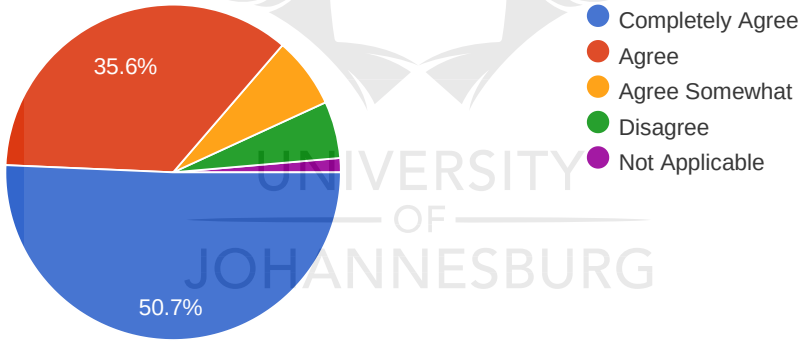
I need training on creating online tutorials so that students can learn remotely.

73 responses



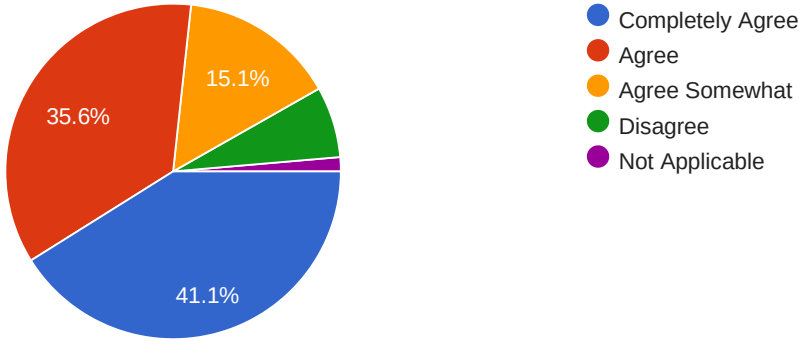
I need training on creating interactive e-teaching contents.

73 responses



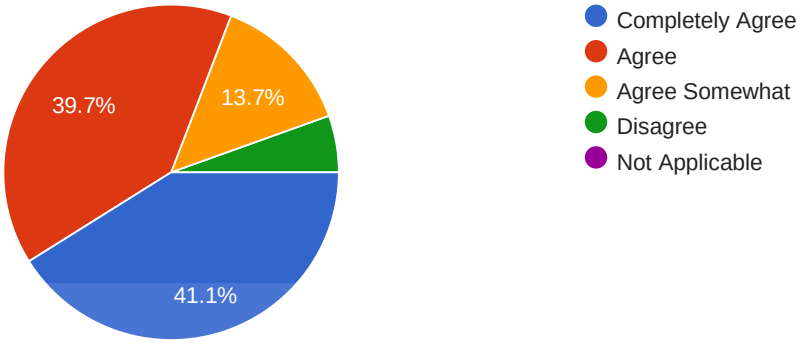
I need training on how to collaborate with students online.

73 responses



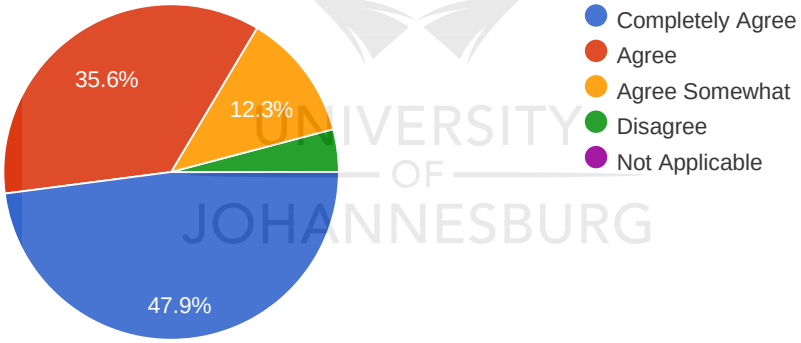
I need training on how to manage learning activities online.

73 responses



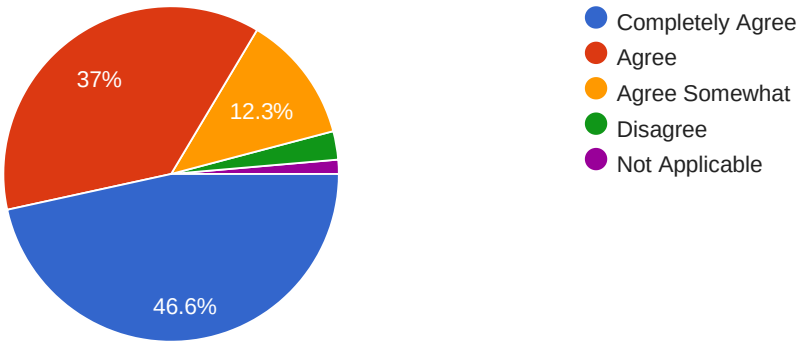
I need training on how to evaluate e-teaching/learning activities using compatible tools and techniques.

73 responses



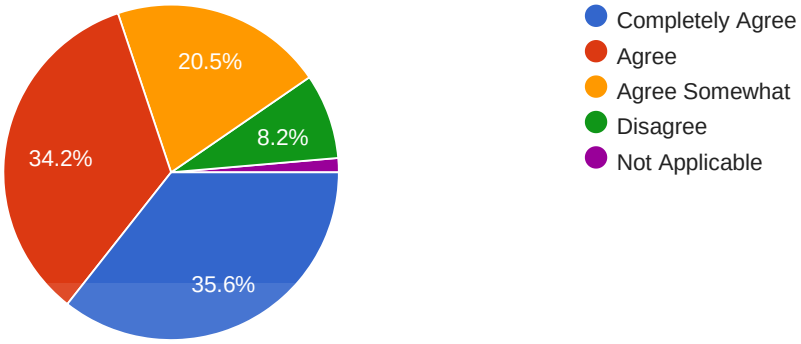
I need training on how to coordinate and monitor assessments online.

73 responses



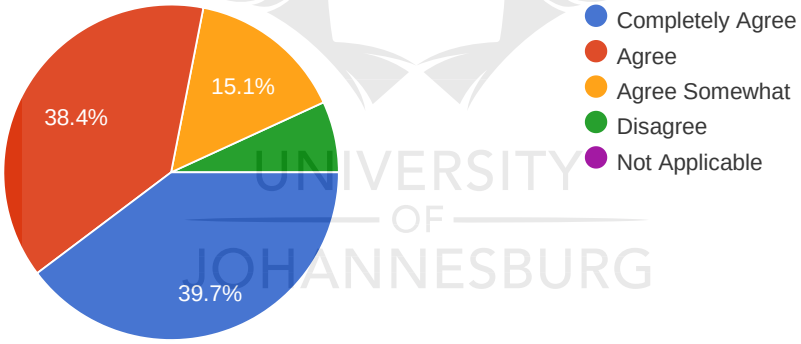
I need training to assess, grade and enter student marks online/remotely.

73 responses



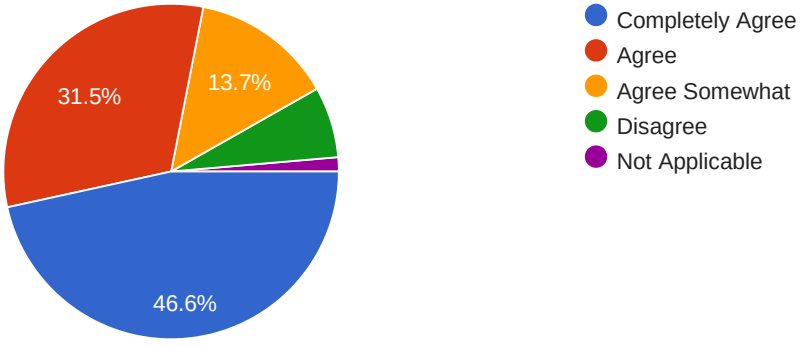
I need training on how to set periods and limits for online learning.

73 responses



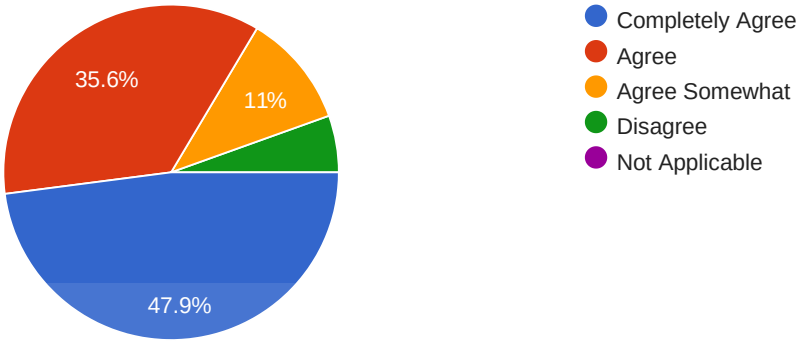
I need training and support on setting official, two-way communication channels with students, using emails or e-learning platform communication tool.

73 responses



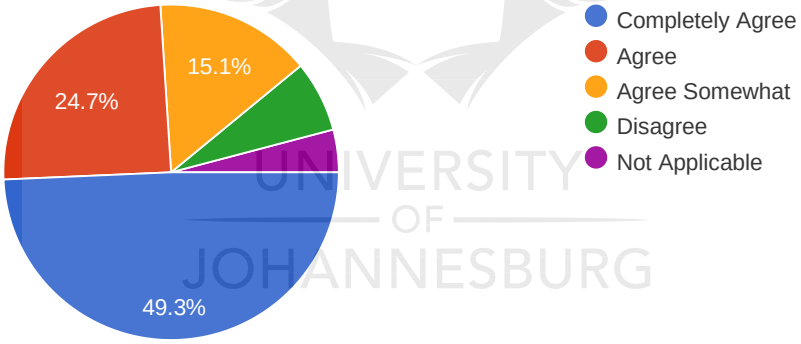
I need training with the e-learning communication tool to provide feedback on assessments.

73 responses



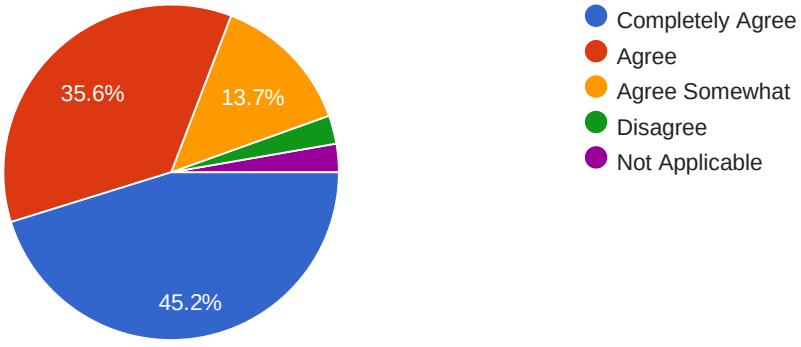
My subject will require simulation software that I will need training for.

73 responses



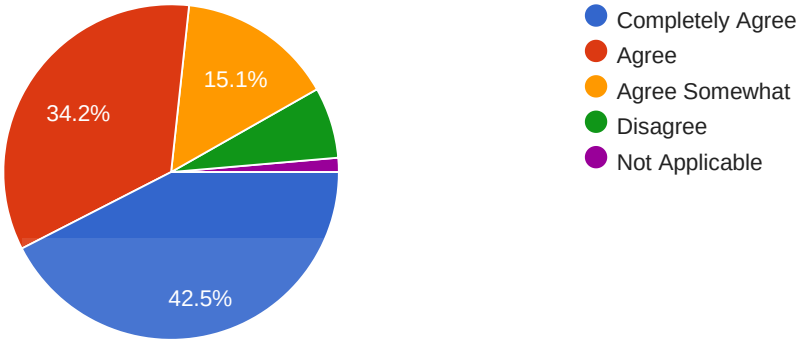
My subject will require e-assessment software that I will need training for.

73 responses



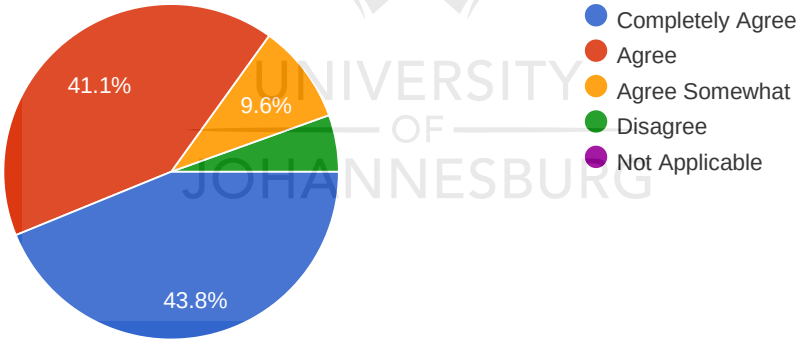
I need training in time management for blended learning (Half face-to-face and Half remote learning).

73 responses



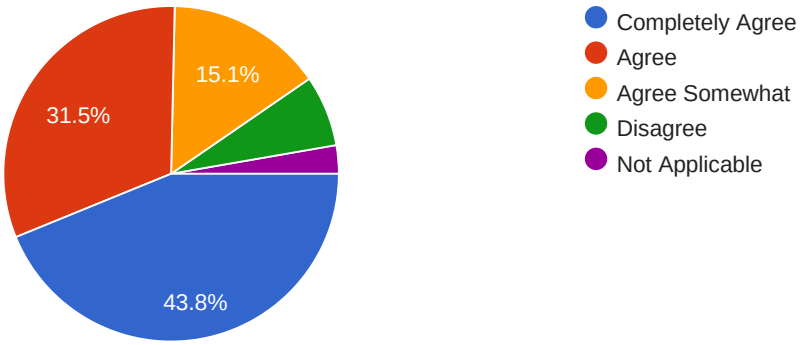
I need training on how to set timed instructions for students for all online learning activities and e-assessments.

73 responses



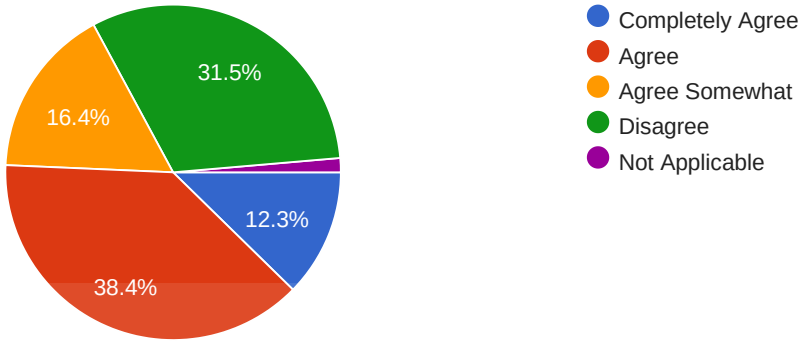
I need additional training on how to use interactive whiteboards.

73 responses



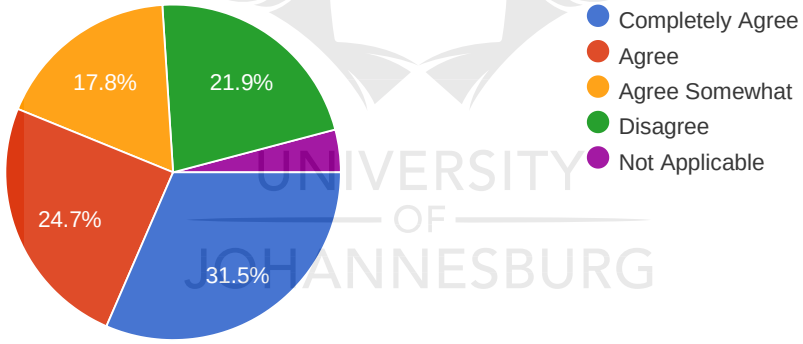
I need additional training on how to use data projectors.

73 responses



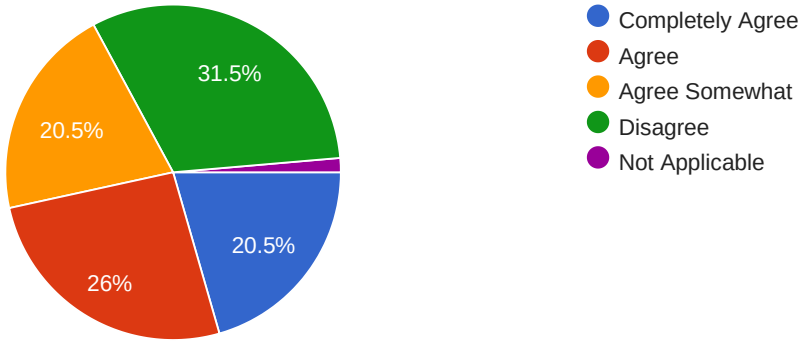
I need additional training on how to use video cameras.

73 responses



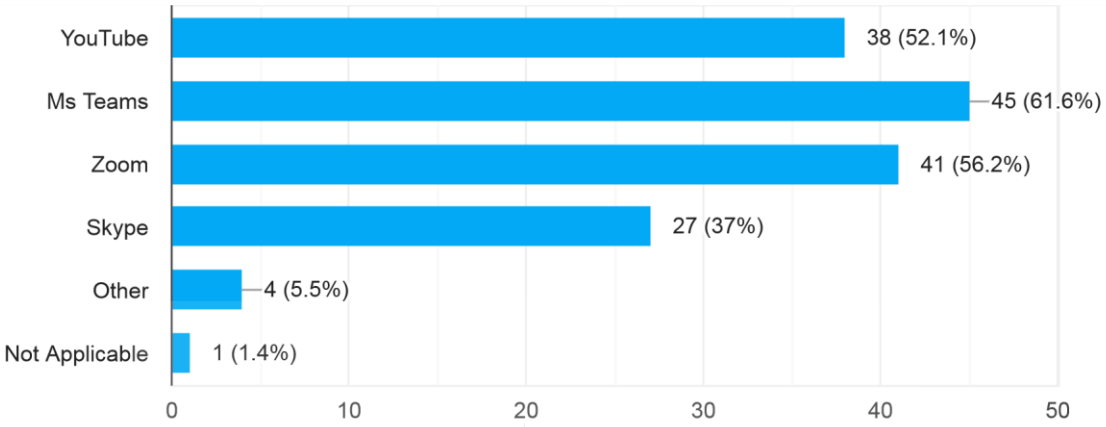
I need additional training on how to use speakers and microphones.

73 responses



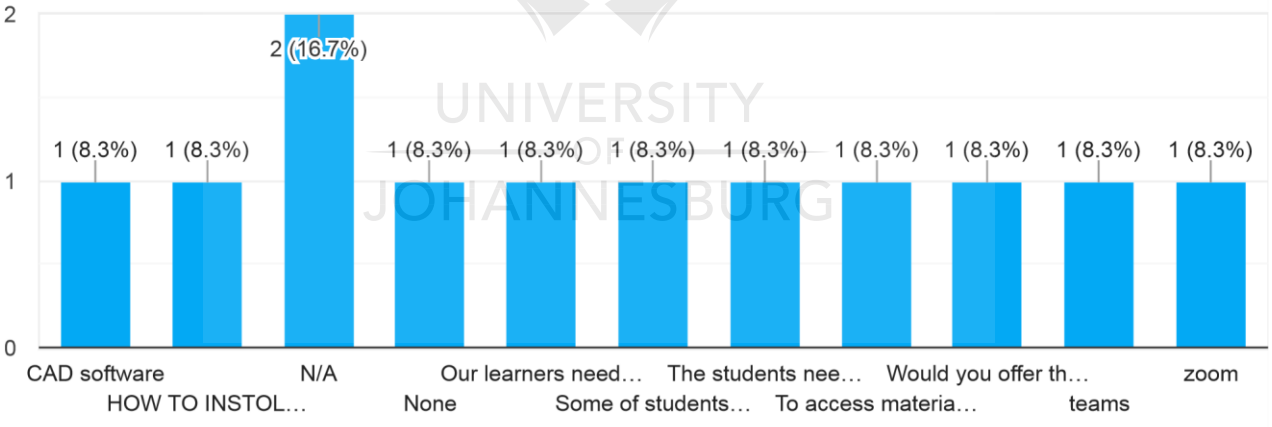
I need expert training in the following to present my subject remotely:

73 responses



If other, please specify.

12 responses



Please indicate anything else in the the space provided concerning your training needs.

20 responses

None

N/A

how student can create or load companies on Sage pastel for themselves

Through remote learning,some learners may encounter challenges retaining learned content. I need sufficient skills to develop curriculum that will engage and motivate my learners to fully participate. I need to develop skills to help learners to fully engage according to their individual learning abilities as they are different

i need to be trained on how to use the overhead projector

I would like to be trained by an actual person in front of me and not remotely.

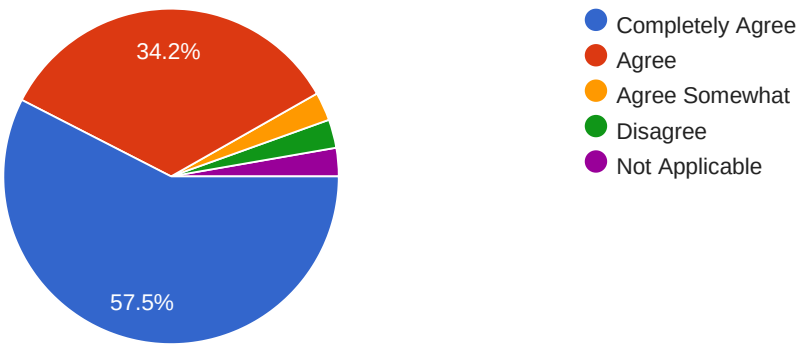
E-learning

E-Teaching seems to be the new normal, therefore as educators our competency in digital teaching can

SECTION E: RESOURCE NEEDS

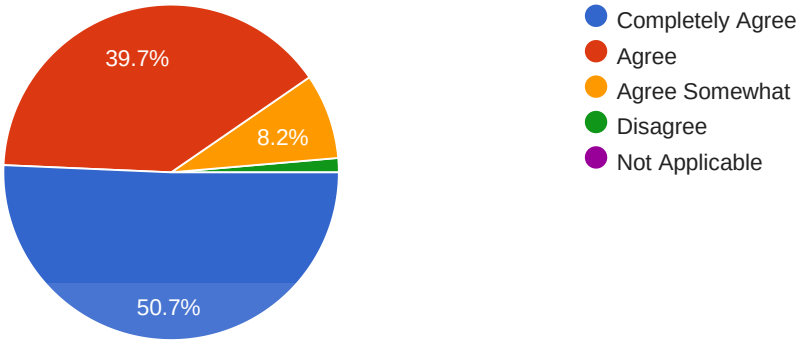
A desktop computer or laptop with high-quality features and capabilities is essential for remote learning.

73 responses



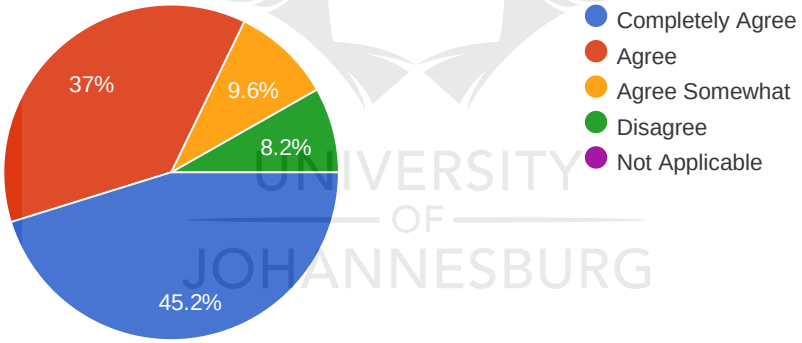
I have a desktop computer or laptop that is adequate to engage in remote learning.

73 responses



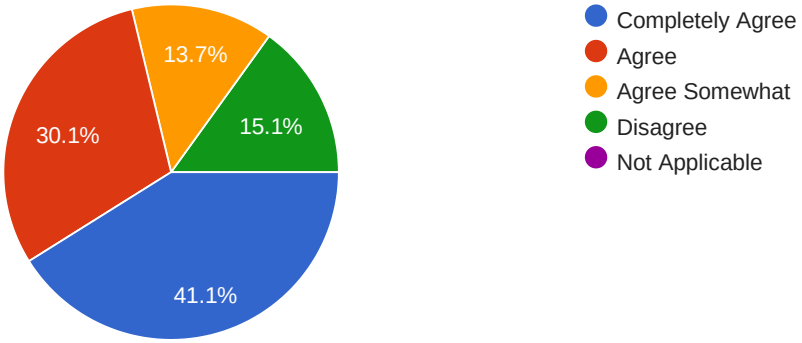
Interactive whiteboards are necessary for remote learning.

73 responses



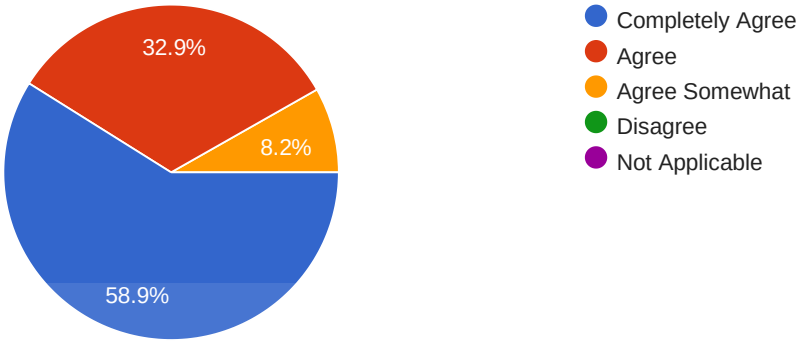
Data projectors are essential for remote learning.

73 responses



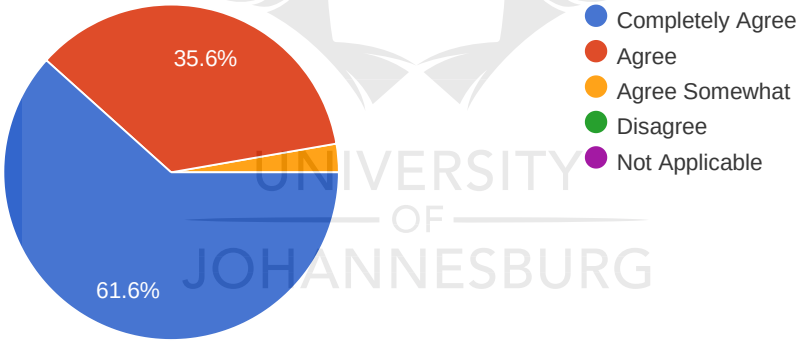
Video cameras are essential for remote learning.

73 responses



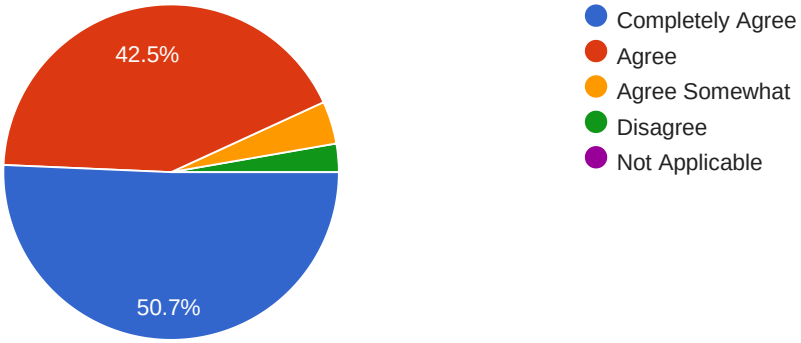
Speakers and microphones are essential for remote learning.

73 responses



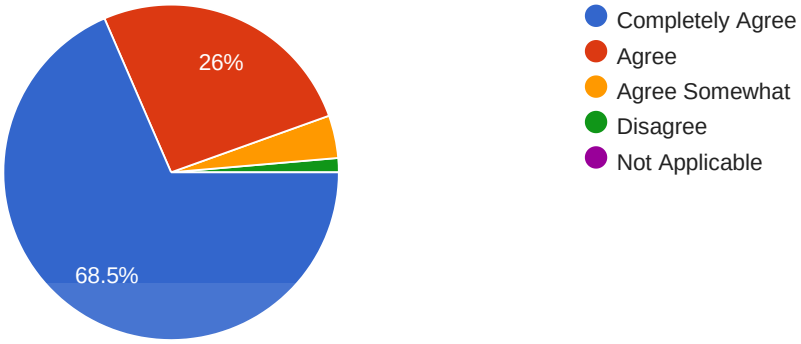
Light pens and scanners are essential for remote learning.

73 responses



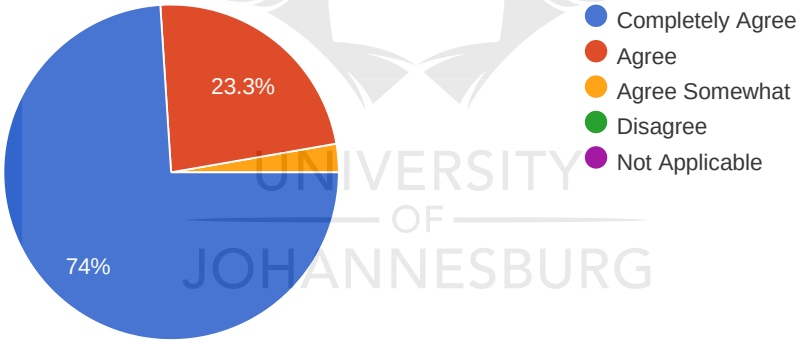
Broadband internet access is a requirement for remote learning.

73 responses



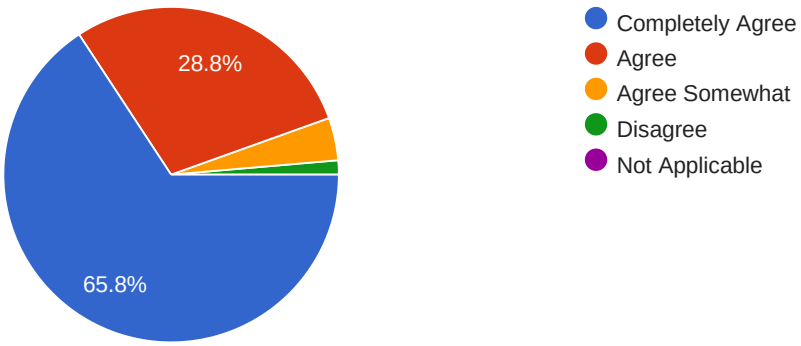
Remote learning requires the best, fast and strong internet access.

73 responses



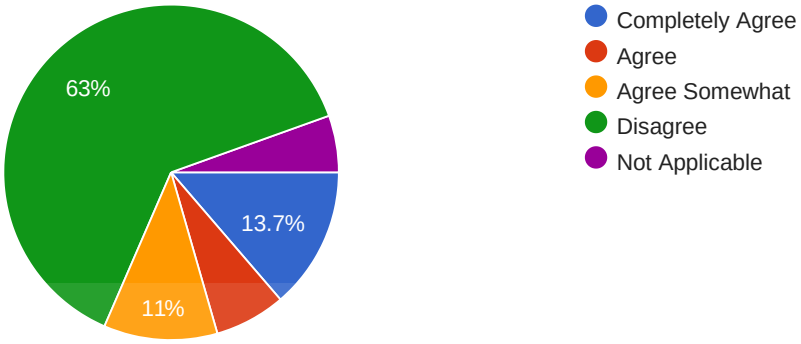
24/7 internet access off-site or at home is essential for remote learning.

73 responses



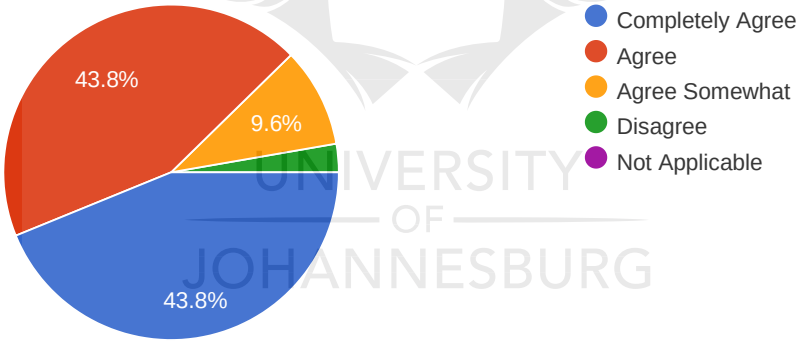
The campus/college has an adequate online learning platform.

73 responses



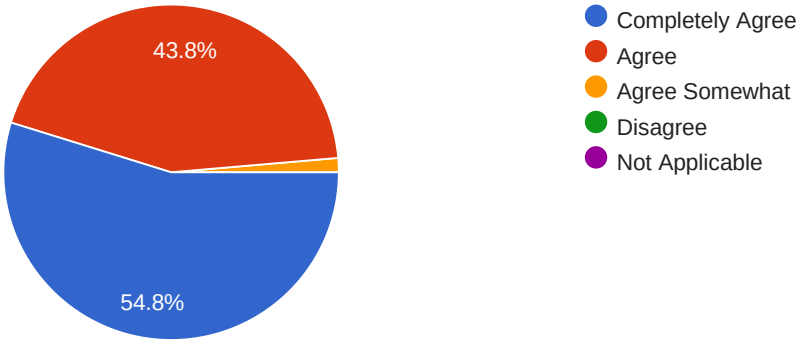
Multimedia projectors with white screens are essential for remote learning.

73 responses



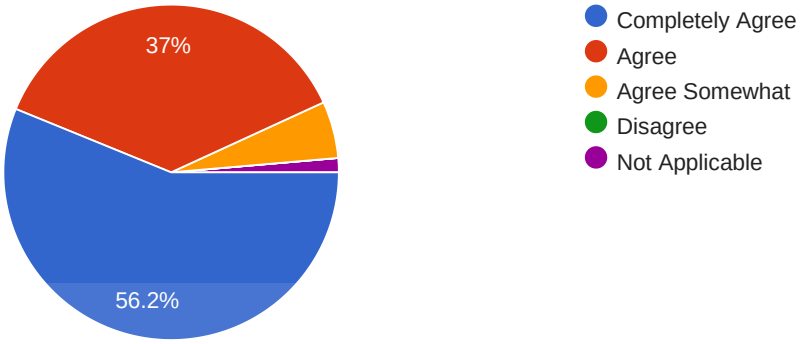
Interactive software is essential for my subject for remote learning.

73 responses



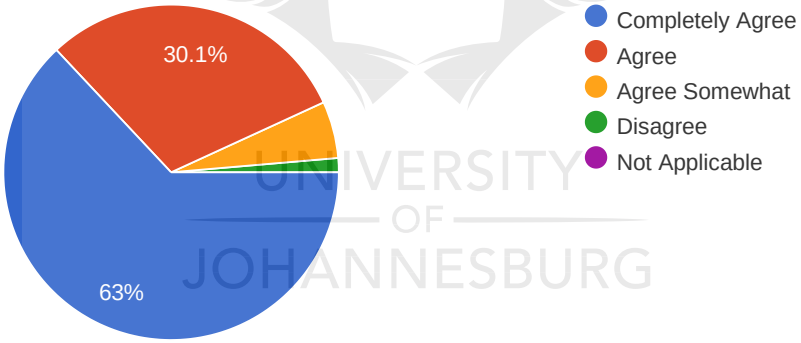
Electronic simulation software is essential for my subject for remote learning.

73 responses



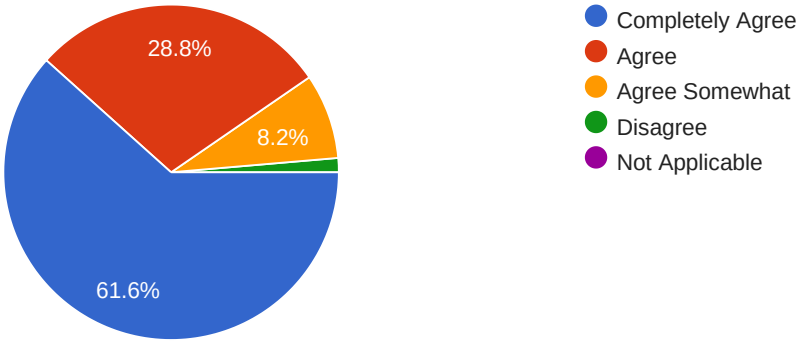
Additional external storage devices are needed for creating backups.

73 responses



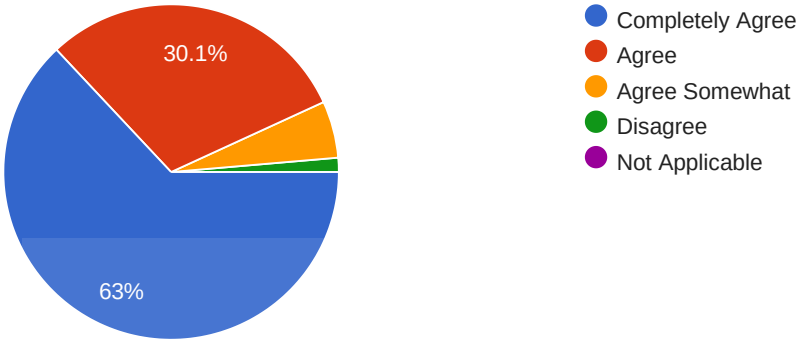
Electric power points are needed in strategic areas around the campus and the classrooms.

73 responses



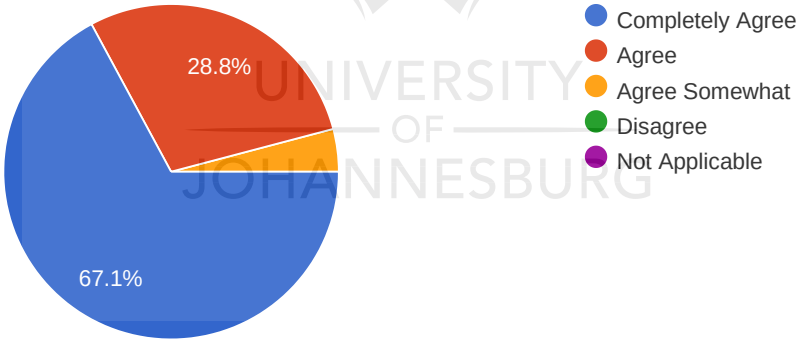
Network connection points are needed in strategic areas around the campus and the classrooms.

73 responses



Links to educational websites, digital libraries and e-journals are essential for remote learning.

73 responses



Please provide comments on any of the above that you wish to bring to my attention.

20 responses

Ultrabook is suitable for online or remote learning.

The campus must have sufficient space for students to have more computer labs

n/a

No comments

None

For effective remote learning, learners should also receive laptops plus data for connectivity.

I want to be linked to educational website

Some of the terms you use in your questions we don't even understand

NA

Any additional comments

18 responses

None

Colleges are failing lecturers from providing the necessary recources to carry on their everyday lessons

n/a

Internet access for students also very important.

IIT ISNO LONGER A LUXURY TO HAVE THE ABOVE RESOURCES, IT IS NECESSARY.

Not at all

Students don't have access to Internet

remote Learning training is also veyr important to me

Thanks for the research, this may bring attention to management in TVET Colleges that there is a real need for remote learning training.

APPENDIX 8: Interview transcripts

Interview with HOD 1

Date: 2021 May 20
Time: 13:40
Location: HOD 1 Office

Interviewer: You know me as a lecturer Mrs Nyembe for computer practice, I am doing my master's degree in educational management. So the topic of my research is the professional development needs of TVET college lecturers for remote learning. When to vet colleges, we migrated to DHET, it came with the impression that they are going to transform TVET colleges to be like universities in terms of teaching and learning, in terms of technology, but many years down the line, we are still more traditional learning than we are in like universities. So, my the purpose of this interview is to explore your perception regarding the training and the resource needs of lecturers in your department, so that they can take part in remote learning, okay. Ehm I'm going to use the interview. To understand how you as a leader, you aim to ensure that your lecturers get the training that they need and the resources that they need. Before we can say that we are ready to take part in remote learning. Other departments have tried, but we have failed because we don't have the necessary resources as the college. Um it will take about 45 minutes. Like I said, when TVET colleges migrated we way we were thinking but we are also going to change to be transformed to be like universities, it didn't happen. But then there was a corona-virus outbreak which also exposed and exacerbated the need for TVET colleges to transform from being 100% face to face learning institutions. So as I said, our discussion will only be based on the training needs and the resources needs of the lecturers in your department. So the first question that I have here is have the lecturers in your department started taking part in remote learning?

Respondent: Yes, they started last year, actually, it was forced by COVID. We closed in March. Ehm and the President of the country said that we will be in level five lockdown. And, first of all, we didn't do anything we thought for level five was going to go over quickly. But as time passed, we saw this, this is becoming serious. And our students are now at home stressing lecturers of stressing. So then the college started interacting and with us and saying colleagues, we need to come up with plans how to assist the learners. Now at that stage, we were, we didn't know what to do. Lecturers didn't have laptops. No data. Ehh I had a laptop but I don't have all the necessary resources. What I said to my lecturer is let us form WhatsApp groups. And luckily some of the lectures already did that, before the lockdown. So, students, we got students and lecturers numbers, A. our IT assisted with, with that. She sent us the numbers and we started with WhatsApp groups. Now, unfortunately…

(Respondent went to paste a 'Do not disturb note' on the door)

Respondent: not all students are on the same level with financial finances. So not everybody had WhatsApp. Then the college had… you must stop me if I'm talking too much.

Interviewer: No it's fine, thank you

Respondent: And then the college came up and said let lecturers start making notes and assignments and tests that we can load it on the college website. We started with that. And luckily lecturers, I also had all the ISATs and the packs on my laptop. So what we did was we send it to the students. But now obviously, only to those who could afford WhatsApp. So we tried and we say the students start doing the packs and the assignment and then you will submit when we reopen. At that stage, we still hope that the opening will not take long. But with NCV we reopened in July, which was quite late. And it started at different times. So you can imagine now, we closed March, July, August, we start with classes. Now you have to do all your assessments. And the department said, luckily, they sent the new guidelines to say we can leave one test. But we were hoping that we'll leave the ISAT because that's the most time-consuming. So coming back July, August, we had assignments to do, we had ISAT to do. And then we saw this, this need, because now obviously, some lecturers got sick, myself was infected with COVID. My lecturers infected me. So I was off five weeks, I was very sick. My lecturers, my old team was about five lecturers at a stage, not here. So that also hampered everything, because now we were too sick, we couldn't work. But what I say to my lecturers is when we reopened, is that students' assignments, packs, notes, let us print that so that when the students come back in August or July, we will give them the pack and say, this is term two work. And then I can go through it and do the assignments and those that didn't get any. So I must say it worked well, because when we looked at our results, level three results was a level two results was quite good, because we enrolled more level threes than we anticipated.

Interviewer: Oh that's great.

Respondents: But it also showed us that NCV can actually be done in a lesser time if you put your mind to any.

Interviewer: Yes, Yes

Respondent: But that's it this is a discussion for a different date. So it brought out a lot of issues, to say, lecturers don't have resources, they don't have laptops, they don't have printers. So what are we going to help the students with? WhatsApp alone is not enough. I mean, you can send whatever you want on WhatsApp, it's not enough. Some lecturers had students email addresses. But remember, still, then things were still

closed, you couldn't go and print or something. And students also have limited finances, so everybody can't go print. And then we started saying to management, listen, we are not the, we are far behind universities, because universities just ran, they didn't have issues. And we were like, I always say we are the stepchild of the DHET, because colleges are nowhere near and then a lot of colleges started buying laptops for the for the lecturers, and I must say, I don't want to say anything negative, but our college was the last to get resources. I, I'm talking to a few lecturers in different colleges and HODs, and they said they got the laptops in May last year. So that made a big difference. Where they could have data and things, so yes, they could do assignments. But again, the WhatsApp was still the issue. So the need for students to have either laptops or what do you call it?

Interviewer: Tablets

Respondent: iPads and tablets was also an issue because now you have a resource, but I don't have any. So what are you going to do? And then the government was quite responsive to DBE, showing YouTube videos for free. You know all these educational things, but nothing on TVET. There was no Google, what was that? School whatever. There was a lot of things for schools, which which could help. But for TVETs, there was nothing

Interviewer: There was nothing

Respondent: and our own website when they said people must start designing things. We had lecturers that did wonderful power presentations and everything we send it all to Head Office. At this stage is still not loaded.

Interviewer: Oh wow

Respondent: Because it was going to… they were going to say the college website will also be zero-rated and they will load the stuff. We actually went to other colleges' websites and got stuff. I must tell you that we went to other colleges' and got stuff. And then also on the DHET, there were some things that they have put on. Ahh hmm, but our own college was very far behind. And that is what is a big concern for us is that all colleges must be on par. Even in rural colleges were ahead, you know other colleges have Wi-Fi there have ehh. I know of Southwest Gauteng college, they, their students already forgot that they got tablets, they've had it now, three or four years already. So you see with us, we have big ideas, but we don't implement. Okay, I'm not saying we're the only college. But if I look at other colleges, then we are behind.

(Sneeze)

Respondent: So, eh now I see NSFAS has opened the thing to say students that is getting NSFAS, can now apply for the laptop. I don't know how long that's gonna take the rollout and the thing so I just feel Mr. Blade Nzimande and his, he knows what's happening in colleges, but it's like he promotes colleges and say there's bursaries and everything. But does he really know what is happening on ground level because he's always talking universities, universities, and then he mentions TVETs but we nowhere close to them.

Interviewer: You know Ma'am, with my, my research, I could have gone and interviewed the managers and the leaders at head office. But something told me that for this change to come, I need to go to the frontline runners of the process, which are the lecturers and who are the immediate leaders of the lecturers. They are the HODs. I knew that going to the leaders up there, it wouldn't be the same as going to the heart of the problem, which is where the lecturers are. So ma'am thank you very much for that. My next question is since when you opened in July until now, how do you think your your lecturers are coping with remote learning?

Respondent: They are… honesty saying I don't know. Mrs B was one of the front runners was with remote learning. She scheduled a class like three to four. I'm sending you assignments and then we have in a quick discussion. The problem there started when she wanted to load videos, because the videos must be small. Like telegram now can can accommodate what videos but students don't have the data some of them buy a data bundle, which only caters for WhatsApp notices or messages and not various. So that hampers that again. So then they said Mr. Blade, Dr. Blade Nzimande said he's gonna give 6… 30 something like that 30 gig to every student. Our students didn't get. Only the university students got that. And then our students can go on on educational portals now, yes, but it's not applicable to us. So it doesn't tell them to go on educational portals, if there's nothing to do. Now, I know people like future managers. They also have zero-rated links, which also assisted. But remember, you can have the best tools in the world. If your students can't get to those tools… You're stuck.

Interviewer: Yes, it's so true. It just shows that we still have a long way to go.

Respondent: So now the college gave the laptops to our lecturers and that's where that comes now. All the lecturers can't use the laptops.

Interviewer: (Laugh) We'll get to that part, ma'am.

Respondent: Ok

Interviewer: So my next question is that, since you said your lecturers have tried, and some are coping with remote learning. There are those that are still experiencing challenges with the software or the hardware of the laptops that they have recently received. How are those lectures supported in your department?

Respondent: You know, last year, with the analysis of results that's done on Excel, a lot of lecturers, program managers complained to say they don't know how to complete the analysis.

(door opens)

Respondent: So now, at the end, what happens is, hmm that eh, they gave program managers a chance last year. They enrolled all of them without, they said who wants Excel training. So everybody will say yes, they only go to opportunity to program managers. And HODs, which I think was wonderful to all manager. So I think it was wonderful. But the thing is that the level was very high, it was advanced excel. So now, for you and me that has done ICDL advanced excel, I also have to look a few things up, because you don't work on that every day. But the lecturers failed dismally, the program managers failed dismally, it was such a, and you know what, I would say ICDL, was too high level for them, because you must have 75%. So I just feel it was pitch too high level, you have to give people the basics and then go to advanced.

Interviewer: Yes.

Respondent: So now they had in class, some people who who's never worked on Excel, some people who's worked a bit on Excel and others who have advance. So now the problem is, it wasn't addressed. But again, we got trained. Then I said this Excel training will be wonderful for our lecturers, especially teaching excel in the classes. We we did request that a lot of our lecturers requested training in computers. But it hasn't been addressed yet. I know for only for computer practice the Cisco had a small training workshop, but I hear it wasn't really a workshop, it was more, ah a meeting. So for NCV there's no training, I'm mean people, we assume people know how to use data. How to connect and honestly, not all of us know technology.

Interviewer: So thank you, ma'am for for that response. Looking at the department that you are running and the different nature of the subjects, some are more theory, some are more practical. When you give it a thought, what do you think, are the needs of the lecturers in your department? When you look at the individual subjects, do you think they all have the same needs? Or are they different?

Respondent: In a sense of method, because I can say, I think 95% I think all of them have method. But to do that method is a different case. Let me tell you, I've been monitoring classes now and checking lecturers. And I actually wrote, I can print it. An email to say please, colleagues, how do you teach sitting at a table? Number one, how do you teach a student, how do you write a test sitting at your table? We have the students now coming, taking photos of the test neh. When I also asked the lady that caught them, she said no, the lecturer is not there but are writing a test. So I said how can you now tell the students she's wrong? If the lecturer is not there you understand? I think some people don't take this as serious as they should. And they know the method. They know what is supposed to be done. But they're not all following it.

Interviewer: Yes. So if they can't cope,

Respondent: So I feel in a sense, people must make classes very interesting. And I told them them in the beginning of the year. I see then classroom effective classroom teaching to say what do you how do you keep a student interested in the work? Because I said this is why students drop out what are they finances is a big thing. But number two, why did they come to certain classes and not others? It's because it's lecturers, lecturers reading out of the textbook. They're not making it interesting and I say to them, we are ordering data projectors, use them. They didn't have laptops, but use different teaching methods. To make it interesting for students. You don't have to have a laptop to make it interesting. You can play games you can make them play monkey puzzle, you know all these ridiculous things. Because things that you think is for, for, for small children, even these two students like, I like it, I like to do some things interesting. In in level three new venture there to do a panel interview, do you know how to students love that they dressed up and then the one was the secretary taking the notes, the one was the candidate. And I said to him, this is what I this is what TVET is supposed to do, make them aware of what's happening in the workplace. So that when you come to interview, you know how to dress you know, this, you know that, but we take it as some type of just, it's a task let me just finish.

Interviewer: So, from what I gather, you are saying your your lecturers need more training on teaching methodology, classroom management. So it will go both for face to face, as well as remote learning.

Respondent: They had training last year for teams, Microsoft Teams, there was a company that came and came to show them how does teams work. But I can tell you now if I have to ask a lecturer now to connect to teams that we have a meeting, half of them won't know. And the other half, didn't have a laptop. So they will, they will join with the desktop and not have any sound. So I just feel we we are forgetting that the

lecturers, we assume lecturers know, but they don't. So we need to train them constantly.

Interviewer: Yes, yes, yes

Respondent: To say, this is how we do remote teaching, we send some of the lectures to do lessons over the radio. I can say some of it worked. But remember subjects like maths, I can't imagine that you do with other radio. Unless you say x, y, z, we go to page three. The other thing is the subject like ODP, how do you teach it over radio? Do you understand this, these sub subjects that you just can't do.

Interviewer: Yes, it's so true.

Respondent: So for me, some subjects need visual and others can go over the radio. And but also you need to also advertise because I can tell you now half of your students didn't know that our lecturers are on the radio unless we tell them listen, the lecturer will be this time this time. And you also forget and then oh my goodness, he was on the radio. He totally forgot it. I don't know if that recorded it because that would be nice. If you could keep the recording and repeat it you know. So I'm thinking that the college the college was also and I'm sure other colleges as well. Were just thrown in the deep end.

Interviewer: uh so true. Ma'am, I don't know if you've got ah veteran lecturers in your department

Respondent: If I've got what?

Interviewer: Veteran lecturers, those that are a bit old, that were born before technology.

Respondent: (Laugh) Yes I've got

Interviewer: How do you support those lecturers?

Respondent: It's very difficult because a lecturer would say to me, we don't have Wi-Fi. So I said to her we don't have Wi-Fi you talking about internet. So they confuse Wi-Fi with the internet and they don't really know how it works. Ehm what I normally do is I ask them to go to a computer lecturer if they need to do tasks there and then collaborate. And not Mr. C said to me one day he says some of the topics in in like office practice where you have to print a letterhead they can do in in LO class, not really reinvent the wheel. Use it for LO market for LO and you market for ODP, but

that collaboration hasn't have come together. We need the younger lecturers. They are keen to do that because it makes sense not to work hard and to work smarter. But the elder lecturers they are still the talk and chalk and textbook and I feel like running away if I see the textbook in the hand, you know when lecturers ask me where's the textbooks and I'm like, why does the students have to have a textbook now? Okay, later on for referencing, but starting off an academic year. The student doesn't need a textbook on them.

Interviewer: Ma'am thank you for that. You have mentioned that the program managers went to an Excel training.

Respondent: Jah

Interviewer: And then there was another training for Ms. teams.

Respondent: Yes, that was all the lecturers.

Interviewer: Yes, are there any other trainings that your lecturers have attended for remote learning?

Respondent: Eh There was training … eh Brightspace. It was something to do with classroom management on the computer. I was, I must honestly say NCV didn't the thing that at all, the timing was very bad. I think they had it in the external exams. So just before the external exam, so we were busy with, with marking and all those type of things. So none of us attended that training. But then Mr. D told me that EWC is using Brightspace.

Interviewer: Oh

Respondent: And I then later wrote an email to the campus to say, can't we look into this Brightspace because it's a learner management system, that also helps with marking. So the students can actually submit the they work on this platform, and then it helps the lecturers. But it never went thought further from there, but other colleges is definitely using these type of things. And we can we can learn from each other.

Interviewer: Yes. So except for these three trainings, they haven't gone for even for Microsoft Office, maybe Word, Excel, and PowerPoint?

Respondent: No, nothing, nothing.

Interviewer: Okay. In your opinion, when our bosses on top can organise training for for the lecturers for remote learning. Do you think all the lecturers should receive the same training based on the different nature of the subjects that they offer?

Respondent: No, I think you need to train different lecturers because different ways, because a lecturer who doesn't know computer must first be taught the basics, and then go on to remote learning. Well, a lecturer who knows a computer well can just go on to remote learning and show be shown the different techniques to use and and how to introduce remote learning.

Interviewer: And do you think that is the process has started for for to transition from being 100% face to face to maybe 50%, face to face, and 50% e-learning for remote learning to take place? As it has already started? How do you think is transitioning? Do you think it's on a good pace? Do you think it's a slow?

respondent: It's a slow pace. I think that now that the lecturers have resources, it has started to take off. But remember now we still we still have 90% face to face. The Friday remote learning. I can tell you Mr. E, if I have to mention to you, he does that. he engages students, till three, four o'clock on a Friday and the active and you must see his results he gets 90, 100% and he tells me, ma'am I'm still busy with the students. It's three o'clock we active and it makes the class to feel very interesting, they don't miss his class. So there is lecturers that already there, but there's a lot that's not a there at all. Remote learning is a milestone. It's still a word that doesn't exist.

Interviewer: Okay, ma'am do you know of any interactive devices, software or hardware that can be used to support the lecturers for remote learning.

Respondent: Well, they now got the laptops and they got data, they got the routers, they gave them, I don't know why they gave them a DVD writer, because we don't use that anymore. I think what now the devices that they need is printers because now it's a different case. Now everybody wants to print. So I think they must make more printers available to be able to do that. And then obviously the students must be equipped. If the students can have a place where they go on campus to have Wi-Fi and Resource Center where they can go print and stuff then it will help but at this stage, we are not helping the students.

Interviewer: It's so true. Ma'am. You have mentioned that the software that is being used by other colleges is Brightspace. Do not have any other one that you can suggest for the college maybe?

Respondent: There was another one. I'll just, I don't know if it was Moodle. I'm now thinking of the names here. But they didn't mention it. But apparently Brightspace, and it's not a company. It's a it's a software program that you buy through someone else. Because I I've been doing some research on that. But I know previously, Moodle was one of them. But that's expensive. So I don't know if any other learning management programs.

Interviewer: Oh, ok. My next question, I think I'm way ahead of this one, so I'm going to change it. Do we have any remote learning platform in the college?

Respondents: We did. There was a plan to have it on the college website. But it wasn't, it hasn't materialised.

Interviewer: Thank you. Have you tried to use that a college website is the HOD? Have you tried to go on it, and see what is happening there?

Respondent: Yes, yes, I must say the communication with students on Facebook, the marketing has improved a lot. But on our own website, I haven't been there recently, I must say. But last year when we wanted to load the stuff, it wasn't possible because we we don't have the rights to load things. And to this day, I can tell you now I've submitted work from my lecturers that are not on the website.

Interviewer: What are the strategies that you apply in your department to make sure that your lecturers are compliant and they receive or they reach the optimal level of face to face and remote learning?

Respondent: You know what I mean, we have regular meetings where I encourage lecturers and I also made them set up a remote plan, for now, the four days a week why we all the five days a week that they come to college is not a problem. The other four days, and the fifth day we try to tell lecturers you know what we need to give lecturer what I'm telling them because we don't have a Friday class give them stuff the Thursday. Plan ahead, you give them things to do so that they can do it and engage you on WhatsApp, this this the only platform we have is WhatsApp.

Interviewer: Oh ok, ma'am you have mentioned that you would like your lecturers to have, on top of what they have received, you'd want them to have printers, so that they can print the material for their students. So my next question is how do you or how will you ensure that the college procures these printers for your lecturers? And timeously.

Respondent: At this stage, I think we have printers available not enough but we have some because the last I heard that the lecturers centre there's no, no printers. So even if the lecturer has a laptop he can't go and print. Ehm what I said to them as well, which can help now is that if you need to print during your admin periods, what do we call now after 12:20 this morning, session, to go to a computer room and print. So we are trying to help lecturers they come to me as well and print. But we just need to encourage the lady of the IT and there was, we have procured a new computer and printer. So it was sent in.

Interviewer: Do you have any other physical resource that you would think that the lecturers also need for remote learning? Maybe like a video cameras, so that they can make videos.

Respondent: The college was going to make videos, lecturers they were going to set up at M-Campus because M-Campus has a multimedia centre. So the plan was that because that multimedia class has video cameras, cameras and anything. So the planned that lectures will go the top lectures or the well-spoken lectures in certain subjects will go and video, the subjects it didn't happen.

Interviewer: Don't you want the college to if we wanted to build the same facilities here in this campus?

Respondent: Yes, we can, you know, it's expensive, but we can, we can do it if we in any case, if you have a cell phone you can you can video yourself. I mean, this Mr. S, Pastor, he videos, his preachings and sends it to people, it's awkward. But do you understand, you can do it with your cellphones, you don't need these advanced cameras and video things but it would be ideal if you have a room where we can have this videos and the lecturers go and give a 10 minute or 15 minute session specifically on difficult topics it will be ideal and then you know what does was one campus manager say the claim is if students are absent, this was now years ago and they actually go to the Resource Center and they can access this this, it would be awesome.

Interviewer: Yes. Ma'am if we can look at TVET colleges we are technical, we are also vocational. And now when we have to take part in remote learning, there are some contents that need to be dealt with with students face to face and they are those that can they can learn at home they can get the print outs or they can access the e-learning platform once we have it. So how do you balance to say this must be face to face this must be remote learning, how do you balance that?

Respondent: Well, for me from the beginning, we said that a subject like computer ODP is impossible to unless you make a video and they have physically their own

computer, but 90% of our students don't have computers. So you will not be able to reach it and help them the theory subject that we can definitely are not talking about maths, maths and accounting is a different case. But a subject like maths and accounting will, I don't, there is some things that you can send students notes with, you know, basic things to BODMAS and how does it work and everything. But for me a theory subject like business practice, if you give students notes, and you make it interesting for them, you know, this spider diagram and make it colourful and all those things. A student can learn that. So but we don't really do that 50 50 now, it's not 50 50. It's very little remote learning coming now. Going now and then that is a problem because if we have a lockdown again, we have big problems. Although the lecturers have noted and stuff, some lectures do work ahead, so they can send it to students. At this stage when the lockdown was lifted, I said to the lecturers plan that the students can come fetch the packages before the college started. But now with with a covid that we got ill, you know, it was a bit sidetracked. So it's still not remote. If a student has to fetch the package. It's not remote.

Interviewer: We still have to get to the e-learning.

Respondent: Yeah, it's not there yet. So I think if if, if there are more platforms on e-learning for us to do like the TV, television, the college website, if it's more like that, students will not access it more.

Interviewer: Yes, I know that we just have a lot of red tape when it comes to ah development and transformation to take place. But ma'am how, in your view, how can you make sure that the training that will come for the lecturers for remote learning meets global standard? How will you make sure that they they received it, they will, most the world class training for remote learning?

Respondent: See the problem is you have to start at the beginning, and build it up. So you can't just throw people at the deep end, and say listen, load all your stuff on the platform and this is what you do. And you need to mark the students here and there. Everybody is not on that level, so, what you need to do is start with the basics, and go with it, if there is lecturers like Mr. E, who are more advanced, because remember he did some courses at Wits and all this, those lecturers are ready, you can then now, make it, then now what you need to do, remember the training, it starts at campus level, you need to tell, or sit with the lecturers and say, what training do you need? And then go and look at what training you can give them excel training is not enough. That's, that's basics. I am talking now basic excel, but you need to show them, how does e-learning work, how do you engage students, how do you make work available for them. And, the lecturers are not there yet. There's many that can do it immediately, and just go and load their stuff. But you must also know what to load. I

mean, just to put pages there, is also not gonna work. You need to make it more interactive. So, I think what we need to do, is engage Universities to see how their remote learning what successful.

Interviewer: Yes, yes

Respondent: because, they, they were the front runners of this whole thing.

Interviewer: Can you please tell me more about how issues of connectivity and data availability are attended to in the college?

Respondent: Well, the connectivity has improved, ehm, in the sense of, the internet was upgraded and all those things. The only problem with our campus was the lightning that has hit the switch. Five months later, we now have a fibre line, re-installed. R106 000 later, but, ehm, we had to fight for it, because all our NCV lecturers have no internet. I can show you, all our packs is research, ehm, level two, life orientation which is now called, Life skills and computer literacy, is collaborating with CISCO, and now they have assignments they have to on CISCO. And, we have no internet. So you can imagine, all NCV work now is totally hampered with internet. And then our program managers didn't have any internet, but luckily, now they have the data. And then the Wi-Fi for students, we don't have any Wi-Fi for students. So they can't access anything, so if we improve on campus, first of all, the Wi-Fi and the resource centre for them. Where they can do their own research. Remember what is happening now is, most of the lecturers engage with LO lecturers, and say can I come and do research there? There is no resource centre, where students can go and practice, or, or research and do their own work.

Interviewer: Thank you very much ma'am. I am getting to my final question now. When you look at the college holistically, how can you say the college as a whole, is transitioning to remote learning. Not just looking at your department, but the entire college.

Respondent: It's slow, and uhm, I was talking to one of the lecturers at N-Campus, she was, very excited, she said, 'you know what this lockdown has come at the right time, because we are now going to get resources'. Eight months later, I think the college's process of doing things is getting slow. The thing is, they have the right and the authority to move things quicker, but they, like you said the red tape. And the red tape is not from DHET, the red tape is in our college.

Interviewer: Oh wow, Ok

Respondent: You don't have to ask DHET if we can buy laptops, you must look at your budget, and decide what you can buy and what you cannot buy. We were told previously by the CEO, to say, the college has money, you must order. But when you order, some of the things are just declined, without reason, the data projectors that we have ordered now at the beginning of the year was declined.

Interviewer: Did they give a reason?

Respondent: When I asked P. she said to me, they did not give her a reason, she said, I said P. it's because we are are ordering 30 data projectors. I said to her, why don't you order five now, ten then, and then you know. She said no they will decline it as well. So you understand the, the, the bureaucracy. If yes there's money, but you can't order, there's a budget, but you can't get. Ehm, we ordered typist chairs, this is now moss, normal furniture, it was declined. We've never, if you, if you. If the campus orders every second year, I can understand if they can decline it. But I, I, I see some of the chairs, I, I, I don't think the chairs have changed in five years. At least, so, you understand what is happening, and you just get despondent, and say, you know what let's just carry on. And you know what, some lecturers, 90% of the lecturers just carry on. We know the issues but we carry on, we try to stay positive, but the change is happening too slow. And they have, they have the means to change.

Interviewer: Yes, the means are there, but they are just too slow. So in your opinion, what does leadership need to put in place to, to achieve this transition. From being this 100% face-to-face to have remote learning, to have e-learning as part of the college?

Respondent: Well, you know what happened previous years at the college, when we had this cap budget, when they gave us money to restructure the college. It was run by a committee. It was, there was someone at the head of the committee and he had people working with him. And that is what we have to get, is a committee to say, it's an ad-hoc committee, let's get all the experts of e-learning, lecturers, external people and so what do we need and engage universities and all the people that have successfully done that, and say what have you done? Let's get together and make the change.

Interviewer: Wow thank you very much, ma'am, for agreeing to take this interview with me. It was eye-opening and I need to stress to you that, you won't be identifiable in any way. Even the names that you have mentioned today, I am just going to use pseudonyms. I am not going to use any names. Do you have anything that you need to add, any comment regarding our interview?

Respondent: No, I just feel is ah, you know, it also comes with lecturers need to be acknowledged as well, yes they've got the laptops and everything, its work-related. Previous years we had a lunch or a whatever, some people thought that, it was just nonsense and you know what small tokens of appreciation to say, you know what colleagues, we know that you work through difficult circumstances, but thank you.

Interviewer: Yes ma'am, ma'am you have mentioned that, in your strategic plan the lecturers, they bring their plan on what they will do with the students. And I get, got a sense that you are someone who enhances distributive leadership. Where you are not only the one who is taking lead of everything but you also give leadership to the lecturers. That is so beautiful, and now when you are talking about the acknowledgement and the token of appreciation now you are bringing in transformational leadership as well. So I just want to say that, those are some of the leadership approaches that I also thought, they will go a long way in assisting TVET colleges to achieve remote learning.

Respondent: Yes.

Interviewer: Thank you very much ma'am for the interview.

Respondent: It's a pleasure.

Interview with HOD 2

Date: 2021 May 24
Time: 10:30
Location: HOD 2 Office

Interviewer: My name is Nonhlanhla Nyembe as you know me as one of the lecturers. Today I am with you to conduct an interview for my research. The topic of my research is Professional Development Needs of TVET College Lectures for Remote Learning. So, when TVET colleges were migrated to the DHET, it came with the impression that they are going to transform to get colleges to be more like universities in terms of teaching and learning strategies, in terms of eh technological development. But uh years down the line, we still we still see that there's still no improvement, no much improvement, no much transformation of TVET colleges. So the purpose of my interview today is to explore your perception regarding the training and the resource needs of lecturers for remote learning to take place. I hope to use this interview to understand how you as a leader, you try to ensure that the lecturers in your department they have all the the resources and all the training that they need. Before you can proudly say we are ready for remote learning. The time will be about 45 minutes. Uhm the recent outbreak of the Coronavirus has exposed and exacerbated the need for colleges to move away from being face-to-face learning institutions to be more remote learning, which means have face-to-face and have e-learning. The focal point of our discussion, as I've said before, is the needs of lecturers, nothing else just the needs of lecturers in terms of training, as well as the resources. My first question is, how do you think lecturers are coping in your department with remote learning at this time, starting from last year until now?

Respondent: They are not coping. Firstly, they did not have the resources. Now they have the resources. But I don't know if they have the skills in designing their own lesson.

Interviewer: Hmm, that's a very important point to raise. And I know that there are those that will try to do it even though they are still lacking in other things. But they are those that will say I am struggling. So how do you assist those lecturers? How do you support those lectures that have challenges with remote training?

Respondent: My idea on this is you can support but if a lecturer is not really motivated to go onto YouTube, and find out what to do, instead of sitting back and say I want training, you want training forward, because YouTube is there for you to show. But I also understand from the other side, that they need a support because they don't feel comfortable doing a lesson by themselves, at least if they can do like maybe one day, I think one day training where a facilitator can show them a little bit of the nitty-gritty is and how to do a proper lesson on remote learning because it's visual, and it's virtual. Yes, I must feel comfortable doing that. And at this stage, some of them are definitely not comfortable.

Interviewer: They need to take initiative.

Respondent: Jah. But I can say I remember a few years ago they did the E-learning. They went for a weekend or whatever. But you can do training. But then if you don't have that resources, it will be a challenge.

Interviewer: It goes hand in hand. Ma'am when you look closely at the different subjects that are offered some more practical and some are more theory. So how can you gauge the different needs of the lecturers in terms of their subjects that they're offering because they won't have the same needs? They won't need the same resources. So how do you gauge that?

Respondent: For theory, I think it's an excellent way to teach the students but for practical like computers, it's it's not practical because I don't have computers to practice

at home. But theory subjects is supposed to be very easy to do. But then only if you want to do a lesson. I mean, you must be creative.

Interviewer: Yes. Like you have mentioned, YouTube, for practical subjects, we can always, lecturers can always try to create videos and upload them in YouTube for the students. But again, it goes down to the lecturers having the resources to do that. So do you have any lecturers that were born before technology? in your department in how do you support those?

Respondent: Hmmm Jah, definitely, I can't think of a few. How do I support them? It boils down to me, you cannot support somebody that doesn't want to be supported. And that comes with the attitude of the lecturer. I cannot mention names now.

Interviewer: Yes, no, no, no…

Respondent: I'm just thinking now, you know, because it's easy for them to sit back and say, I don't know. No, I don't want to. But I, you have to change with time. It's those lecturers that were not computer literate. And they resigned because they were not computer literate, and they couldn't cope with the system anymore. So it's going to get to a stage where you have to resign because you're not competent. Keeping up with the times.

Interviewer: Oh, okay. So those that are still around, have they received any kind of support?

Respondent: No, not that I can say that God, they had one training on Microsoft Teams. And that was that it was just to assist them for meetings, but not for actually designing and have a visual lesson how to know how to do a visualization.

Interviewer: Oh ok, have your lecturers in your department received any kind of training for remote learning, it could be Word, Excel maybe Teams.

Respondent: It was only teams that I know of, or that I can recall now. The other ones had just did their thing and try to do their own thing, but there was no training for them.

Interviewer: Okay, so this one talks directly edge computer training. They have the lecturers received any computer training in the department.

Respondent: Some of them went for ICDL. And they did Excel. That was a mess, because all of them failed… it wasn't very successful.

Interviewer: Can you tell me what is the reason you think they were not successful?

Respondent: Because the time limit of the test . . . that was totally unnecessary. If they had more time to think about the question and work out because you know Excel, you don't know everything out of your head, you must go and look for it, search for it. And there wasn't time for that you had to know all those things. Otherwise, you will never pass.

Interviewer: Okay, thank you very much for that, ma'am. Do you think that all the lecturers should receive the same training both the theory as well as the practical lecturers?

Respondent: Yes, I think so… Remember, for practical, I'm just thinking computers now. Yes. So, for computers, you can give them the background and the theory part. But where do you practice so that the remote learning lesson can be on the theoretical part, but the practical part is still a challenge.

Interviewer: So if for everything to take part, we also need to incorporate the students to know when, where and how they will get access.

Respondent: You see this is now the second thing we're talking about lecturers now going to YouTube develop a lesson, but the students that have access to that because of the device that because of the data because of not even interested in the information. So that one part is from the lecturers' side. And the other part is from the students.

Interviewer: Okay, thank you for the ma'am. Do you think that lectures are supported to transition from face-to-face to remote?

Respondent: No.

Interviewer: Both from campus level and college level?

Respondent: Yeah. What you need to remember at campus level, there's not a lot we can do on campus, it's supposed to come from college level.

Interviewer: From the college. Ma'am, when you think, when you visualise remote learning for your department. There are those interactive devices that are going to be needed. So that lecturers can be able to create lessons and upload them for the students. And sometimes text is not enough. There should be audio, there should be animations, there should be demonstrations for their students, for them to be able to understand some other lessons. So what hardware or software devices do you think? Or do you wish that your department can have? So that they can take part in remote learning? If you know of any.

Respondent: I think like, a video camera? I don't know nowadays, What do they use, you know, but for me, I think it must be a video camera because you have to stand in

front of the class. And somebody needs to video you so that you can send that to the students. And I'm also thinking about, you're talking about devices now. But I'm just thinking about training like PowerPoint and things like that to make your lesson more presentable.

Interviewer: Yes, remember, it's software and hardware. So it's just perfect. Thank you. This one the PowerPoint will cover the next question software specifically related to this object that should be given as support to that lecturers. So except for PowerPoint, you know of any other software that can be used to support the lectures.

Respondent: I don't know. I'm just thinking of a lessons. What I would also like is like group work, why must just one lecturer present a lesson, if you can have group with two or three lecturers can do certain parts, and it will also make it more interesting for the students

Interviewer: Oh to avoid repetition.

Respondent: Yah

Interviewer: Okay, that's good. Do lecturers have a remote learning platform that they are using for the college or the campus?

Respondent: No.

Interviewer: So how are they accessing the remote learning platform? How are they reaching out to students?

Respondent: From the data that they received now?

Interviewer: Using which software? I know that ah most of the time we're using the WhatsApp. So I guess it still WhatsApp.

Respondent: I don't know if WhatsApp is really effective. But I know they use WhatsApp.

Interviewer: Okay

Respondent: Because what else can you use? Like ah we do upload a video on the email addresses?

Interviewer: Only those that request for it. What is your experience as the HOD? When you look at all these things that need to be done and the lack of resources and training.

Respondent: It's a mess.

(Laughter)

Respondent: So this is definitely not affected. The lecturer is not competent. The students don't have access. Uhm for now it it doesn't work. I think we you reach like about what 10% of students.

Interviewer: That's a lot. See, it's very down. So I know that even though ma'am there are no resources, there are no there's no training. But there was a time where you were supposed to do something as the HOD and your your department just try to do something for the students and reach out to the students. So what strategies have you tried to apply to make sure that students got something to learn while they are at home?

Respondent: Uhm I'm thinking how remember we also might use a Facebook, at that time last year when you had to go to a head office where you had to put the lesson on

the College group and on Facebook for for students. To access. I think if I think from the college side that was the the only time when they really tried to, to incorporate everybody at the college to reach those students, but I mean, it's per subject, it was one, it was one lesson per subject.

Interviewer: Per subjects. So what were the strategies that you would apply to say, this lecturer submits and then… what are the steps?

Respondent: There was a management plan where you had to submit per subject. And then we chose a lecturer. And that lecturer, I had to go to Springs to do that lesson. It was was like a COVID. We can say COVID management plan for remote learning.

Interviewer: Okay. Do you have ah access to the management plan?

Respondent: I can see if I can get hold of it. Otherwise, I remember it came from Mr. A, and Ms. B.

Interviewer: Okay.

Respondent: Let's see if we can. If you can, I'd love to have that. If there are any, I know that. Recently, lecturers have received ah some devices for remote learning. Are there any outstanding devices that you would love for your lecturers to have, that they they didn't have And even if they have them, but they run out along the way, they they get broken along the way, others will need more than what they have received? How do you make sure that a lecturer has received his resources in your department timeously?

Respondent: the only device I can think of is that when that guy came and make made a demonstration, I don't know what they call the thing. The one way you can present the textbook on the screen.

Interviewer: I think it was a scanner?

Respondent: Something scanner thing. But I mean, for us to ensure the lecturers is good that thing from college side, it's not possible. . . We can put in a request, but for procurement, but I don't think it will be successful. Okay, now I'm thinking now, if you the other part of the question was if it gets broken? Yes, no, it's part of asset asset controller procurement.

Interviewer: So they just have to go straight there? You don't take part in that?

Respondent: Jah.

Interviewer: As we are about to move from 100% learning to remote learning, some of the content of the subjects will have to stay in face-to face-physical classrooms, but some of the content will have to go to the e-learning part or the remote learning part. So how do you choose which part of the subject goes for remote and the other one stays as face-to-face? How can you balance the two?

Respondent: I think that will be the choice of the lecture that knows the subject. Only the lecturer will be able to determine which part to do remote and which part to do face-to-face.

Interviewer: Okay. I know that the the training that the lecturers have received was not enough. But in your thinking, if someone were to come and give training to lecturers, how would you make sure that the training that they received is it's of a good standard that meets the global standards?

Respondent: Remember, you need to know it's not we as a campus or as a HOD. Not allowed to get facilitators in. You can only get those once been appointed through Head Office, but by the academic unit, so we can also get a facilitator. But the appointment and the decision on who's going to do that presentation. It's only in central office.

Interviewer: And there is no way for you to check if they are offering something that is relevant, that can be sustainable?

Respondent: Because I could tell it courses the that I can tell you. It's, it was definitely not relevant. And we work very hard work. And then we had to attend there for five days. And we still haven't received any results for that. It was on labour relations. So sometimes the pitch is not in the right place, it's too high. Or sometimes it's far too low. I'm thinking of a time management one that I did. It was like Mickey Mouse stuff for managers to attend to know. So it's very difficult to determine if that facilitator will be up to standard.

Respondent: I think you can look at the content that they're going to present. How do you evaluate if it's going to be on par? I think it depends on the content. There must be like a syllabus or a structure that you can evaluate before the time to determine if it's going to be on standard or not.

Interviewer: Okay, thank you very much for for that one. It's very, very insightful. When we look at the issues of connectivity, and data availability for the lecturers. How to make sure that they they always have the internet in the classes, how do you make sure that they always have their data. And they are using it for, for for work purposes

Respondent: hhmm, hhmmm, hhmmm, (meaning trouble)

Interviewer: let us just touch on the connectivity for the classrooms that need to stay connected.

Respondent: There is an IT manager that manages it. And when they have request from lecturers, you go through the IT manager and through procurement. But Wi-Fi is an issue, there must be Wi-Fi. But there is no Wi-Fi. Because of remember, they've got their own reasons why they don't have Wi Fi because they misuse it. And they not only doing college work and the same thing for internet, but they must be some security check at Head Office where you know, you've got that people that check on which sites you're on and what you're doing. So I think there must be security checks. Then you can have all those things, if you have the necessary security checks.

Interviewer: This just shows that we still have a long way to go, you know, I could have just taken this study and did it with the leaders at Head Office. But for me, it was going to be more relevant if I bring it to the heart, to the front line, which is the lecturers and who are the first line leaders of the lecturers they are the HODs. You are the ones that get frustrated, if you're department cannot function.

Respondent: It seems to me that we have no say, nowhere.

Interviewer: Hopefully it will change in the future.

Respondent: I hope so, we are just hanging in the middle. Yes. And nobody listens to us.

Interviewer: So I've got a few final questions, how do you think that the college as a whole is transitioning to remote learning, not just looking at your department with the college as a whole.

Respondent: I don't think the college is doing good, if you compared to what you hear from other colleges, is the overall management of the college is not doing, they are not

taking the lecturers serious. They don't realise the actual needs of the lecturers to do what they want them to do. They want us to report but they don't give you the means to do what

Interviewer: you understand the problem so well because you are at the heart of those problems. So if you were to turn these things around, what would you do as a leader to turn all these things around to make sure that all the things that need to happen? They happen.

Respondent: I would appoint these, computer companies or IT companies, so that somebody can take responsibility for it on a campus if there's a problem with you know, these other companies that are painful to maintain and to do necessarily what's necessary for it.

Interviewer: But on the teaching and learning part of it, how would you manage it?

Respondent: I will I will get people in to show them How to do proper these things. On different subjects.

Interviewer: On different subjects. I know that with UJ, we didn't experience any shutdown, when, in fact, when we closed colleges closed in March, from April, ah UJ, gave their students 30 gigs of data to say, we have to keep going, you have to keep going. If you don't have the resources, here is the data try to move.

Respondent: But how can schools get it right? but a college can't get it right. That is what I don't understand. But then, also, I think the parents must be involved here. I'm comparing now with schools. for schools, I know there was a normal timetable. The children would sit in front of the computer that they have Wi-Fi at home. And the parents make sure that they follow the lessons per timetable. But I don't think the parents are

involved in college, students' college students are on their own, they don't get the support from parents. Okay. But then, if they don't get the support from parents, we supposed to have a facility here on campus where they can have access to this.

Interviewer: like a media centre?

Respondent: A student or media centre.

Interviewer: Okay, ma'am do you have any school or any university that you've seen that has transitioned so well to remote learning, and you wish you can also be like them?

Respondent: Now I was talking about the school now that my family members, children, but that those are private schools?

Interviewer: Oh, yeah. Any college that you know, that are doing well?

Respondent: No, I'm not sure. I cannot comment on that.

Interviewer: Uhm Ma'am, thank you very much for taking this interview with me, you have given me a different side of, in fact you have given me an insight of what you are experiencing. As the leader of the lecturers in your department.

Respondent: I think what you need to know is that we are just as frustrated as you are, as a manager, I feel you feel that you cannot go forward because you don't have that support from nobody.

Interviewer: So in the college, I know that there is a lot of red tape, before anything can be done, there is processes that need to be followed and decision-making powers they lie with one or two people instead of having a committee that deals with everything. So

going forward, what changes would you like to see happening in terms of ah the red tape in say, in terms of making decisions.

Respondent: They must go back to the decentralization of decision making. Where each campus is responsible for the decisions as it was before, when everything worked 100% well. And the biggest problem started with centralization.

Interviewer Okay, thank you very much. We have reached the end of the interview. Do you have any comments? Do you have any questions for me?

Respondent: I just hope that this research of you will have a positive impact and will bring change. In the remote learning and e-learning of the college. I'm not even talking about TVET colleges. I'm just talking about the College.

Interviewer: The small scale.

Respondent: Yeah. Yeah,

Interviewer: I hope so too. That is what has driven me to actually try to research about this because it's the pressing matter, it's a pressing matter for everyone. We want to see the change. So you want to see the change. How about you becoming the change? Yeah, that's what that's what I think that's why I decided to to do this session.

Respondent: Well done.

Interviewer: Thank you very much for this.

Interview with HOD 3

Date: 2021 May 24
Time: 15:00
Location: HOD 3 Office

Interviewer: Good afternoon HOD3. I am Nonhlanhla Nyembe and I am here to interview you. The topic of my interview or the research that I'm doing is Professional Development Needs of TVET College Lecturers towards remote learning. Uhm when TVET colleges were migrated to the DHET it came with the impression that they are going to transform TVET colleges to be more like universities in terms of teaching and learning strategies, as well as techni technological development. A few line a few years down the line, we see that there is not much improvement or transformation in TVET colleges. I am conducting this interview with you as the HOD to explore your perceptions regarding the training and the resource needs of the lecturers in your department. I hope to use this interview to understand how you as a leader of the department aim to ensure that your lecturers are furnished with the resources as well as the training that they will need for remote learning. The time will be around 45 minutes, depending on your responses. So with the coronavirus outbreak, it has exposed and exacerbated the need for TVET colleges to transform from being 100% face-to-face institutions to have remote learning as well, in terms of teaching and learning, so half will be face-to-face and half will be e-learning so that students can learn at home or wherever they are by just going to the internet going to the site of the e-learning of the college. The first question that I have for you ma'am is have the lecturers in a department started taking part in remote learning, not looking now but when we look from the last year.

Respondent: Unfortunately, I am Ms N, HOD for ?? studies, the first question is, is the lecturers to take in the remote learning. Eh last year unfortunately, we didn't do the remote learning. Yes, we understand the covid that is spreading. But so far, we didn't do the remote learning from last year. But coming this year, this year earlier, they gave them the laptops, so so that now they can be able to start with remote learning. But so far, we are not yet started with the remote learning, because our challenge now is the show that we are having the resources the lecturers are having the resources now they do have the laptop, they do have the data, the only challenge is now is the access now for from the side the student, because I believe that if we want to merge as the universities, we need to have also the student, the student need to have the resources. So far the students don't have the resources is only in the side of the lecturers that they do have the

resources. However, even if they are having the challenges, but now with the student they don't have anything they are still relying on face-to-face to face.

Interviewer: That is so true, ma'am, thank you very much for that. So with whatever you have started already with the little that has already started how are the lecturers coping?

Respondent: So far with us engineering here, because we have started with the N one, atleast the N one are coming every day. We're still at COVID er still complying with COVID. Per class we are having 25 students. The students are coming every day, the lecturers they see the student every day. So we don't have any packages that you can give the lecturers. We don't have any alternative days for now. So we don't know when it's going to happen maybe from next week because now we have continued the registration of what is going to happen but our plan is for now is all the students are supposed to come with a COVID-19 complying of 25 students. We are looking for extra lecturers that can assist us since the students doesn't have an access to the internet.

Interviewer: Okay, thank you very much ma'am with the lecturers that have received the resources. Eh are there other lecturers that are experiencing challenges with the hardware or the software, how are you supporting them?

Respondent: Eh, with the hardware and software and you know, with the lecturers we're supposed to conduct training. So far no lecturers came to me. But I'm preparing that if now any lecturers that's going to encounter any problems with I'm supposed to escalate to the DCM looking for the training for the lecturers. So far we didn't have any training,

Interviewer: Eh, when you are talking about training, are you talking about training to use the laptop, or training for the e-learning site?

Respondent: Eh, when I'm talking about training I'm talking about because now we're in engineering, so we need both training for using a laptop thoroughly, they must know what is happening with the laptop, it also train you for using under e-learning.

Interviewer: Seeing that you are in the engineering side. I can say most of the subjects are practical, more than theory. So when the lecturers are supposed to receive their training, are they all going to receive the same training, those that are teaching theory? And those that are teaching practicals?

Respondent: Fortunately enough in our department here we're teaching only theory even if the subject are more practical but its theory. We don't really we're not teaching practical is the NCV. So with us its only theory.

Interviewer: Thank you very much for clarifying that with me. Do you have any lecturers, veteran lecturers that the ones that were born before technology?

Respondent: Yes we do have.

Interviewer: How are you supporting those ones?

Respondent: We know if they've got any challenge of how to print we've got IT here, IT manager here. If now I can't be able to help them. Maybe they can't print, they are having challenges then I will just ask IT manager to come and assist them or I will also assistance if I know how.

Interviewer: Oh ok, you don't need any additional assistance or support for your lecturers in terms of using the laptops and all the other things?

Respondent: In terms of that, it is individual because if if the lecturer is coming with a problem, I am attending the problem per individual. Because some of the lecturers they do they know how to use the laptop they know how to print they know how to use it, actually, they don't have to any challenges. So I am attending the ones that are coming in,

Interviewer: In your in your view ma'am, looking back from last year, have lecturers received any training for remote learning?

Respondent: mmmm mmmm

Interviewer: Nothing?

Respondent: Nothing.

Interviewer: Have they received computer training, just basic computer training in a Word, Excel, PowerPoint, anything like that?

Respondent: Usually what we do, they will say come and we are going to have a training for Excel. If I remember very well, last year, there was training for Excel, how to use an Excel. I think they were also invited on that training.

Interviewer: Just Excel?

Respondent: Yes.

Interviewer: Okay, so I'm going to use the same answer that you gave me to say the lecturers will request for training or support, and you will deal with that on a case by case basis.

Respondent: Or I will see in general and then when they come to me I will note it down and then I will just compile this, okay, maybe five lecturers they don't know how to do this, then I will ask for the training for that.

Interviewer: Okay, thank you very much. Thank you, this is so very insightful, you know, when I thought of the research, the way I wanted to structure it, it was going to be easy for me to just go to the leaders at Head Office and ask them what their plans are. But I realised that, eh, they will plan and their plan is going to be a one size fits all that means everyone will receive the same training the same resources, then I realised that no, I can't go there, I have to go to the heart of the problem. That is the lecturers and the immediately does have the lecture as other in short does. And you are the ones that is able to understand what the lectures needs because you've been there and now as their leader you are also seeing their struggles. So, as lecturers have, have received the resources to start taking part in remote learning, how can you say it is transitioning? How is the movement from face-to-face to remote learning taking place?

Respondent: You know, with us this side engineer engineering, I could say the, the, the movement for changing from not having anything to having the laptops. Atleast it is much better for the lecturers. Now they can plan better by themselves without waiting for the laptop. I mean, without waiting for the desktop to be available. They can plan their day to day activities on time in their own time again, you know everything according to planning for them now everything's running smoothly. I don't have any any challenges. But now the challenge is with the students now, how can they get this information. However, the lecturers they will plan and make the copies. But for now, as I've said, we

are not platooning. We're not having A today, tomorrow is B, it'll be all of them they are coming.

Interviewer: every day?

Respondent: every day.

Interviewer: Ma'am, I know that some subjects if we were to start with remote learning, giving them notes only to explain is not going to be enough. Some other subjects will need demonstrations will need audio for the lecturers to explain better, some will need simulations, like maybe with Mr. J, how to connect an engine simulation like that. Do you know of any hardware or software that you think the lecturers will need, that will assist them to liven up lessons when they present them online?

Respondent: Okay, no, so so far, we've got the publishers that are coming. With these publishers, they're coming with the, with the with the software of which now atleast now will give us the videos where it is going to be easy for us to show to the students. Because now we've got that computer, at least when they are in class is going to be much better to pull it in, and then just go to them see.

Interviewer: So beautiful. Do you know the name of the publishers?

Respondent: Ah, the Oxford, Oxford said they are going to come and also they're going to they're interested also on training the our lecturers.

Interviewer: Oh so ex Oxford as in the textbook publishers?

Respondent: Yes the textbook publishers. So for now, they are not yet made the appointment with my practice they did when they bring the samples that they have got the videos that the students can see what is happening in the industries.

Interviewer: Yes. My next question is how are the lecturers accessing their remote learning platform working from home unfortunately?

Respondent: As I've said when we started so we there's no remote learning platform.

Interviewer: So lecturers they just do their admin?

Respondent: Just to their admin, their lesson plan their activities, at least once they come here they can able to give the student more awake. That's it.

Interviewer: Thank you very much. How have you experienced all this changes?

Respondent: It is so frustrating is so frustrating, because these are the changes that are upcoming now and they are supposed to be implemented and is not easy.

Interviewer: I can imagine where you are sitting everything just comes. Can you tell me more in about what you are doing in your department? Like do you have any strategies? Or did you use any strategies when you were still in lockdown of how you are going to give students notes that those ones that were not coming every day? Did you ever decide to stick with it?

Respondent: Ah what we did the lecturers will prepare the notes before because they know because last time they were platooning last year. So what they do, they will prepare the notes for today for maybe the group A that come. Then they will give them now tomorrow they're not going to come to utilise those notes at home. That that's how we've done it.

Interviewer: Do you have any outstanding resources physical resources?

Respondent: Physical resources, yes for the lecturers.

Interviewer: Do you have any that are outstanding and how do you make sure that they come to the lecturers on time?

Respondent: Eh, human resources these are the lecturers that I'm talking about. The lecturers I'm not having enough lecturers and now I can comply with the COVID-19 so the lecturers for this side, they are not enough. I am running short of six lecturers, we did put a request from last trimester, we are still waiting.

Interviewer: What about the computers printers, do you have enough for your lecturers?

Respondent: Yes, yes, for for the lecturers, the laptops the printer the printer we do have it however, I, I is not enough but because we do have one printer that is big that they can be able to use it

Interviewer: Have you ever requested for another one?

Respondent: No, I didn't request for the other one.

Interviewer: Okay. So ma'am, we know that, when we are talking about remote learning, we are talking about 50% face-to-face and 50% remote. How do you balance the two? How do you choose that, oh, the students are going to get this session in class, then they are going to study this one at home?

Respondent: This, you know, you know anything about that the program managers and just with the coordinators of the subject, they will sit down in the subject committee. And then they will decide from from the subject committee to say maybe module one, it could go to remote learning, and then module two, then we can interact with the student. That's the decision that is taken from the subject committee.

Interviewer: Thank you very much.

(Desk phone rings and volume is lowered)

Interviewer: I know that a you might have a wish you might have some plans for your department to see it growing and being able to stand and say, Yes, we are ready, we are taking part in remote learning, but there needs to be training for that to happen. So how, if you had the powers, how would you make sure that the training that the lecturers will receive is of a global standard?

Respondent: You know, what we will do you. You must investigate, you must check make your research is very important to make your research don't don't just take in your remote learning enquire from the TVET. I mean from the universities because in the universities, they're using e-learning is so good, you must make sure that whatever that they're going to have is going to empower the lecturers.

Interviewer: Do you have any university that you can use as an idea, the one that you saw and you just felt as if you can just bring them to come in transform your department?

Respondent: uh, I do have that is the Pearson University Pearson University. You know, their standard is very good. They are they are giving the students the learning, ah, e-learning also they are writing their test there you know the standard is good to sort of ask them if it was my making.

Interviewer: Yes, Wow, it's so beautiful. Do you have any data and connectivity issues that you need to attend with the lecturers?

Respondent: mmm mmm (no). They give them the data. So far, everything is fine. No one came in report that their date they are not waking. Fortunately enough, the Head Office, they give them the laptop with the data.

Interviewer: Thank you. I'm going to ask my final questions now. Now, this question is based on the college when you are looking at the college as a whole, not just your department. How can you say the college is transitioning to remote learning? Is it going at a good pace is it slow?

Respondent: It is very slow? Because they're not interacting with campuses, it is very slow.

Interviewer: Are you involved in the planning? Do they ask you for ideas?

Respondent: No. That is why I'm saying it's very slow because they are not interacting with the campus. They didn't know what is happening in each and every campus. And how can they assist them? So they are planning is from there to us direct?

Interviewer: top down? Okay,

Respondent: if they can improve that involve us in the planning, I think the College can go up can be on top.

Interviewer: Okay. So in your opinion, in your point of view, what do you think our leaders or the leaders in the college need to do to achieve the transition from face-to-face to remote learning?

Respondent: I think they are supposed to involve more of the campuses that is the SMT. when I say SMT, let them involve not only the campus manager, but involve the campus manager, Deputy campus manager, HODs and the program managers so that now one can have a fruitful e-learning.

Interviewer: And I know that there is just a lot of red tape. There's just a lot of admin and decision making does needs to take place before things can be bought before lecturers can be hired. What can you change about that, if if you were in the position to change?

Respondent: If I was in the position to change number one, I must check the enrolment numbers. Check the enrolment numbers and then check from there, before I can wait for the requests. As a top management at Head Office I'm supposed to have that online already. If I say, I'm going to have 800 students example, then I must calculate, if its 800 and, you are having the guideline the timetable guideline, and the timetable guideline says one is to 25. You must have that already working, and say ok, If one is to 25 and go to look for eight or six lecturers extra, before you can distribute that planning of what have the ratio of the studio of the lectures. So you must have that in place. Don't have a planning, you don't have a solution, have a planning, then have a solution. So wait for the request, if the request to request is fine. But if they're requesting you were having that in your mind, and say, Okay, actually I was looking for 800 a student, out of 800 student, I was looking for the six lecturers, accept that, it must not be a surprise, because with us here, it is a surprise. It's a surprise when you say I'm looking for the six lecturers, how why can you see that is my challenge for me with the colleg.

Interviewer: You know, I've I have a lot of questions in my mind. But let me just ask one question and say, when you are looking at a remote learning, there's a lot of software, there's a lot of infrastructure that needs to be procured. And there's a lot of training that needs to take part. When you are looking at the structure at the college right now. Now the decision making structure is the one that is responsible for buying, what do you think it's, it's appropriate? Or would you rather have a committee that will take control of everything? And who do you think should be part of that committee that will go to campuses, go to the HODs, go to the lecturers and see what they need, and then go back and report and say, this campus needs this, this campus needs this? How would you set up such as a structure?

Respondent: I think the committee's must start from the campuses, per campus. Let us have the committee for the campus. Because now I cannot take somebody from A

campus and pass and make a committee for B Campus. Let us have a committee from B campus. After B campus, all this committee initially, every campus form one Committee for the Head Office serve now you will know I will come up with something that is happening in B campus, they will come up with some that is happening in A campus, maybe we are going to have something that is common, then it's going to be much easier for them so that we can see because now, we are saying we're running short on this. At C campus they are not running out of the same thing. They are covered. They are doing maybe they are having only 30 students. With us we're having 800 student, obviously we need lecturers with them, they don't need lecturers. So it means now we must have committed a campus that committee must form the committee for your college, the college so that it can run smoothly.

Interviewer: At campus level, who do you think should be part of the committee

Respondent: DCMs, HODs and program managers.

Interviewer: **A**nd at college level?

Respondent: At college level. We move now we can put because now we're going to have this we can put DCM at the college level all the DCMs, because now we're going to sit together to campus level, then they can go now to college at college level.

Interviewer: Thank you very much for this interview. It was very, very insightful. All the names that were mentioned today, I'm going to remove them and use pseudonyms. And even your responses, they are going to be confidential, you are not going to be identified in anyway.

Respondent: thank you

Interviewer: Do have any comments. Any questions?

Respondent: No. Thank you very much. You know, I wish this can make maybe the college to change their ways of doing things. Because as you can see, I'm making the interview and I'm speaking from my heart because I want the department to grow. So if they can just read your your your your research, and take it into into consideration and maybe we can build our college.

361 **Respondent:** Yes Thank you very much Ma'am.