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Exploring the Integration of Internet in Teaching and Learning of Hospitality Courses at Technical and Vocational Education and Training (TVET) Colleges in Gauteng

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TITLE

Exploring the Integration of Internet in Teaching and Learning of Hospitality Courses at Technical and Vocational Education and Training (TVET) Colleges in Gauteng

A research proposal submitted in fulfilment of the requirements of the degree of

Master's in Education

SCHOOL OF EDUCATION

THE UNIVERSITY OF THE WITWATERSRAND

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February, 2022

APPENDICES

ABSTRACT

The widespread of internet in the world has brought about a transformation in almost all spheres of life, including the teaching and learning (Nazan Dogruera R. E., 2011). Internet launched a quick and efficient way to access information, which people use for social, entertainment and educational purposes. When technology transformed the hospitality industry, TVET Colleges were forced restructure their curriculum by integrating technology to produce relevant skills that align with industry needs (Mohammed, 2015). This study is a qualitative study designed to explore lecturer's integration of internet to enhance competency based training in Hospitality in a Gauteng Technical and Vocational Education and Training College. The study used the Technology Andragogy Work Content Knowledge (TAWOCK) model to probe lecturer's effective integration of internet in Hospitality. The study explored the use of internet in teaching and learning in TVET colleges' in hospitality subjects. The researcher chose Hospitality lecture's in the Gauteng region, conducting online one on one interviews on Microsoft teams and follow up phone interviews. The Covid-19 pandemic brought a sudden enforcement of the internet integration and general use of technology in Hospitality studies. Lecturers use technology as a supplementary tool for teaching and learning, with very minimal effective integration in teaching and learning. Currently the internet is used for lesson preparation, communicating with students and colleagues, record keeping and sometimes for research in the classroom. Lecturers lack knowledge and information affordances of internet for teaching and learning as well as technology integration skills and knowledge into teaching and learning.in Hospitality. Recommendation of the study have been to explore the department of higher education's role in technology integration in TVET Colleges and impact of technology on employee's skill post Covid-19 pandemic. The study was carried out in the midst of the Covid-19 pandemic, where all TVET Colleges in Gauteng implemented emergency teaching and learning which utilizes internet.

Keywords

Technology integration, Internet, Hospitality, Instructional support,

DECLAIRATION

I, Gcebile Delcy Dlamini, declare that the research report titled Exploring the Integration of Internet and Technology, To Enhance Competency Based Education in Technical and Vocational Education and Training(TVET), Colleges, Hospitality in the Gauteng Region is my own work and that it has not been submitted for any other course or degree and that all the sources I have used or quoted have been indicated and acknowledged by means of complete references. This research report is being submitted in partial fulfilment of the requirements for the Master of Education degree in Education and Work at the University of the Witwatersrand.

Name: Gcebile Dlamini

Student ID: 1965612

Date: February, 2022

Signature: 

DEDICATION

I dedicate my dissertation work to my family and friends. A special feeling of gratitude to my loving Mother, Miss Lizzy Lindiwe Mngomezulu whose words of encouragement and push for tenacity ring in my ears every day. My Late brother Mr. Mbuso Dlamini and late Sister Dr. Khetsani Dlamini-Shoyisa who has always believed in me. My siblings for their daily moral support and encouragement. My friends for always praying for me and just being a source of inspiration because they are also doing well in their fields, Nelly, Alsha, Bongiwe, Nomcebo…to name a few.

I also dedicate this dissertation to my Potter's Wheel church family, Mbabane, Eswatini, especially Mrs. Vickie Dornbrack for the spiritual support and prayers throughout the process. I will always appreciate all, they have done.

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CHAPTER 1
INTRODUCTION AND BACKGROUND
BACKGROUND AND INTRODUCTION

Technology has remarkably transformed the world, demonstrating that almost all spheres of life, including education, has been positively influenced (Report, 2018). Technological skills are considered crucial in the 21st century to expand the chances of employability and staying employed (Mata, 2015). Even though technology promises a better future for most developed countries, this, in contrast, threatens to sideline developing countries. As the economy is rapidly improving due to technological advancement, many ~~a~~ professional qualification are becoming less relevant in the job market that is presently controlled by technology and demand for digital literacy. The International Labour Organization (ILO), reported a significant concern in the education and employability disparities in the sub-Saharan region, with a high number of graduates who are unemployed because they lack the required skill set, suggesting incompatibility between tertiary education and the job market(Organisation, 2013). A recent ILO report, states that unemployment among the youth remains stable, but relatively still high due to the continuous technological transformation of the labor market (Organisation I. l., 2020). The transformation includes the automation of jobs, the use of robotics, artificial intelligence, 3D printing, machine learning, the Internet of Things and block chains which is resulting in the replacement of people while further creating new jobs in the labor market.

Technical and Vocational Education and Training colleges have not been excluded from the ICT and digital technology revolution. TVET colleges produce skills that are more likely to be automated, which demands that TVET education be reviewed to align with digital economy demands (Organisation I. l., 2020). The implications of the digital transformation therefore suggests that TVET colleges are faced with the challenge of integrating ICT and technology tools into their teaching and learning environments, in response to the growing demand of ICT/technological skills in the world (Bandura, 2019). These challenges include but are not limited to the lack of infrastructure, e.g; access to power to operate technological tools and the lack of skills for proper integration of technology, the cost of

obtaining and maintaining technology as well as the sustaining consistency among colleges in various geographic regions. To further elaborate on the aspects of maintaining consistency , e.g., TVET colleges around the Gauteng region are more likely to have technological tools and literacy than colleges in other less privileged regions. There is further a lack of technological literacy and confidence to apply technology among staff and ICT practitioners to support integration as well as a lack of preparedness for student's use of technology which is further influenced by different factors including family background and resources that support technological access. Other challenges that continue to inhibit the integration of digital technology in teaching and learning include: inadequate or lack of access to computers, tablets, smartphones, internet, user friendly and affordable educational applications and digitally literate educators (Uys, TVET Teaching in the time of digitisation, 2019).

TVET education is characterized by being experiential. This approach is based on the premise of producing occupational competencies that are designed for each of the TVET field and job titles. The work environment is continuously changing and developing, making it a challenge for educators to produce relevant, functional, and applicable learning experience. Theory based education focuses mainly on facts and abstract concepts with minimal application of the knowledge in the real world. Theory based education result in graduates who have difficulty applying their knowledge in the workplace. In contrary to the theory-based education methods of learning, experiential learning combines the learning of facts and concepts with application of that knowledge in solving real world situations. This is the learning approach TVET Colleges have adopted, focusing on developing practical and skills-based knowledge that is directly relevant to the work environment (Mozammel, 2017). Thus, making it easier for graduates to transition into the workplace, as the learning system allows students to create, apply knowledge and demonstrate understanding (Kerka, 1998). Workplace and industry needs are addressed through the courses that are offered and students are assessed based on their competencies (Isaac, 2015).

Experiential learning in TVET Colleges, can take place in classrooms that are equipped with industrial equipment and through internships. Experiential learning is rooted on the constructivist theory of learning, which asserts that learning takes place when new knowledge is attained and explored through the application of old knowledge and experience (Mughal, 2011). Students construct

knowledge as they interact with the objects of their socio-cultural environment. In the context of TVET learning, lecturers create an environment that allow students to apply theoretical concepts in real life situations, by exposing students to the industry or workplace of their field of learning. Vocational training education is credited with getting students ready for workforce and skills improvement to align with current needs or emerging trends (Laura A. Schindler1, 2017). John Dewey and L.S Vygotsky described the importance of The socio-economic development of countries relies considerably on the development of vocational education and training for highly competent employees that will yield good production.

In this industrial digitalization, industries are continuously investing tools that will increase their efficiency and production, machinery, and human resource (Judit Nagy, 2018). Even though technology has existed in industries, the current era the forth industrial revolution, the emergence of internet revolutionized the use of technology in industries through the automation of operations and processes, digital monitoring of the flow of activities, networking of processes and companies, data collection, evaluation of processes and products as we as decision making (Judit Nagy, 2018). The United Kingdom hospitality employment industry has reported difficulty determining skills that will be required by the industry in the future, considering its unstable and risky nature perpetuated by technological revolution (Laura A. Schindler1, 2017). The rapid changes in the industry due to technological advancement, outsourcing, globalization of tourism and hospitality trends bring anxiety to hospitality students in TVET colleges because of the uncertainty of their future employment. Unemployment among graduates continues to grow, and the workforce, on the other hand, demands scarce skills, which suggests that graduates possess irrelevant skills or lack relevant experience in the field (Jose Picatoste, 2018). Tourism and hospitality clients, on the other hand, are taking advantage of technological tools such as research search applications, social media, purchasing/booking tools and other services that use technology, therefore a growing demand for hospitality education and training is required to provide the relevant skills to keep up with the market demands (Latchem, 2017). These technological tools also threaten the automation of some jobs and the trends of automation are expected to continue, for jobs like clerk work, office work, production jobs (including cooking and culinary work in hospitality), assemble line work, marketing and bookings, “As a consequence, some 40 per cent of the current jobs in Australia are considered at high risk of automation over the next 10–15 years, and nearly 60 per cent of the present generation of

students — and 70 per cent of TVET students…"(Latchem, 2017,Pg 9). In addition to automation the internet has eliminated the intermediating employees by developing digital systems that promote direct access to clients and information online.

Considering the digitization of the tourism and hospitality industry, educators face the challenge to consider the integration of creative teaching methods and experiential learning approaches to teaching because it has demonstrated improvement in student engagement (Laura A. Schindler1, 2017). This means, TVET colleges have an obligation to produce graduates that possess TVET skills that are embedded on internet and technology, which will help them adjust to the new world of work. The new labor force market demands skills that include critical thinking, human resource management, emotional intelligence, judgement, negotiation, cognitive flexibility, as well as knowledge production and management and these skills must be established on digital literacy and understanding (Marwala, 2017). The possession of such skills will encourage employability while reducing unemployment, as well as opening more job opportunities for TVET graduates. Darling-Hammond suggested new approaches to teaching and learning that will help instructors and students to keep up with technological advances (Darling-Hammond, 2006). These approaches include the establishment of communities of practice among professionals in the same field, students who are still training to be professional in a particular field, instructors, and professional who are already in job, researchers and analysts (Darling-Hammond, 2006).

Communities of practice refers to a group of people who are collectively learning a shared discourse (Hoosen, 2009). Hospitality lecturers would have to work together with Hospitality employees to design and implement a curriculum that will produce graduates that are industry competent. These communities of practice will help in working together as a chain to tackle the daily challenges while producing aspiring professionals who are grounded in the profession as well as promote long-life learning, an important skill in the digital world. Darling –Hammond asserts that learning for students should take place in learning environments that resemble the real-life working place or simulate reality so that learning is not abstract and the practical's resemble a different environment causing a disconnect between theory and practice (Darling-Hammond, 2006).

This educational revolution also requires that all TVET College employ an andragogic approach to teaching and learning, where they constantly monitor the industries to see emerging trends, assist students as they engage in experiential learning by structuring their curriculum to address the needs of Hospitality. Andragogy is a term used to describe an adult learning method, the self-directed learning approach as opposed to teacher-directed learning, learners decide what they want to learn based on their current needs and they are involved in the planning of their learning, learning that is oriented towards the current role, like in-service skills development and learning that is problem-centered where the learner is learning to solve problems surrounding daily engagements (Deis, 2004). This learning approach is characterized by four Principles: Self-directed learning, Learners as Resource, Learning as Developmental and Learning as Application to real world (Deis, 2004). Therefore, this approach works efficiently for TVET College education because it is experiential in nature, accordingly students can always bring their work-based learning experience into the classroom to guide learning and curriculum improvement. Andragogy has been credited for promoting life-long learning, career transition and the improvement of products and service delivery as opposed to pedagogy where the learning is mainly teacher centered with a curriculum that is predetermined by government (Deis, 2004).

Critical to all all learning approaches, each of them has a distinct philosophy, and a clear understanding that provides learning strategies to enable the appropriate creation of learning material specifically designed for the target group. These strategies help learning designers to create appropriate learning for specific target group. Andragogy refers to learning methods used in adult education, which are self-directed, problem solving and transformative. While pedagogy refers to learning strategies used in children learning, where the learners depend on the teacher's guidance, teacher-directed or centered learning ((Pew, 2007). The idea of TVET College education located at the crossroads of school and the workplace, where the college's primary goal is to produce skills needed by the industry (Powell, 2013). A method of learning that promotes skills and knowledge acquisition, application of skills to solve real-life problems and personal development with improved competencies. Andragogy focuses on adult learning, where students are being taught to direct their own learning, still with the support of the instructor through scaffolding and constant feedback (Blaschke, 2016). Adults refer to students at the age above 18 years, which are mainly college students.

The modern structure of TVET colleges is directed towards the job market and emphasis is placed on the production of competent professionals that possess relevant skills. Pertinent to one outcome of andragogy is to produce learners who are empowered for rapid changing work environments. Therefore, TVET colleges must adopt the andragogic approach to learning. The modern curriculum in TVET is a competency-based curriculum which focuses on producing the skills needed by receiving industries and employers (Nelson Mbarushimana, 2017).

Introducing change within an institution requires an alteration of the entire system, TVET colleges will have to consider the feasibility of available technology, its functionality in alignment with the proposed change as well as its sustainability. With the competency-based curriculum and its potential to empower students with skills that allow them to be flexible to the demands of the industry as well as arising situations in the rapidly changing technological society, a continuous improvement of the system is essential. A andragogy supports the development of skills and competencies, to align with individual needs and market demands.

Hospitality courses, teaching and learning can leverage the power of the internet for both promoting life-learning for students and instructors as well as create communities of practice. This study seeks to explore the extent in which TVET college students use of the internet and technology can be integrated with andragogy to bridge the gap between employer's skills demand in the digital era and student's skills and knowledge capacity as well as lecturers to students and student to student communication. There is an argument that the cost of integrating technology in teaching and learning is relatively lower compared to traditional teaching and conducting practical's and that these costs gradually decrease the more technology is implemented. Integrating ICT's in teaching and learning enhances inclusive learning by supporting learning disabilities through tools like videos, audios and texts that can be revisited until content is mastered (Darren D. Chadwick, 2016). The use and dependency on technology in the world continues and is expected to grow, which places a demand on TVET college students to be equipped with necessary skills and knowledge to cope in the workplace, preventing them from being lest disenfranchised from their potential careers (Orji Tobias Chibueze., 2014). This might also mean moving towards a technology-based kind of TVET education, which includes either online or blended learning. TVET students need to be empowered

with skills and knowledge on how to use ICT tools effectively and responsibly. ICT tools integration in teaching and learning consists of the use and combination of different digital tools and applications that support and enhance teachers and students, online courses, blended learning, and virtual resources. These tools require an advanced level of digital literacy from teachers and students, which involves the ability to comprehend and use ICT tools and technology productively in teaching and learning activities. In the case of TVET colleges' education, this would mean all the elements of teaching and learning, the practical application into production and online safety (Orji Tobias Chibueze., 2014).

PROBLEM STATEMENT

Technical Vocational and Training Colleges (TVET) are an essential driving force for the economic growth in South Africa, as they produce skilled and competent human capital. With the emergence of the fourth industrial revolution, an era that is characterized by rapid technological advancement, artificial intelligence, robotics, automation, the entire world is connected by the internet. TVET colleges are faced with the challenges surrounding the full adoption of technology to maintain a significant input into the economy by producing technologically competent TVET graduates. The full adoption of technology would mean TVET Colleges are able to adopt and implement a functional technology integration framework to produce advanced technology literacy skills and eliminate digital divides among both students and educators (Mata, 2015). UNESCO reported the challenges that may hinder educators and students from being beneficiaries of the opportunities presented by technology and how this contributes to a digital divide in the new world. This included not only the lack of access to the technological infrastructure: equipment (technological gadgets like computers, tablets, smartphones), internet, suitable materials written in understandable language but also the digital literacy of educators, meaning they can understand and use digital technology effectively as well as have the capacity to easily adopt new technological tools (Uys, TVET Teaching in the time of digitisation, 2019). Preceding studies related to the integration of ICT tools and digital technology in teaching and learning in South Africa focused mainly on the challenges of integrating ICT tools while the educators' technological competencies focused on pre-tertiary education and did not highlight the instructional and educative potential of the internet, especially in promoting experiential and competency-based learning in TVET colleges. Experiential learning refers to the method of learning that engages

students in practical activities that best enhances their learning, like real experience of the concepts, reflection on the concepts learned in class, critical thinking and acting according to the desired outcomes (Kolb, 2005). The increase in graduate unemployment due to poor TVET training can be associated with a lack poor experiential learning particularly technological experience, while on the other hand, the job market is rapidly advancing in technology, thus creating a gap between industry needs and TVET education which is supposed to prepare students for industries.

There is an urgent demand for TVET colleges to find strategies to bridge the gap between skills needed by the job market and skills produced by TVET colleges in South Africa. This study is grounded on the evidence that TVET colleges face the challenge of integrating ICT and digital tools to produce competent graduates that are ready for the digital job market, however, the prevalence of an environment limiting to the application of ICT integration should not inhibit TVET college students and lecturers from exploiting the opportunities presented by ICT tools to enhance the development of relevant skills. The realization of the opportune space in the integration may provide the requisite spur for policy makers to develop and nurture the educational institutions (supply equipment and empower personnel), to explore and exploit related value chains. This assumption is supported by the department of higher education in the white paper for post-school education and training where it encourages the collaboration of higher education institutions and employers in developing relevant skills (Department of Education, 2013). Therefore, this study seeks to explore the impact of using the internet for instructional support, enhance content representation and enhance work-based learning in Hospitality.

RESEARCH QUESTIONS

1. How does TVET lecturers use the internet for content representation?
2. How does TVET lecturers use the internet for instructional support?
3. In what ways does TVET lecturers use the internet to implement skills/work-based learning?

THEORETICAL FRAMEWORK

The Technology Andragogy Work Content Knowledge (TAWOCK) model informed the theoretical base of the study, which is a model adapted from Technological Pedagogical Content Knowledge (TPACK) framework (Zainal Arifin, 2020). The TAWOCK model was

specifically designed for the integration of technology in TVET colleges after extensive research demonstrated some gaps in the relevance of integrating the TPACK framework to TVET education.

TVET education takes into consideration work-based learning in addition to content. The TPACK framework is based on the concept of integrating Technology, Pedagogy and Content Knowledge into teaching and learning. Technology knowledge refers to the ability to use technology to support teaching and learning in the classroom. Pedagogy relates to methods of teaching children, and content knowledge refers to the subject matter, while the TAWOCK framework refers to technology knowledge. Andragogy knowledge as opposed to pedagogy, refers to the techniques and methods of teaching adults. Work knowledge refers to the skills and competencies that are taught in TVET colleges while Content knowledge, referring to subject matter denotes and underscores the Hospitality concepts for the purpose of this study (Deis, 2004).

The concept of Hospitality education is lifelong learning of skills and competencies that are needed by the Hospitality industry because it is diverse and continuously evolving. Therefore, student's readiness to learn is predetermined by the industry demands, which aligns with the andragogy approach than pedagogy, where students learn what educators want them to learn. According to Knowles (citation), andragogic learning conditions must encourage students to see the need to learn. In addition to the readiness to learn, the andragogy approach focuses on solving real life problems by using project based, case based as well experiential learning as opposed to pedagogical approaches which are based on mastering the subject matter (Zainal Arifin, 2020). TVET education focuses mainly on practical/work-based learning than theory and abstract concepts. In the TAWOCK framework, pedagogy which is more applicable to child education is replaced by andragogy which is more relevant for TVET education. In spite of the fact that both pedagogy and andragogy methods can be applied in TVET education, andragogy becomes more relevant because asTVET education emphasizes experiential and work-based learning.

Based on previous literature in the field of study, a theoretical framework provides a plan and guideline for research, (Dickson Adom, 2018). The TAWOCK framework of knowledge integration has been widely used for technology integration into pedagogy, however

the model has recently been modified to integrate TVET college requirements, and the new model is called the Technology Andragogy Work Content Knowledge (TAWOCK) model where pedagogy is replaced by andragogy (Zainal Arifin, 2020).

TAWOCK FRAMEWORK

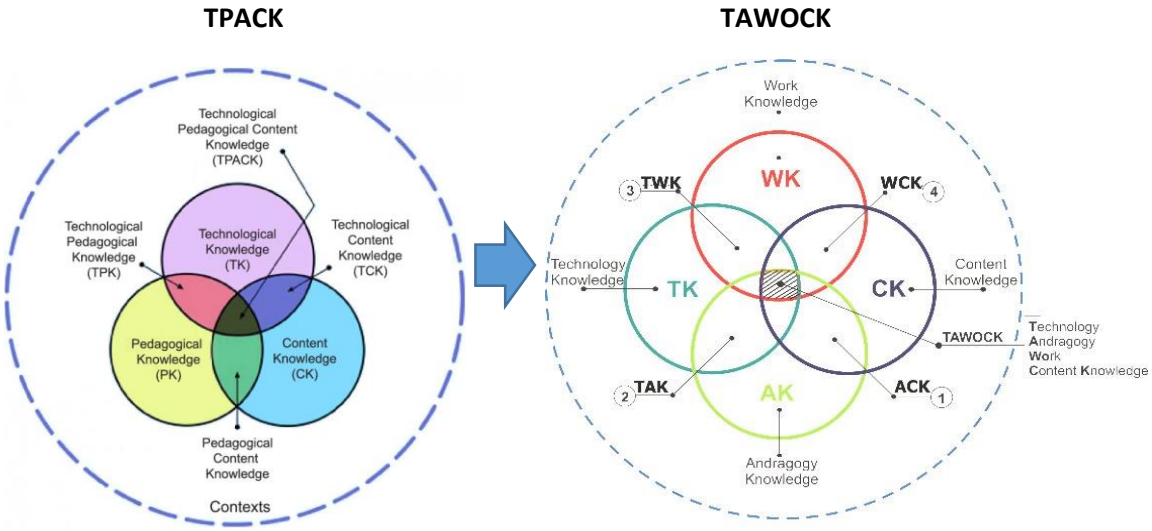


Figure 1:1 TAWOCK Framework

The conceptual model of Technological Andragogy Work Content Knowledge (TAWOCK) is found at the intersection of the four knowledge domains that are needed: technological knowledge, andragogy knowledge work knowledge and content knowledge. TAWOCK refers to successful integration of technology into TVET teaching and learning, which requires a clear understanding of how to present concepts using technology, teaching practical skills, the use of andragogy for content delivery that utilizes technology for effective learning, knowledge of how to select the appropriate technology for specific content and the knowledge of how to utilize

existing technological knowledge to construct knowledge. Technology Knowledge (TK) refers to the integration of technology into teaching and learning. Andragogy Knowledge (AK) refers to the ability of a teacher to use appropriate teaching methods for competency-based learning, to develop workforce skills using adult learning approaches like problem-based learning, project based learning, constructivism and collaboration. Content Knowledge (CK) refers to the understanding of concepts that are needed to develop knowledge and skills for TVET colleges. Work Knowledge (WK) refers to the skills needed by learners to develop competence in the relevant field. Andragogy Content Knowledge (ACK) is knowledge on how to present concepts to learners in a way that is understandable, the knowledge of relevant delivery methods for specific concepts. Technology Andragogy Knowledge (TAK) is the knowledge of understanding of the appropriate technological tools that are useful for specific lesson delivery or skills acquisition. Technology Work Knowledge (TWK) is knowledge of the technological skills needed by the workforce that TVET colleges are expected to produce and how they can develop those skills. Work Content Knowledge (WCK) is the understanding of the concepts that are needed by learners to be competent in the workforce. Technology Andragogy Work Content Knowledge (TAWOCK) is knowledge of how to develop specific skills and competences needed in the workforce through andragogy and technological tools (Zainal Arifin, 2020).

PURPOSE OF THE STUDY

The purpose of the qualitative study was to explore lecturer's usage of internet for educational purposes in TVET Colleges using the TAWOK framework to assess internet integration into hospitality courses in TVET colleges, to enhance experiential learning curriculum. The study explored how lecturers use internet to enhance content representation, instructional support and work based learning in preparing students for the hospitality industry in South Africa. For this study, the focused on TVET colleges in the Gauteng region. The results of this study may be of value to the department of higher education/TVET college policy makers, instructional designers in TVET colleges and educators in designing appropriate internet integration models for TVET colleges and other educational institutions to align with growing digital technology informed systems of education**.**

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CHAPTER 2
LITERATURE REVIEW
INTRODUCTION

This section of the study will discuss the important issues in the field of education relating to the integration of technology in hospitality in TVET colleges within the South African context.

THE 21ST CENTURY HOSPITALITY INDUSTRY

Technological transformation of the world has immensely penetrated the workforce such that an improvement of tertiary education has become a necessity. The emerging job positions demand digital skills and existing employment positions are digitally upgraded to meet global demands and improve production, therefore new employees entering the workforce must be digitally literate to be competent (Uys, TVET Teaching in the Time of Digitization, 1-16). Technology has taken over operation roles in factories and hospitals, where robots are doing a large part of the operational work and drones allow for a more efficient viewing of processes from warehouses to power lines. The replacement of human beings by machines do not always mean the loss of vacancies but informs an upgrade of skills by employees to align with the new developments because these technologies are an extension of human roles to make work less physically strenuous and more efficient. There is a growing concern from the middle-class employees about the automation of most of their jobs by industries as a strategy to improve efficiency and increase production. Employees are becoming more concerned bout losing their jobs, because technological tools are doing even better work than human beings are able to deliver, particularly in the factories. The digital age is a very critical time for average skills and abilities because computers, robots technological tools have the ability perform duties far beyond human abilities (Autor, 2015). Artificial intelligence is a new set of technologies that seek to adapt to human beings, has the ability to solve a number of health care problems, communication, transportation and many other human roles. These transformations are not only confined to workforce or industry and education but goes beyond human relations, the world has become so connected that there are now limited distances, time and communication barriers.

Digital literacy and digital understanding are the primary skills required by employees in the 21st century workforce, both industries and corporate spaces. Digital literacy refers to the ability to apply critical thinking and be creative within the continuously evolving technological environments, while digital understanding refers to the confidence in utilizing technological applications and software, the ability to predict threats in the usage of technology, opportunities and future projections in that particular technology (Uys, TVET Teaching in the Time of Digitization, 1-16). TVET colleges are expected to produce the following skills for an effective and efficient 21st century industry or workforce; contemporary communication skills, critical thinking skills, self-directed learning, information management, and responsible team players. Preparing TVET students for the digital world requires the incorporation of the same digital principles expected in their teaching and learning, e.g. the application and use of systems that students will be expected to work with after graduation, hence the need for digital literacy and understanding for TVET educators.

The digitization of TVET colleges bring opportunities for the improvement of TVET education. These challenges include the cost of digital tools, training and the employment of new staff that possess digital skills (Uys, TVET Teaching in the Time of Digitization, 1-16). Even though TVET educators cannot be replaced by digital tools, educators with digital skills can replace educators without digital skills. Just like most new development interventions, there are those who quickly adopt the new intervention enthusiastically and those who become skeptical with change as technology has always been a challenge for most digital immigrants to adopt than the new generation of digital natives (El-Saghir, 2012). Digital immigrants in a classroom environment are most likely to be the educators who may be reluctant to the adopt technology while most 21st century students are enthusiastic about technology and its use thereof.

The internet has provided the Hospitality industry with connectivity and communication tools for easy access to stakeholders and clients. With the internet, tourist and hospitality clients can access information on accommodation, schedules, routes, rental vehicles, available seats, make booking and restaurants. E-tourism and hospitality has become popular where most of the tourism systems are digital. For example, computer reservation systems for managing inventory, global distribution systems, intermediaries selling tourism products and e-travel agencies facilitating the selling of tourism products and services are among the popular digital concepts . Internet also advanced

the hospitality industry by introducing virtual reality and augmentation of products, e.g. providing an augmented potential experience of the destinations advertised to clients and enabling tourists to make informed choices.

INTERNET IN TVET COLLEGES

The main aim of Technical Vocational Education and Training is to produce professionals that possess skills necessary to get through and thrive in the evolving world (Uys, TVET Teaching in the Time of Digitization, 1-16). TVET colleges were established to produce skills that are needed by the industries; therefore the curriculum often reflects on the industrial needs of a particular region or country (Employability skills needed in Hospitality Industry, 2020). Technology has become popular in the 21st century community, with mobile phones being the most prevalent device among human beings, including students from as early as foundation phase. They have features and characteristics that are interesting to students, few of which are addictive to students like the excessive use of social media platforms and dependency on phones (Chimatapu Sri Nikhita, 2015). The popularity of mobile phones among students have furthero led suppliers and manufacturers to find students as a target market for their products. Research also reveals that, there is a positive correlation between the improvement of academic performance and mobile phone usage, meaning mobile phones have the potential to improve academic participation (Uys, TVET Teaching in the Time of Digitization, 1-16).

Mobile phones have become available with web connection products that are proven to be beneficial to education like the social media and knowledge platforms. It is important to note that these products are mostly dependent on internet connection, even though some may still be functional offline. Social media platforms have the potential to improve academic performance if it is used appropriately because of their lack of ambiguity and uncertainty that increases self-disclosure and self-presentation among students. Students find it easier to express their ideas and contributions through social media platforms compared to face-to-face, which gives educators a clear insight of their learner's knowledge status and intelligence level (Godwin P. Dzvapatsva, 2014). These digital platforms came with networking, collaboration and communication opportunities that complements the face-to-face interaction between students and educators. With such substitution of traditional and conventional classrooms by digital platforms, the education system has witnessed a transformation for the better. However even though technology promises a better future for education, TVET colleges in South Africa

has witnesses a digital divide. This includes division at different levels; device divide where not all learning practitioners can afford device medium, smart phone, computer or tablet. The Second division results in the internet divide, where practitioners cannot afford or have poor or no access to internet for a full functional use of technological platforms. Learning platforms also require special knowledge and experience to develop, monitor and manage them to ensure they serve the purpose of learning especially knowledge platforms. Social media platforms on the other hand require proper guidance and structure as not to impact learning negatively as certain features accompanying media platforms can be disruptive to students. For the success of these learning platforms and use of the internet, educators will also have to be explicit in their design methods (Godwin P. Dzvapatsva, 2014).

Online learning continues to carry the stigma of being intimidating especially for novice students and digital immigrants, which in the context of today would be the educators since the generation of students in colleges are techno-savvy. Technology can be frustrating and confusing to use, as explicit design is required from educators, and when users are frustrated they may be tempted to drop out and stop working on the activities, rendering future attempts a failure. The lack of social and emotional presence has been a concern among most educators who exhibited negative attitudes towards the integration and use of technology. some educators complained about the social and emotional distance as important aspects of learning and some thought technology was disruptive. The educators in some cases, highlighted issues of privacy and cyber bullying as a reason why they thought technology would impact education negatively (Godwin P. Dzvapatsva, 2014). Additionally, the cost of setting up a technologically embedded learning environment, which includes the infrastructure, connectivity, ever evolving software costs are also an important issue (SUBBAN, 2018).

EXPERIENTIAL LEARNING AND TECHNOLOGY IN TVET COLLEGES

Experiential learning was founded on the hypotheses that human beings learn better when they engage in activities that allow them to apply concepts, thoughts, and propositions to an interactive environment. During these interactions, students together with educators design, implement, evaluate and modify activities to achieve learning goals, making learning more about the experience than the outcomes (Noor Dina Md Amin, 2012). It is characterized by a well-designed curriculum to display explicit and understandable competencies, it is self-paced, with clear goals and objectives and its emphasis is on skills, abilities and knowledge needed to perform

specific tasks assessments, which evaluates what students can do, either new innovations, problem solving or improving the current system (Mozammel, 2017). Effective experiential learning is characterized by six features: 1. Learner centered, and student directed, 2. Emphasizes problem solving, discovery and inquiry 3. Applied content to practical experiences, 4. Focuses on mastering a specific discipline, 5. Based on perceptions, 6. Encouragement of students to discover and solve problems on their own (John Anthony, 1990). This kind of learning is structured in a way that first assesses the current needs or competencies of the workplace and industry, and then the curriculum is designed to enhance the acquisition of those competencies. Considering these above competencies, TVET education is at the forefront of creating skills needed by the South African economy and for sustainable economic development as well contributes to political and social participation, through the production of relevant competencies. TVET Colleges in South Africa, are committed to adopting a system of education that will allow them to produce quality human capital to the industry, which in turn increase production.

Employers, faculties, educational researchers and policy makers agree on particular skills, abilities, knowledge, competencies and demonstrations that are needed by a country or region to improve its economy and production. TVET colleges, provide opportunities for students to choose personalized learning pathways that aligns with these needs (Soares, 2012). Soars (2012) argued that public sectors, organizations, industries and cooperate sectors have adopted technology as either a sustainable innovation which refers to when technology enhances or replaces human skills with the purpose of improving production and efficiency or disruptive innovation where technology is adopted to develop new products that never existed before to cater for specific or new needs for communities.

The new technological developments in software and cognitive science allows for the development of skills, knowledge, abilities and competences as well as evaluates the acquisition of such skills (Soares, 2012). Technology allows software engineers, learning scientists, human-computer interaction experts and cognitive scientists to collaborate in designing a learning environment that will produce the necessary skills and knowledge required for student-centered and monitoring of goals and objectives. Cognitivist design instructions help in scaffolding students through material to achieve learning objectives.

Skills training environments sometimes have limiting factors, disruptive technology provide opportunities for simulations that allow the performance and practice of skills that could have been difficult and impossible to execute. Simulations are mainly utilized in the field of medicine, however over the years they have also been introduced to engineering, aviation and gradually other fields of learning. These simulators have the advantage of always being readily available, their ability to perform would have been challenging in a natural environment, faster and more efficient as well support dangerous novice activities e.g., in medicine when students are supposed to practice certain procedures that are risky on a human being, simulators have proven effective.. Virtual reality simulators are exceptionally more advanced versions of simulation, with features that mimic the physical environment in which procedures are performed and are notably interactive (Gregorio Mañeru, 2011).

When the department of higher education and training in South Africa took an initiative to introduce digital technology in TVET colleges, through the establishment of Business Management Systems, for the monitoring and evaluation of TVET qualifications and Learner Support systems, designed mainly to support educators, with resources to support teaching and learning, the aim was to make TVET resources available for all stakeholders within a single system, making TVET teaching and learning process easier. TVET colleges are located in different regions in the country including rural areas like in the Eastern Cape where access to internet is a challenge. Either the cost of internet or data for connection or the geographical location hinders the full functionality of technology. The Eastern Cape Department of Education partnered with eSkill CoLab from the Walter Sisulu University to introduce Information Communication centers with equipment and internet for students to connect to the internet for learning purposes. E-skills CoLab refers to a center that produces digital and ICT skills that is needed to be functional in technological environments (Lesame, 2014). Through that initiative TVET colleges were utilized as ICT centers, where they benefited from the technological services as well engaged in their obligatory assignment to produce skills, abilities, knowledge and competencies needed by society (Ndiyakholwa NGQULU, 2019). This initiative presented a potential for TVET colleges to serve community digital needs as well as establish effective competency-based education in the digital age, to bridge the digital divide among students and educators.

CHAPTER 3
METHODOLOGY

INTRODUCTION

In order for education specialists, teachers, curriculum designers, researchers and policy developers to evaluate technology integration and its efficiency in teaching and learning, they must develop an understanding of the level of integration in an authentic learning environment. It's important to have an accurate perception of the integration of technology and technological pedagogies in the classroom, e.g., the use of the internet as a substitute for the textbook is an integral part of the learning process.

A research methodology is detailed plan on how the study will be conducted. A research methodology is used to structure the research and how it will be implemented, which also enhances the validity of the study. Central to this study is the understanding of TVET College lecturers in South Africa for an effective integration of technology into teaching and learning. To gain an insight on the integration, the researcher explored the integration of technology and internet into teaching and learning in hospitality, therefore, this study is case study of Gauteng TVET Colleges, where the researcher studies the phenomena in its context without influencing it (Creswell, 2014). According to Creswell (2014), a case study the phenomena is studied in relation with its context. The researcher explored lecturers knowledge and used on internet in their Hospitality classrooms and it enhances experiential learning, since TVET Colleges teach skills.

SETTING

The study was conducted in three TVET Colleges in the Gauteng region and these colleges were purposively selected for the study. The researcher is a Master's student in the University of the Witwatersrand School of Education in Park town, hence the selection of Gauteng TVET colleges.

Location of the study

The study was conducted in TVET colleges in the Gauteng region, South Africa, which offers hospitality courses.

Focus of the study

The study focused on the exploration of the andragogy integration of internet by TVET college lectures to enhance competency-based learning.

RESEARCH PARADIGM

A paradigm is a "set of beliefs that guide action" (Creswell J. W., Philosophical assumptions, 2013). Creswell (2013) describes research as a process that involves three dimensions; ontology, epistemology and methodology and a research paradigm is an all-inclusive process of interconnected practice and thinking that explains the nature of enquiry in these dimensions. Ontology being what the researcher believes about the nature of reality and epistemology refers to the beliefs that a researcher holds about finding reality (Scotland, 2012).

The ontological and epistemological dimensions are concerned with the researcher's perception of the world, which in turn influences the relatively important aspects of reality. The researcher's perceptions can either be objective or constructive in nature, meaning an objectivist believes reality exists out there in the world waiting for the researcher to discover and make generalizations while constructivists believe in multiple realities that exist where the researcher interacts with participants to discover their subjective realities (Scotland, 2012). Either of these approaches are equally important depending on the nature of the research conducted. Therefore, a research paradigm is a philosophical point of view in which a researcher is positioned by the manner in which the research problem and research questions are formulated as well as the exploration of answers (Creswell J. W., 2013).

The research paradigm was appropriate for this study is the social constructivist research paradigm which is interpretive in nature. This paradigm allowed the researcher to uncover and understand the social reality of the participants. This paradigm is used in qualitative research methods which employs participant observation, in-depth interviews and focus groups methods of collection. Qualitative data was collected through one on one online interviews via Microsoft Teams (views of Hospitality lecturers).

Research Design

The study used a qualitative method to explore the use of the internet by hospitality lecturers in TVET colleges around Gauteng to enhance content delivery, instructional support and skills acquisition for competency-based training using the TAWOCK framework of technology integration in TVET college lecture rooms. According to Creswell (2014), qualitative research explores a phenomenon in its authentic environment, collecting evidence, presenting, and analyzing to get a deeper understanding of a phenomenon studied. This study employed a case study approach to explore the Hospitality lecturer's integration of internet in teaching and learning in TVET colleges Gauteng. A Case study research approach is systematic investigation of facts about a specific phenomenon within its original context using multiple sources of data (Yin, 2009). The researcher will explore the use of internet among Hospitality lecturers in three Gauteng TVET Colleges, to find out how lecturers use the internet for content representation, instructional support and work-based learning to reinforce experiential learning. The researcher' aim is to build an in-depth understanding of the lecturer's use of internet in the classroom using information gathered from the three Colleges through the utilization of online interviews.

Research methodology

The study employed a qualitative approach to explore, the lecturers understanding and degree of the integration of internet in their pedagogy to enhance experiential learning in Hospitality courses for TVET college students. The qualitative method of collecting data provides a meaning and deep understanding of phenomena studied, and the meaning participants attach to their experiences (Creswell, 2014). The study approach in exploration of a phenomenon, investigates a particular experience that is deeply entrenched in the context of its authentic environment (Creswell, 2014).

The researcher used an In-depth online interview guide to explore the integration of internet in TVET colleges to enhance experiential learning of hospitality students. A study that uses data collected through online interviews follow the basic principles of conducting interviews and thinking as according to qualitative research and further adds an important dimension of technology (Salmons, 2015). The researcher used online in-depth interviews because it a convenient way of meeting participants considering that the study will take place during the COVID-19 pandemic, which enforces human contact restrictions.

The technology dimension of this study is important because, human interview communication factors that add value to information are delimited by the technology, e.g. body language, technical problems like poor connection, sound and images (Koceski, 2013). This study will use videoconferencing methods of communication , which involve video, audio and text synchronous communication on a communication platform called Microsoft Teams (Salmons, 2015). An interview guide based on the TAWOCK framework to collect data on the internet will be used and integrated by lecturers in the hospitality studies at the targeted TVET Colleges in Gauteng.

STUDY POPULATION

Considering that technology and internet integration into teaching and learning requires a well-established technological infrastructure; computer-equipment availability, electricity power and internet connection is taken into consideration (Javier Gil-Flores, 2017).The target population for this study was Hospitality lecturers in TVET colleges in the Gauteng region because the Gauteng region has a rich technology infrastructure.

Sampling

Sampling is the process of choosing a portion of the target population for the purpose of collecting data (Creswell, 2014). Qualitative research uses nonprobability sampling methods, which are convenience, purposive, quota , dimensional, theoretical, volunteer and snowball sampling (Leuwis Cohen, 2007).

Participants were selected using purposive sampling, which is a method of sampling that is characterized by the selection of participants based on attributes that will make the researcher get the data required for the study (Creswell, 2014). Creswell (2014) argues that a

purposively selected sample is small in size, and the participants are those who have experience with the phenomenon studied. In this study participants were selected on the basis that they were hospitality lecturers in a TVET College in Gauteng. Gauteng, which is a province regarded as the hub of innovation and technological development, with the assumption that technological advancement begins there before it disperses to other provinces in South Africa.

Four lecturers were purposively selected from each of the hospitality departments of the three TVET Colleges. It is important to select participants who have access to the internet. In particular, lectures from the Gauteng region were selected for the purpose of this study. The study will focus on selecting hospitality lecturers from one TVET college in the Gauteng region, using the purposive sampling methods because distributing questionnaires to all TVET college lecturers offering hospitality would result in a huge amount of data collected that would require a long time to analyze and make sense of it because the study is qualitative, hence the study focused on one TVET college in Gauteng. Participating lecturers were identified through communication with the principals and college managers. Permission sought through the ethical permission application process will be ensured prior to the data collection process.

DATA COLLECTION

Data collection refers to the process of gathering facts and information about a specific phenomenon studied from the sample selected (Creswell J. , 2007). In qualitative research data collection is interactive, where the researcher and the participants engage in a conversation on the phenomenon of study, observation and perspectives with interactive strategies. Qualitative data collection methods allow the researcher to get involved with the participants as either an insider or outsider during the process (Salmons, 2015). In this study, the researcher engaged with participants as an outsider to gain an insight into their lived experience through integrating internet. Diverse perspectives from the participants may emerge on the phenomenon studied and the researcher will clear preconceptions on the phenomenon while listening without prejudgment to the different perspectives. Qualitative research usually engages three methods of data collection: observation, interviews and reviewing of documents and records.

In gathering data for this study, semi-structured online interviews, with selected lectures were conducted through the Microsoft Teams platform. Microsoft Teams is a cloud based digital application that brings channels, allows synchronous and asynchronous conversations, meetings, sharing of files and applications to Microsoft 365. The channels are used for group discussion topics or meetings which are sometimes called Teams (Tapp, 2019). For the purpose of this study, a Hospitality Lecture's Interview Team will be created, and a link will be sent to all the participants to connect at a designated individual's time.

An online/Computer mediated in-depth interview guide was distributed to the participant's emails prior to the interviews. The guide waschosen for its flexibility in gathering facts and information and will allow the researcher and participants to probe, should any interesting concepts arise. Follow up phone interviews were conducted to further explore the responses of lecturers. The in-depth interview guide designed using the TAWOCK framework of technology integration in the classroom by Zainal Arifin , Muhammad Nurtanto , Nur Kholifah , Soffan Nurhaji & Warju Warju (2020) was used to collect data. Embedded on the TAWOCK framework, the content guide explored the three concepts (content knowledge, andragogic knowledge, work knowledge and technological knowledge) to determine the lecturer's competency and integration of internet into teaching and learning: content knowledge, pedagogical knowledge and technological knowledge. Concepts were discussed with participants prior to the interviews through telephonic communication and emails. Brief discussions were held at- the beginning of the interviews to ensure that the participants understand concepts and questions.

The in-depth interview guide was divided into two sections, the background sections which contains personal information of participants referring to occupation, experience, age, gender and qualification. The second section were TAWOCK based interview guide questions that is designed to assess the research questions and their probes.

Data management and analysis

Data analysis is the process of classifying, describing, and interpreting facts and information gathered in a study (Creswell J. , 2007). The study will employ qualitative data management methods of collecting data, therefore a thematic analysis which is an interpretive

and conversation analysis of data will be used to analyze data (Creswell J. , 2007). The analysis was deducted from the literature review and the TAWOCK framework of technology integration into the classroom. The researcher transcribed recorded interviews and follow up interviews to clarify specific concepts, identified themes from the interview responses, and code data according to the theoretical concepts from the literature review and the TAWOCK framework.

Stages of the analysis

Stage 1: Verbatim transcription of recordings

Stage 2: The use of TAWOCK framework to analyze data

Stage 3: Identification of themes and the use of Atlas TI 2020 software for the qualitative data analysis.

DATA CREDIBILITY

Reliability

Reliability refers to the ability of data collected to produce the required information for the study (Creswell, 2014).To ensure reliability, the study reviewed concepts studied in depth through a review of literature . The TAWOCK framework and questions were well-structured to produce accurate information. The researcher sent the interview guide and information sheet by email and called the participants before the interviews to discuss the questions to ensure participants understood all the questions and their requirements.

Validity

Refers to the ability of the instrument used to collect data to gather accurate information for the requirements of the study (Creswell J. , 2007). Validity in qualitative research is ensured by monitoring the three possible biases': the participant bias, the researcher's bias and reactivity.

Participant bias, refers to a situation when participants are not giving authentic responses for different reasons like the fear of being penalized by their authorities or if the topic is threatening to their image.

Researcher's bias refers to the influence of the researcher's prior knowledge on the phenomenon and assumptions which can be a risk to to the validity of the data collected.

Reactivity refers to the role of the researcher's presence in the environment where data is collected and its possible influence on the participant's response.

The study ensured strict confidentiality of any information gathered from participants by communicating the terms of confidentiality to them. The participants signed a confidentiality form to minimize participant's bias. The variation of data collection methods, in-depth interview guide and follow up interview questions will help in minimizing the risk of researcher's bias. Also member checking to qualify participant's responses by reading back response transcript to ask them to confirm their responses. The online interviews helped in minimizing the risk of reactivity. The researcher also ensured an in-depth literature review on the TAWOCK framework of technology integrate and implementation of effective competency based training in TVET colleges to enhance theoretical validity.

ETHICS

Ethical consideration

When conducting a study, ethical consideration forms an integral part of the research. The study must adhere to the standards of conducting research in its specific discipline (Creswell, 2014). The researcher ensured the rights and welfare of participants are protected by preparing consent forms. First, the researcher asked for permission from the University of the Witwatersrand to conduct the study. When the study is granted permission through acquiring ethics approval as per the procedure of the University , secondly, the researcher requested for consent from TVET College authorities where data was collected. , thirdly, the researcher also requested consent from Hospitality lecturers TVET colleges to participate in the study and conclusively , the in depth interview guide specified sensitive areas

where participants may find it uncomfortable to respond to, and further requested their consent as well as assure the participants of confidentiality. All agreements and consents were written and signed on the consent forms. In cases where participants or institutions decline, the researcher attended to the reason for declining of consent and respected the decision.

CHAPTER 4
PRESENTATION OF FINDINGS

INTRODUCTION

This chapter presents the findings from the In-depth online interviews. The study explored the integration of internet in teaching and learning of Hospitality courses through online interviews. Therefore, the participants were expected to be Hospitality lecturers who are familiar with Hospitality education and procedures, were able to give informed views on internet use in Hospitality classrooms. The department of Higher Education was extremely helpful in finding participants for the study. The response to interview requests were fairly encouraging, even though a few Hospitality lectures were skeptical and asked for clarity on issues pertaining to privacy, with two lecturers from different Colleges declining the request.

Upon the completion of each interview, the recordings were manually transcribed by the researcher. The data was collected and coded., The coded data was cleaned clean up the codes and a thematic framework was developed -. The reason for the three-step process was to summarize the data and eliminate irrelevant information. The table below, Table 1, shows a summary of the responses that were provided by Participants during the interview sessions.

RESEARCH FINDINGS

Table 1: Findings

Lecturer	Hospitality
Participants	8

Age	34-50 years
Gender	Females
Highest Qualification	Hospitality and Education: Diploma in Hospitality and Postgraduate Diploma in Higher Education, Btech in Hospitality Honors in FET Specialization (Consumer Studies) Postgraduate Diploma in Hospitality Management Postgraduate Diploma in Higher Education Master's in food service management
College Location	Near CBDs (Gauteng)

TK (Technology Knowledge)

	Research Question	Research Question Code	Emerging themes	Theme Codes (interpretation of codes)
1.	**How often do you use technology in the classroom? Briefly explain how or when?**	• Frequency of technological use • Technology use	• Rarely use technology in the classroom • Mainly used for lesson preparation	• Technology used for lesson preparation • Difficult to integrate into daily teaching and learning because of the lack of technological

		• Not all students have access to smart gadgets and internet (data) • Lack of infrastructure that supports technology use. • Lecturers used personal laptops before Covid 19, • College recently distributed laptops	resources in the college and among students.
2. Do you sometimes encounter problems using technology and how do you solve them?	• Challenges in using technology	• Challenges downloading videos, navigating new systems like Microsoft teams • Rely on IT technician for assistance with technology • Only computer with assistance of an IT technician • Struggling with newly delivered laptops • Technological competent and rarely face challenges, which she personally navigates	• lectures face challenges in navigating through technological features but not integrating technology into teaching and learning. • Lectures work through navigation problems with the support of IT Technicians hired by the College • Digital natives with a great enthusiasm for technology integration.

		through confidently without any assistance from IT specialist but use YouTube • Positive attitude and enthusiasm towards the use of technology, • Willingness to integrate technology and to learn more about technology Use internet for downloading videos, pictures, and designing student's assignment	
3. How long does it take for you to adapt to new technological innovations and develop confidence in using them?	• Technology adoption	• Easily adapts with the assistance of an IT specialist or other people • Quickly adapt because of the level of technological competence and frequency of use	• Quickly adapts with the support of an IT specialist.

1. **Have you ever been employed in the hospitality industry and what was your job scope? If NOT, according to your knowledge what is the job scope of hospitality employees?**	• Hospitality industry experience	• Worked in hospitality as an intern and after graduating	• Minimum experience associated with a limited knowledge of the technology used in the industry, and the technological proficiency
2. **What are the skills and competencies required by the hospitality industry in general and in South Africa?** 3. **What are some of the specific technology skills and competencies needed by**	• Hospitality skills and competencies • Technologies used in hospitality	• Hardworking • Disciplined in time and behavior • Hygiene and safety skills • Creative • Fast and critical thinking skills • Work independently • Work under pressure • Menu design and alteration • Stock taking	• Behavioral competencies • Hospitality Concepts and skills • Basic computer and Microsoft skills • Industry specific software's and applications

hospitality employees?		• Diet and Nutrition knowledge • Entrepreneurial skills • Technologically savvy	
Content Knowledge			
1. Do you have a hospitality qualification and how long have you been teaching hospitality?	• Hospitality qualification • Experience	• Hospitality and Education qualification • Health and Safety qualification(SAMTRAC)	• Lectures possess both hospitality qualification and experience at various levels.
2. How do you use hospitality content during lectures? **3. In what way do you ensure an understanding of hospitality concepts among students?**	• Hospitality content application to teaching and learning • Content transfer in teaching and learning	• Department of Higher Education emphasizes on teaching methods • Back theory with practical's • Shadow teaching • Enhance theory and practical with videos	• The combination of theory and practical through laboratory practicals and shadow teaching.

Andragogic Knowledge			
1. How would you describe a successfully presented hospitality lesson or concept	• Effecting teaching in Hospitality	• Combination of teacher and learner centered approaches • Interactive, students share their experience • Practical's • Videos • Correcting pre-conceptions • Research based assignments and practical's • Feedback • Traditional methods (visual aids and simulations)	• Project based learning through, practicals • Knowledge construction through problem-based learning research activities • Collaborative learning through, group works and the correction of misconceptions

2. In what ways do you assess hospitality concepts?	• Hospitality assessment techniques	• Assessments (summative and formative) • Practical's • Competency logbooks • Food tasting	• Formative assessments using practical's, competency logbooks, research activities, projects (menu planning, menu cards, portfolios, etc.) • Summative assessment through tests and examinations
3. Briefly describe how you adapt your teaching to accommodate diverse needs and situations?	• Accommodation methods in hospitality teaching and learning	• Stick to traditional methods of accommodation of special needs	• Instructional accommodation methods, which are tailored to address specific needs.
Andragogic Content Knowledge			
1. What effective teaching approaches to guide	• Promoting cognitive engagement	• Interactive lessons • Peer discussions • Research activity assignments	• Problem based research activities • Collaborative activities or projects

student thinking and learning in Hospitality do you use.		• Poor research skills among students	
2. Do you have specific online resources (sites, links...etc..) that you use to enhance your hospitality content delivery?	• Online resources used by hospitality lecturers	• No specific online websites • Google and YouTube are the popular online tools • CAT, HSSTA, MOIRES, Snowflakes, Anchor yeast, YouTube, WhatsApp • Not all students have access to smart gadgets and internet(internet data or Wi-Fi connection) • Poor infrastructure, not all building and places have wife connection in the colleges	• Unstructured internet use • Content related online resources • Lack of infrastructure associated with poor technology integration.
3. What effective approaches do you use to ensure thinking and	• Ensuring cognitive engagement for special needs	• Outsourcing of accommodation materials e.g., a transcriber for deaf students.	• Stick to traditional methods of accommodation and rely on the department of higher education to provide special accommodation

	accommodation of special needs			materials.
	Technological Content Knowledge			
1.	**What are some of the technologies used in hospitality?**	• Technological tools for hospitality teaching and learning	• Computer/laptops and other smart gadgets • Internet • Uber app • Drive through technology • Booking's system • Conveyer belts • Smart equipment, e.g., digital stoves, food processors, microwave ovens • Video cameras	• Smart/digital gadgets • Internet connection • Hospitality software's and applications

2. How often do you use internet to promote hospitality skills acquisition? How?	• Frequency of internet use	• Rare use of technology in lectures • Mainly used for lesson preparations • Downloading videos and pictures to enhance creativity and demonstration of skills. • Google and YouTube are mainly used to enhance lessons • Google is utilized for student research assignments and lectures to enhance content • Plagiarism among students	• Internet used as a tool for lecturers to search for hospitality content activities for students. • Internet used by lecturers to search for teaching and learning media (images and videos) • As a resource for students' assignments and projects
3. What are some of technologies used in hospitality to promote critical thinking and creativity?	• Educational technologies that promote thinking and creativity in teaching and learning	• Google and YouTube • No specific sites but used google and YouTube • Pictures and videos to enhance creativity	• Learning media to enhance creativity • Google and YouTube as a resource for students' assignments that promote critical thinking

Technological Andragogic Knowledge			
1. **How confident are you choosing technology that will enhance teaching methods? And what are those technological tools?** 2. **Do you have specific sites that you visit to enhance instruction of Hospitality? Why?**	• Confidence in choosing technology • Online tools/websites that supports instruction in hospitality	• Lectures confidence relied mainly on the support of an IT technician, • One of the lectures was computer competent and confident • Internet especially google and YouTube were the popular technological tools used	• Confident in using smart technology and internet but not integrating technology into teaching and learning
3. **How often do you use internet for your Hospitality lessons?**	• Frequency of internet use for hospitality lectures	• Rarely used in class • Used for all most all lesson preparation, for downloading videos and pictures, as well as sharing activities through WhatsApp.	• Frequently used for communication and searching for information but not integration to teaching and learning • Training needed for lecturers to integrate technology into teaching

		• Suggested proper training for technology use that is customized for hospitality. • Internet resources are selected by matching the content in the curriculum	and learning
TAWOCK (Technology Andragogy and Content Knowledge)			
1. Describe your level of confidence in the appropriate combination of hospitality content. Have you received any specific training on technology integration to teaching and learning?	• Lecturers' proficiency level in technology integration to teaching and learning	• Confident in using technology, but not integrating to teaching and learning (downloading videos and pictures)	• Confident in using technology, but not integrating to teaching and learning (downloading videos and pictures)
2. Have you received	• Technology	• Some received training but	• Lecturers possess computer skills

	any specific training on technology integration to teaching and learning?	integration training	could not implement the skills in their teaching environment • Most received computer skills training in tertiary which they still use but have forgotten most of the knowledge due to lack of technological resources and use.	from tertiary and high school training and only a few received technology integration into teaching and learning.
3.	**What is your perception in the use of internet to enhance teaching and learning Hospitality class and why?**	• Lecturer's attitudes and perception towards the transition to technology integration in teaching and learning.	• Positive attitude • Willingness to learn and implement technology skills in their teaching and learning.Technology is important in hospitality, because the hospitality industry is technologically driven, and technology evolves regularly in the industry	• Positive attitude towards technology integration in hospitality.

CHAPTER 5
DATA PRESENTATION AND ANALYSIS

INTRODUCTION

This chapter presents and analyses data collected from hospitality lecturers. The goal of the study was to explore the integration of internet technology to enhance competency-based training in Hospitality in South Africa. A qualitative methodology was employed to explore the study's three research questions as stated in Chapter One. The chapter presents the qualitative findings of the study using Atlas Ti version 9.1 for the analysis of data from the online interviews. Data analysis is the process of classifying, describing, and interpreting facts and information gathered in a study (Creswell J. , 2007). The study used qualitative data methods of collecting data, therefore an interpretive and conversation analysis of data was used (Creswell J. , 2007). The analysis of data was inferred from the literature review and the TAWOCK framework of technology integration into the classroom. The researcher identified themes from the interview responses, transcribed the recorded interviews and coded the data according to the theoretical concepts referred to in the literature review and the TAWOCK framework of technology integration Mishra and Koehler (2006).

The use of this qualitative software facilitated the virtual findings of the study as qualitative data was networked and projected for a better understanding of participants' understanding and views on the integration of the internet in the Hospitality subjects. The data was presented using a structured and systematic scientific technique of interpretation. The results were discussed in light of the study questions. The chapter covered the procedure of data analysis, the demographic profile of study participants, and the findings of the research questions, as well as a summary.

PROCESS FOR DATA ANALYSIS

Individual online interviews and an interview guide were used to obtain data for this qualitative study. The data from the interviews were evaluated using information from a total of eight participants. These individuals are lecturers chosen from three Technical and

Vocational Education and Training Colleges in Gauteng Province. The procedures for analyzing the data acquired for this investigation are described below.

Table 5.1. Analytical process for data analysis

Step	Method	Explanation
1	Organizing data	The interviews were transcribed, processed, and organized in preparation for data analysis.
2	Review of transcripts	The researcher went over the data. This is done to verify that the researcher is familiar with the data obtained and that the data collected reflects the study's direction.
3	Stage one coding	Emerging themes were first labelled, then categorized.
4	Stage two final coding	Relevant data was sorted using the coding method in such a way that related headings with similar content were grouped. These were the categories that were made up of themes and sub-themes.
5	Representation of data	A thematic analysis was then utilized to present the findings. The findings in the topics were depicted in figures and network links using Atlas Ti version 9.1, followed by thematic presentations of participant's verbatim remarks. In addition, the findings were presented in accordance with the research questions.

In this study, the interview transcripts were analysed (coded) using Atlas-Ti version 9.1. Atlas-Ti is a software that specializes in evaluating qualitative data. The transcript was auto-coded to depict participants' understanding and expressions on the integration of internet to enhance competency-based training in the Hospitality industry in South Africa.

Open, axial, and in-vivo coding were used during the coding procedure. To achieve open coding, the researcher had to read the transcripts thoroughly to extract possible labels or tags to explain the meaning arising from the data (Gallicano, 2013:1). This means that the researcher assigned meaning to a piece of text (that is a keyword or combination of words termed a code).

Axial coding was also used, with the researcher grouping related codes into groups. Axial coding is the technique of linking open codes together during data processing (Gallicano, 2013:1). In-vivo coding was very useful since it allowed the coding of participants' words exactly, which meant that their exact words were not modified. The techniques used to create these codes in Atlas-Ti software were "open coding," "code in vivo," "list coding," and "rapid coding." To decrease the number of codes, the derived codes were merged (axial). Open coding helps to organize raw data transcripts into categories, which can then be transformed into descriptive, multi-dimensional preliminary frameworks for analysis (Gallicano, 2013:2). These codes were then divided into code families, which are also referred to as subthemes. Table 5.3 shows the subthemes, which are examined in depth for data analysis, interpretation, and discussion in the study.

PARTICIPANT'S DEMOGRAPHIC PROFILES

Eight participants comprising of lecturers were selected from the Hospitality department of three Technical and Vocational Education and Training Colleges in Gauteng province for participation in this study. The selected Colleges were purposively chosen because they offer Hospitality courses and had possible access to internet. Table 5.2 shows the demographic profile of the participants.

Table 5.2 showing demographic profile of participants

Lecturer	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Age	45-50 (level 3)	30-35 (level 2)	35-39 (level 3)	45-50 (level 5)	40-44(level 4)	40-44 (level 4)	40-45 (level 4)	30-35(level 3)

Gender	Female	Female	Female	Female	Female	Female	Female	Female
Highest Qualification	Postgraduate Diploma in Hospitality	Postgraduate Diploma in Higher Education	Masters in Food Service Management	Postgraduate Diploma in Hospitality	Post Graduate Diploma in Higher Education/Diploma in Hospitality	Masters in Food Service in Managements/ Diploma in Hospitality Management and a Postgraduate/ Diploma in Higher Education	Honors in FET Specialization/Education in Consumer Studies	Postgraduate in Higher Education/ Diploma in Hospitality
College Location	Near CBD	Near CBD	Near CBD	Pretoria CBD	Pretoria CBD	Pretoria CBD	CBD	CBD
Experience	Hospitality Industry: 6 Months TVET:	Hospitality Industry: 9 years TVET:	Hospitality Industry: 4 years TVET:	Hospitality Industry: 5 years TVET:	Hospitality Industry: 18 Months TVET:	Hospitality Industry: 6 years TVET:	Hospitality Industry: 3 months Internsh	Hospitality Industry: 6 Months TVET: 11 years

	18 years	6 years	4 years	4 years	14 years	1 year	ip TVET: 17 years	

FINDINGS RELATED TO RESEARCH QUESTIONS

As indicated in the study in chapter one, three research questions were stated to achieve the study aim, Table 5.3 below presents the themes and subthemes derived from the qualitative findings for data analysis, interpretation, and discussion in the study.

Table 5.3 showing study themes and sub-themes

RQ 1 **How does TVET lecturers use internet for content representation?**		
THEMES		
1.1 Technology knowledge		
SUB-THEMES	**Inclusive criteria**	**Exclusive criteria**
1.1.1 Classroom use of Technology	Opinions from lecturers on the frequency of technological use	Opinions from lecturers on the frequency of technological use

	Technology within the classroom	Technology within the classroom outside the classroom
1.1.2 Technology challenges	Lecturers' views on technology problems encountered while using technology for teaching and learning within the school	Lecturers' views on technology problems encountered while using technology for teaching and learning outside the school
1.1.3 Adapting to technology innovation	Lecturers' descriptions on implementing/adapting to technology within the training college	Lecturers' descriptions on implementing/adapting to technology outside the training college
1.1.4 Hospitality skills and competency	Opinions on skills and competencies required by the hospitality industry in South Africa	Opinions on skills and competencies required by the hospitality industry outside South Africa
1.1.5 Specific technology skills	Identification of specific technology skills and competencies used by employees within the hospitality industry	Identification of specific technology skills and competencies used by employees outside the hospitality industry
1.2. Content Knowledge		
SUB-THEMES		
1.2.1 Hospitality qualification		

	Educational qualification needed for employees within the hospitality industry	Educational qualification needed for employees outside the hospitality industry
1.2.2 Hospitality content	Lecturers understanding of hospitality content application and content transfer to students within the school	Lecturers understanding of hospitality content application and content transfer to students within outside of the school
1.2.3 Hospitality concepts	Lecturers opinions on ways to ensure understanding of hospitality concepts among students within the hospitality industry	Lecturers opinions on ways to ensure understanding of hospitality concepts among students outside the hospitality industry
RQ 2 **How does TVET lecturers use the internet for instructional support?**		
THEME		
2**.1 Andragogy Knowledge**		
SUB-THEME		

2.1.1 Effective Teaching	Views on effective teaching in the Hospitality class	Views on effective teaching outside the Hospitality class
2.1.1.1 Project-based learning	Views on project-based learning within the hospitality industry to ensure effective teaching	Views on project-based learning outside the hospitality industry to ensure effective teaching
2.1.1.1.2 Knowledge construction	Opinions on knowledge construction within the hospitality industry	Opinions on knowledge construction outside the hospitality industry
2.1.1.1.3 Collaborative learning	Views on ways to ensure collaborative learning for students within the hospitality industry	Views on ways to ensure collaborative learning for students outside the hospitality industry
2.1.2 Hospitality Assessment Techniques		
SUB-THEME		
2.1.2.1 Formative assessment	Lecturers understanding of ways to assess Hospitality concepts through formative assessment within the industry	Lecturers understanding of ways to assess Hospitality concepts through formative assessment outside the industry
2.1.2.2 Summative assessment	Lecturers understanding of ways to assess Hospitality concepts through	Lecturers understanding of ways to assess Hospitality

	summative assessment within the industry	concepts through summative assessment outside the industry
2.1.3. Technology based Accommodation methods in Hospitality		
SUB THEME		
2.1.3.1 Instructional accommodation method	Description of how lecturers adapt teaching to accommodate different needs and situations in the classroom.	Description of how lecturers adapt teaching to accommodate different needs and situations outside the classroom
RQ 3 **In what ways does TVET lecturers use the internet to implement skills/work-based learning?**		
3.1Andragogy Content Knowledge		
3.1.1 Effective teaching approaches for student thinking		
SUB-THEME		

3.1.1.1 Problem based research	Lecturers' description of effective teaching approaches using problem-based research activities for students within the hospitality classrooms	Lecturers' description of effective teaching approaches using problem-based research activities for students outside hospitality classroom
3.1.1.2 Collaborative projects	Lecturers' description of effective teaching approaches using collaborative projects for students within in the Hospitality classroom.	Lecturers description of effective teaching approaches using collaborative projects for students outside the Hospitality classroom
3.1.**2 Online resources for hospitality content delivery**		
SUB-THEME		
3.1.2.1 Unstructured internet use	Identification of unstructured internet use as specific online resources utilized by lecturers ensure content delivery in Hospitality classroom	Identification of unstructured internet use as specific online resources utilized by lecturers ensure content delivery outside of the Hospitality classroom
3.1.2.2 Content online resources	Identification of content online resources as specific online resources used	Identification of unstructured internet as specific online resources used by lecturers outside the hospitality industry

	by lecturers within the hospitality industry	
3.1.3 Effective approaches for special needs		
SUB-THEME		
3.1.3.1 Traditional methods	Lecturer opinions on traditional methods as an effective approach for special needs within the school	Lecturer opinions on traditional methods as an effective approach for special needs outside the school
3.1.3.2 Department of higher education	Opinions on relying on the department of higher education within the school to provide special accommodation materials.	Opinions on relying on the department of higher education outside the school
3.2 Technological Content Knowledge		
SUB-THEME		
3.2.1. Smart devices	Opinions on technological tools for teaching and learning within in the Hospitality classroom	Opinions on technological tools for teaching and learning outside the Hospitality classroom
3.2.2 Hospitality software	Views on hospitality software for teaching	Views on hospitality software for teaching and

	and learning in the Hospitality classroom	learning outside the Hospitality classroom
3.2.3 Use of technology and internet for Hospitality skills	Frequency of internet usage for the promotion of hospitality skill acquisition in the Hospitality classroom	Frequency of internet usage for the promotion of hospitality skill acquisition outside the hospitality classroom
3.2.4 Educational technology	Lecturers understanding of Educational technologies that promote thinking and creativity in teaching and learning for students in the Hospitality classroom	Lecturers understanding of Educational technologies that promote thinking and creativity in teaching and learning for students outside the Hospitality classroom.
3.3 Technological Andragogy Knowledge		
SUB-THEME		
3.3.1 Lecturer's confidence in using technology	Opinions on factors that promote confidence of lecturers in using technology in the Hospitality classroom	Opinions on factors that promote confidence of lecturers in using technology outside the Hospitality classroom.
3.3.2 Hospitality internet site	Lecturers' views of google and YouTube as the popular technological tools used to enhance	Lecturers' views of google and YouTube as the popular technological tools used to enhance instruction outside the hospitality classroom.

	instruction in the hospitality classroom	
3.3.4 Use of internet for Hospitality lessons	Opinion on the use of internet for Hospitality lectures	Opinions on the use of internet outside of the Hospitality Lecturers
3.4 Technology Andragogy and Content Knowledge		
SUB-THEME		
3.4.1 Possession of technology skills	Description of lecturers level of confidence in the appropriate combination of hospitality content in teaching in the Hospitality classroom	Description of lecturer's level of confidence in the appropriate combination of hospitality content in teaching outside of the Hospitality classroom
3.4.2 Technology Training	Opinions on specific training on technology integration to teaching and learning in the hospitality classroom	Opinions on specific training on technology integration to teaching and learning outside of the hospitality classroom
3.4.3 Positive technology integration attitude	Suggestions on lecturer's attitudes and perception towards the transition to technology integration in teaching and learning in the Hospitality classroom	Suggestions on lecturer's attitudes and perception towards the transition to technology integration in teaching and learning outside of the Hospitality classroom

Findings related to Research Question One

Research question One that examined how TVET lecturers use the internet for content representation yielded two themes, including, technology knowledge and content knowledge. Technology knowledge further yielded 5 sub-themes, namely: classroom use of technology; technology challenges; adapting to technology innovation, hospitality skills and competencies, and specific technology skills. Three sub-themes emerged from content knowledge, they include - hospitality qualification, hospitality content, and hospitality concepts. Figure 5.1. represents RQ1 and its themes. Based on the findings from question one interviews, hospitality qualifications helped lecturers with content knowledge and technology knowledge in their teaching and learning. Technology knowledge was useful in adapting to new technology innovations, using technology in the classroom for lesson preparation and research for both students and lecturers. Whenever lecturers encountered challenges using technology, they depended on Information Technology technicians in their Colleges.

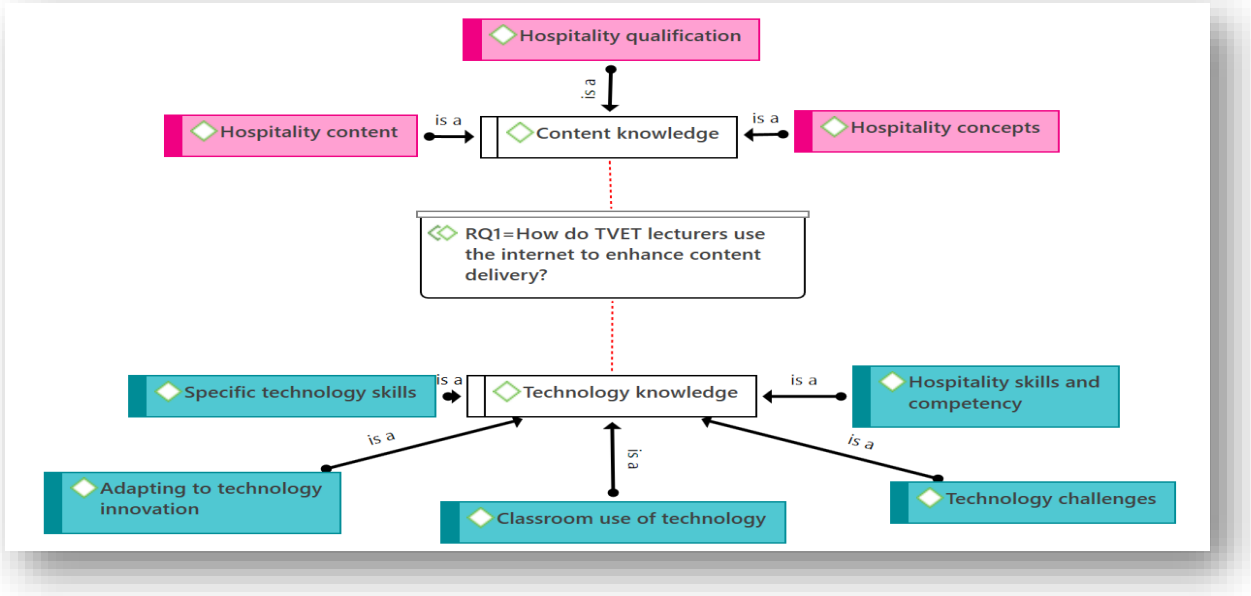


Figure 5.1. Hospitality Qualification

What follows next are the findings as generated from Atlas Ti version 9.1 and supported with verbatim words of the study participants for each of the sub-themes.

Findings related to classroom use of Technology

Lecturers used classroom technology for classroom projects and assignments that required internet research, downloading video presentations to enhance lesson delivery and substituted field trips or practical's for lesson preparations**.**

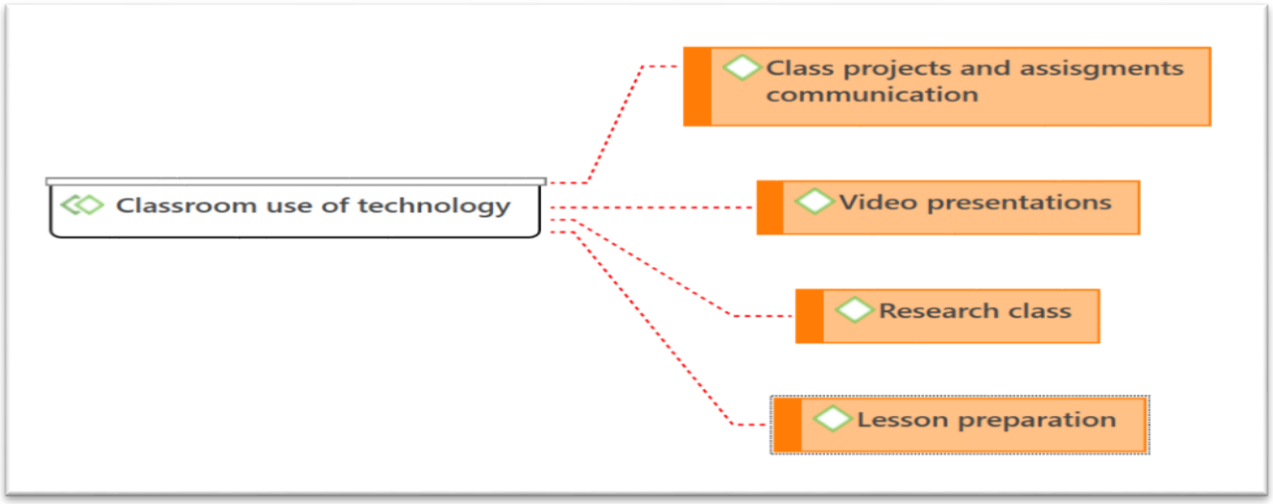


Figure 5.2. Classroom Use Of Technology

Responses from participants

> *...I rarely use technology in the classroom and mainly rely on traditional methods of teaching*
>
> *...outside the classroom -preparation for I use my personal laptop for developing my teaching materials and lesson plan*
>
> *...I normally send communication through WhatsApp*
>
> **…** *use technology more often in most cases, we do our research*
>
> *... I use technology most of the time to prepare my lessons, but in class I do not normally use except when I have to play a video for the students*

Findings related to Technology challenges

Only one out of the six participants said she had no problem with integrating technology into teaching and learning. She explained that she never encounters problems during classroom teaching and learning because she prepares ahead of time, and she often downloads videos during her lesson planning. She explained further that whenever she encounters Technology problems, she often consults with Information Technology technicians in their college. However, the rest of the study participants reportedly were faced with enormous Technology challenges as presented in Figure 5.3. While lecturers agreed to the integration of technology in their teaching and learning of Hospitality courses, there were a number of challenges they experience in the process.

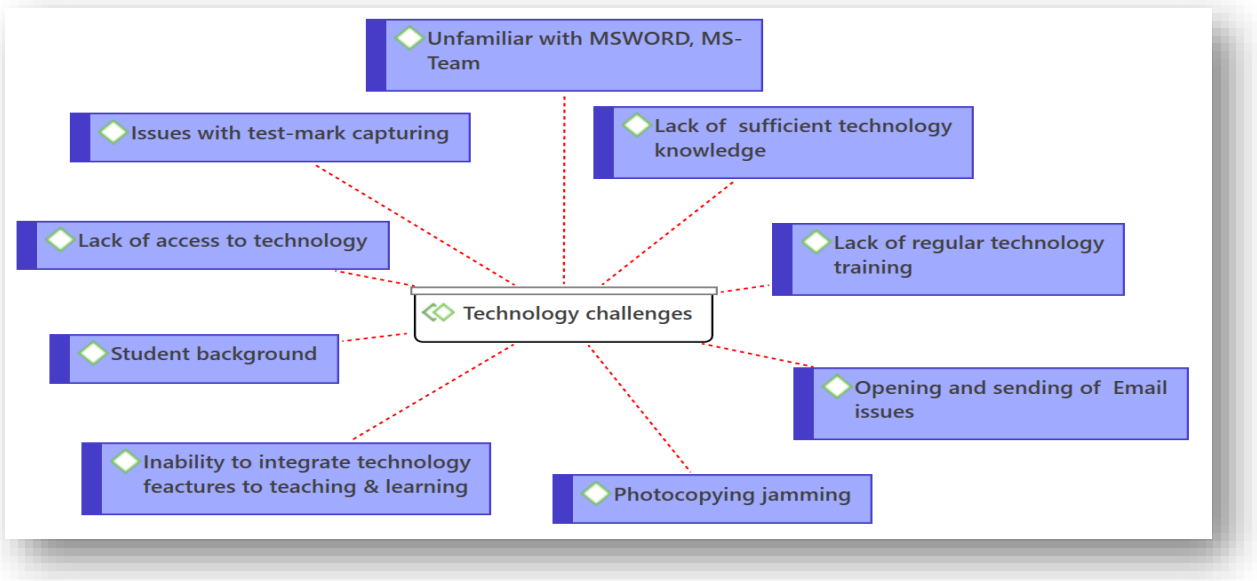


Figure 5.3 Technology Challenges

Below are participants' verbatim words regarding Technology Integration challenges. Lecturers are struggling to navigate through technological features, and they are unable to constructively integrate technology into teaching and learning in the Hospitality class. Despite occasional partnership training from some university collaborations, some of these lecturers continue to struggle. For example, participant 4 affirmed that although she had received some training, yet she was unable to link such into her teaching in class. *Below are her exact words:*

> *...Even though the College took us to some training in partnership with the University of the Witwatersrand when I tried to apply it to teaching and learning, I just could not link the training to what I do in the classroom. It was a bit far-fetched*

In the same manner, participant six claimed to be exposed to innovative new teachers' technology support in her college yet she continues to struggle with IT integration in a class.

Below are her words

> *... Otherwise with the new teachers who are fresh from university they do share with us certain information like recently I learnt that I could actually record a video of myself teaching and circulate it to students but then again, I still do not know how to make that video*

The above finding imply that lecturers in the hospitality industry need to be knowledgeable with the usage of internet to be able to integrate it into teaching and learning

Responses from other participants

> **…** *I struggle to open emails, sending the emails, to download photos*
>
> *I face with technology except, things like having the photocopier jamming*
>
> *…We encounter problems using technology. Firstly, and foremost, with the student's background, …the background is not allowing them to have that luxury of access to both technological gadgets and internet*
>
> *…I do face challenges using technology, e.g. today you suggested using Microsoft Teams and I didn't know about it*
>
> **…***I personally choose not use technology most of the time, because of the challenges I face while using technology, …So I am not technology advanced*

Findings related to adapting to technology innovation

The figure below shows the different ways that assist Hospitality lecturers to adapt to technology innovations.

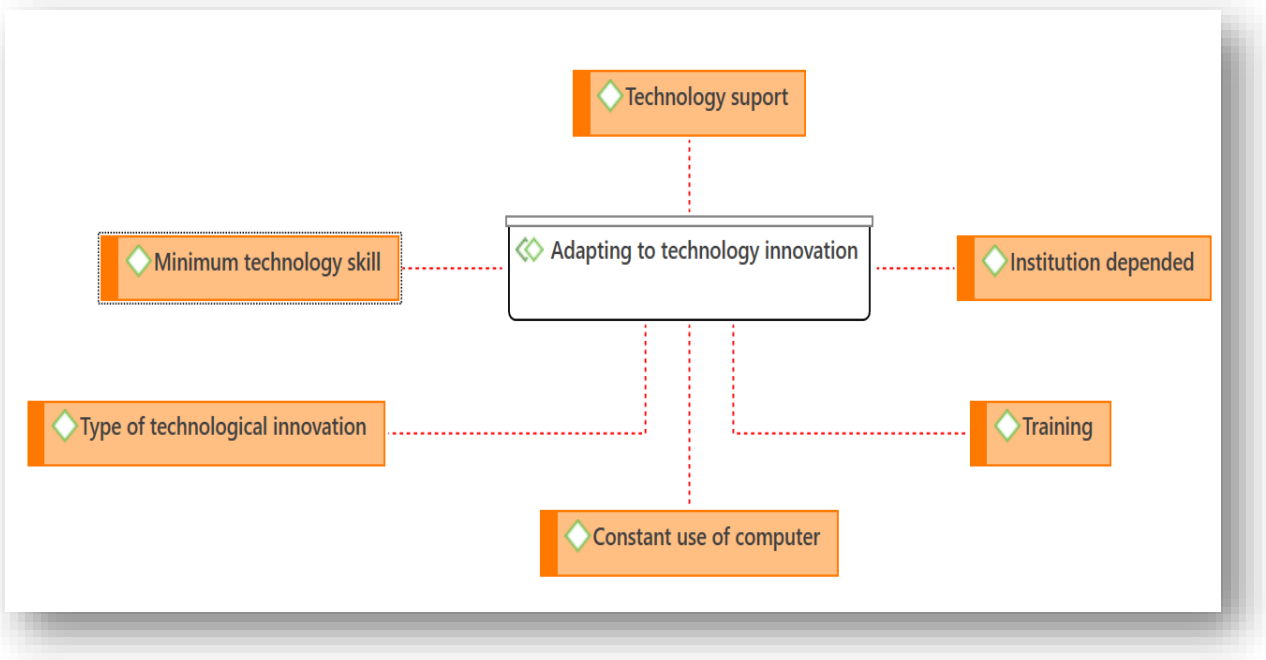


Figure 5.4. Adapting to Technology Innovation

Participants' responses:

> **…** *Adoption of new technological inventions is not a problem because I like to learn new things especially using a computer in the classroom, the problem is mastering the new skills, which I*

think the period of mastering depends on the type of technological innovation and support I get from the College technician

…I normally expose myself and take my time to learn about it. Even though the college itself has taken steps to train us on the use

Findings related to Hospitality skills and competencies

The diagram below represents the perceptions of lecturers for different skills and conpetencies that are required from hospitality graduates that will be entering the workforce.

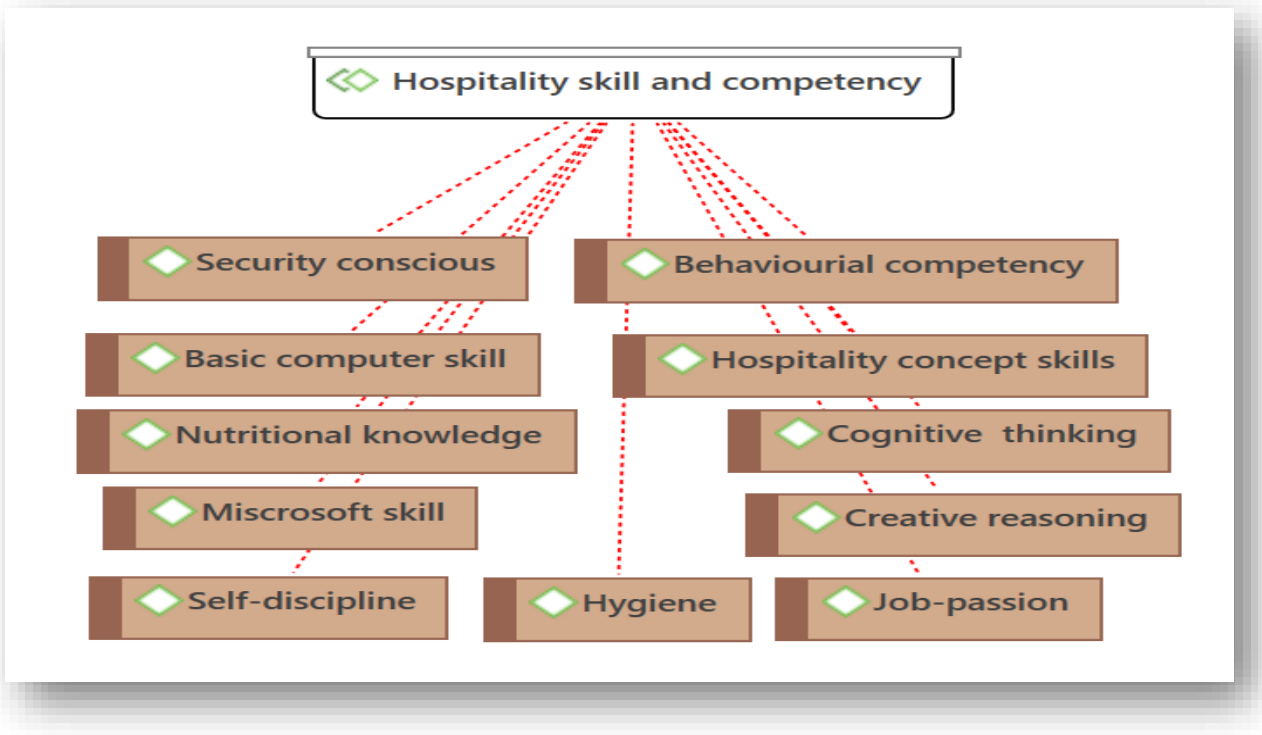


Figure 5.5. Hospitality Industry Skills and Competencies

Participant responses:

> **…** *The skills that I needed by the Hospitality industry, needs trained employees who can work with current and emerging trends in the industry. There are those basic Hospitality skills like hygiene knowledge, cooking, cleaning, hospitality and computer skills*

…receive the guests do those things you have to be formal like the people you normally see in hotel. The kitchen is clean, the rooms are clean is hygiene and safety and then you go to nutrition you must know that different types of guests require different type of meals, some are vegetarians, some they don't eat red meat some they don't eat white meat

… hardworking, creative, think on your feet and generally hardworking skills together with critical thinking skills

Findings related to Hospitality specific technology skills

Due to advancements in technology, some of the participants were of the view that hospitality today must step up in their technology use and should integrate it in their services to people. For example, one of the participants was worried that students were no more taught important and specific IT skills, rather they are exposed to only basic Microsoft skills.

Below is extract of the participant word:

….Unfortunately, we do not get to teach our students most of these systems except the Opera system, but when I was in tertiary because I went to a University we were exposed but we do not teach them, they only get to do a Computer skills course which focuses on the basic Microsoft skills at N6 level in the College

Participants expressed that there is some specific technology in the Hospitality industry that is needed for enhancing faster services to clients. One of the participants stressed that hospitality employers should not do without the use of the micro-system for taking orders. According to this participant, this high technology device takes food orders to the kitchen area and beverages to the beverage section. This machine also takes one order from customers and split's it into the different departments in the hotel. A system such as OPERA was pointed to be useful for a receptionist in the industry. Because the system helps with booking the number of guests, available rooms, and the help desk for booking guest tickets, shuttle transport arrangements, and the entire arrival process.

It also emerged from the data that graduates need to possess technological skills like the Geleleo, Fideleo and Pastel systems. These were identified as software that is mainly used in the Hospitality industry. These systems were important for making guest bookings, reservations of either tables or rooms, monitor hotel stock and equipment, as well as keeping bookings updated.

Below are participants' words:

> *…Graduates should also possess technological skills like the Geleleo, Fideleo and Pastel systems, which are the software's that are mainly used in the Hospitality industry*

> *..You are going to use the micro-system for taking orders, it takes food orders to kitchen area and beverages to the beverage section. This machine takes one order from customers and split it to the different departments in the hotel. Therefore, as an employee you must be comfortable with working with this system. When you are working in the reception*
>
> *you must know systems like the OPERA system for booking, number of guest and just to check how many rooms are available, where, you may even help guest with booking their tickets over the phone, arrangement of shuttle transport and the whole arrival process. They usually do their Opera system on their 3rd year. The Pastel accounting system is also important for Hospitality employees*

The below figure 5.6 shows the list of some of the specific technologies that are used in the Hospitality Industry.

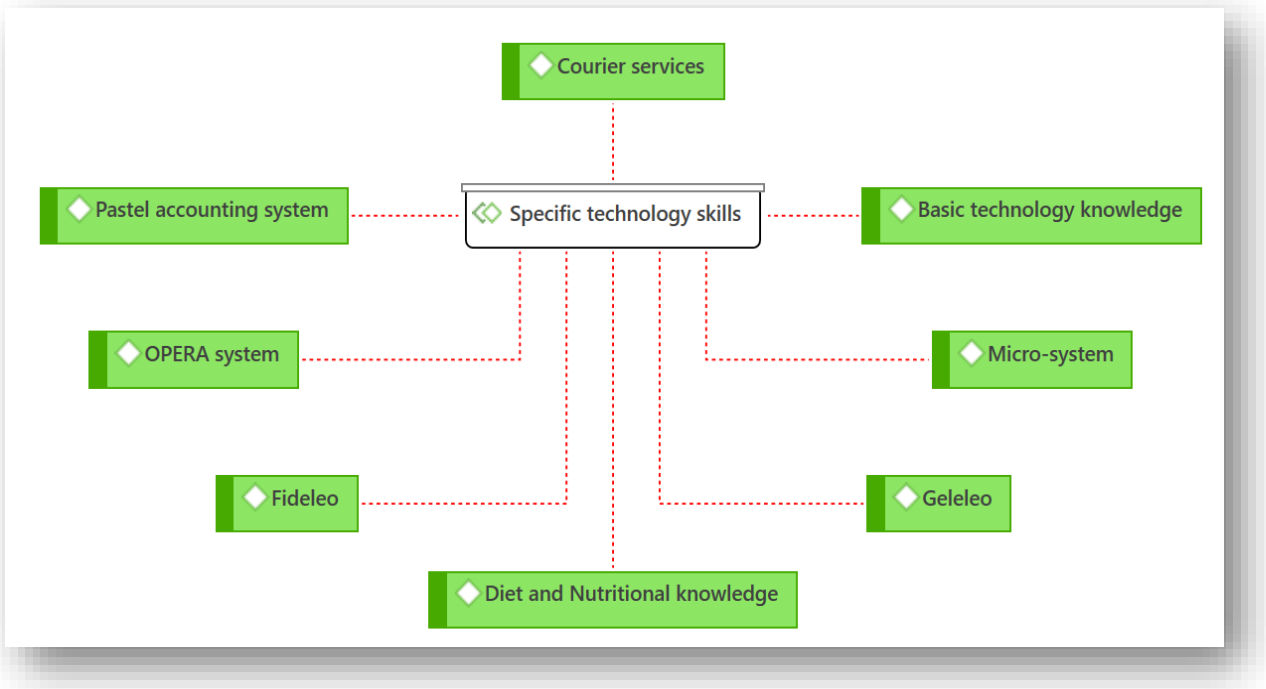


Figure 5.6. Hospitality Specific Technology skills

Participants Responses:

> *You are going to use the micro-system for taking orders, it takes food orders to kitchen area and beverages to the beverage section. This machine takes one order from customers and splits it to the different departments in the hotel. Therefore, as an employee you must be comfortable with working with this system. When you are working in the reception, you must know systems like the OPERA system for bookings, number of guests and just to check how many rooms are available, where, you may even help guests with booking their tickets over the phone,*

arrangements of shuttle transport and the whole arrival process. They usually do their Opera system on their 3rd year. The Pastel accounting system is also important for Hospitality employees

Graduates should also possess technological skills like the Geleleo, Fideleo and Pastel systems, which are the software's that are mainly used in the Hospitality industry. These systems are used by employees, for making guest bookings, reservations of either table or rooms as well as monitor hotel stock and to keep updated with bookings and hotel equipment

Findings related to hospitality qualification

Figure 5.7 presents qualification possess by the participants (Hospitality Lecturers) from the three selected TVET Colleges.

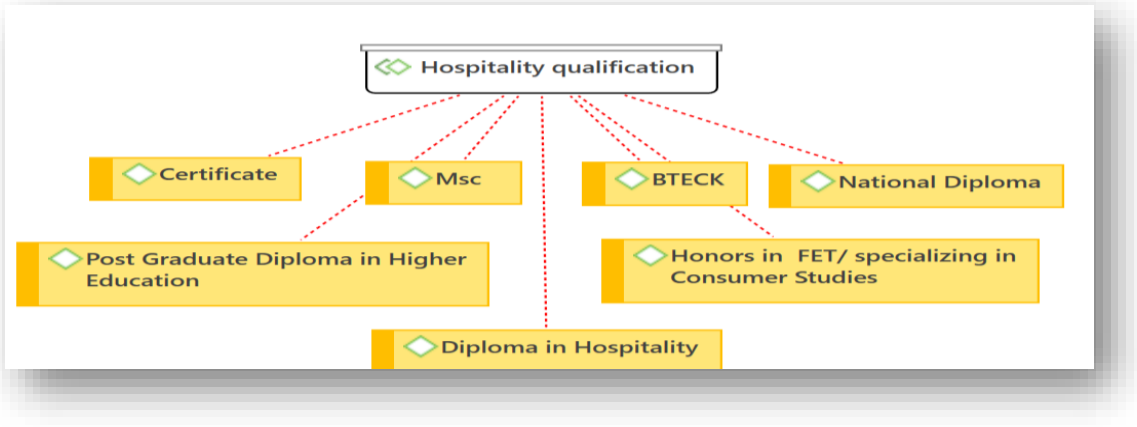


Figure 5.7. Hospitality qualification's influence on technology integration

Participants Responses:

> *"I have Masters in Food Service in Managements, Diploma in Hospitality Management and a Postgraduate Diploma in Higher Education."*

> *"I have Btech in Food and Beverage and a Postgraduate Diploma in Higher Education."*

> *"I have Honors in FET Specialization/Education in Consumer Studies."*

Findings related to Hospitality Content

All lecturers agreed to be relying on prescribed textbooks for theory and incorporating practical's to develop practical skills in Hospitality. Most of the lecturers used videos and downloaded pictures to enhance content, as well as lab practicals to develop practical skills. Two of the eight lecturers displayed a strong belief in shadow teaching more than the others who occasionally took their students for field trips and experiential learning. The below figure 5.8 presents the various ways used by Hospitality lectures to deliver content to students.

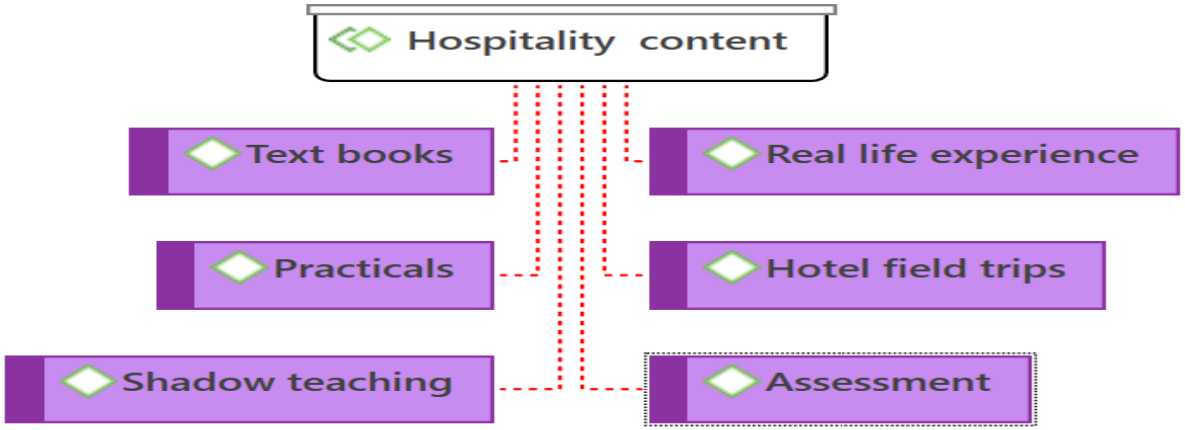


Figure 5.8. Hospitality content

Participants Responses:

"I think immersing student to the real world of Hospitality help students to master and develop skills and I think shadow working is the most effective way of helping students understand content."

"With experience in the industry and teaching, I have learnt to keep a close look on the industry and because our syllabus is pre-determined by the department of Higher Education, I then see how I can align curriculum with industry needs."

"Use textbooks and then immerse the students in the real life experience through practical's and hotel field trips. "

Findings related to Hospitality Concepts

The diagram below, figure 5.9 summarize the lecturer's views on Hospitality concepts as extracted from the interviews.

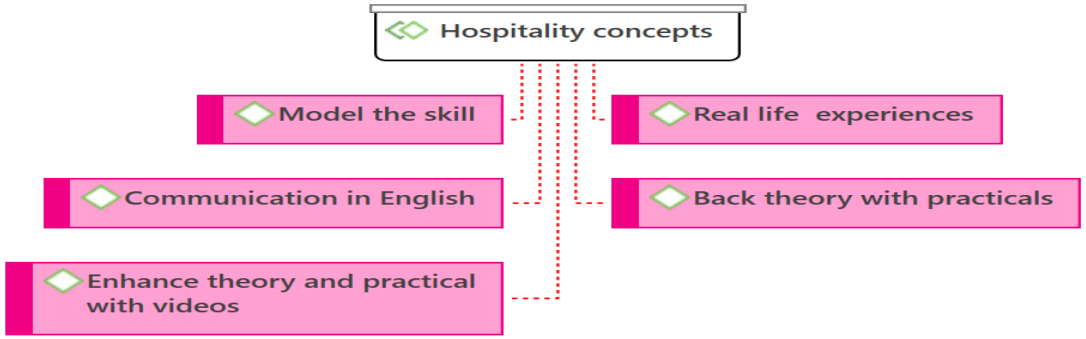


Figure 5.9. Hospitality Concepts

Participants Responses:

> *"As a lecturer you must model the skills that you are teaching, demonstrate through practical or YouTube videos and give students a chance to do practical's"*

> *"...employees must be confident in the ability of employees to communicate and express themselves in English."*

> *".... integrating both theory and practice including reflections"*

Findings related to Research Question Two

Research question Two addressed how TVET lecturers use the internet for instructional support. One theme emerged from this inquiry, namely Andragogy Knowledge and the theme has three subthemes - effective teaching, assessment of Hospitality techniques, and Accommodation method in Hospitality. See Figure 5.11. The diagram below, Figure 5.10 is an illustration of the Andragogy Knowledge themes, sub-themes and theme descriptions.

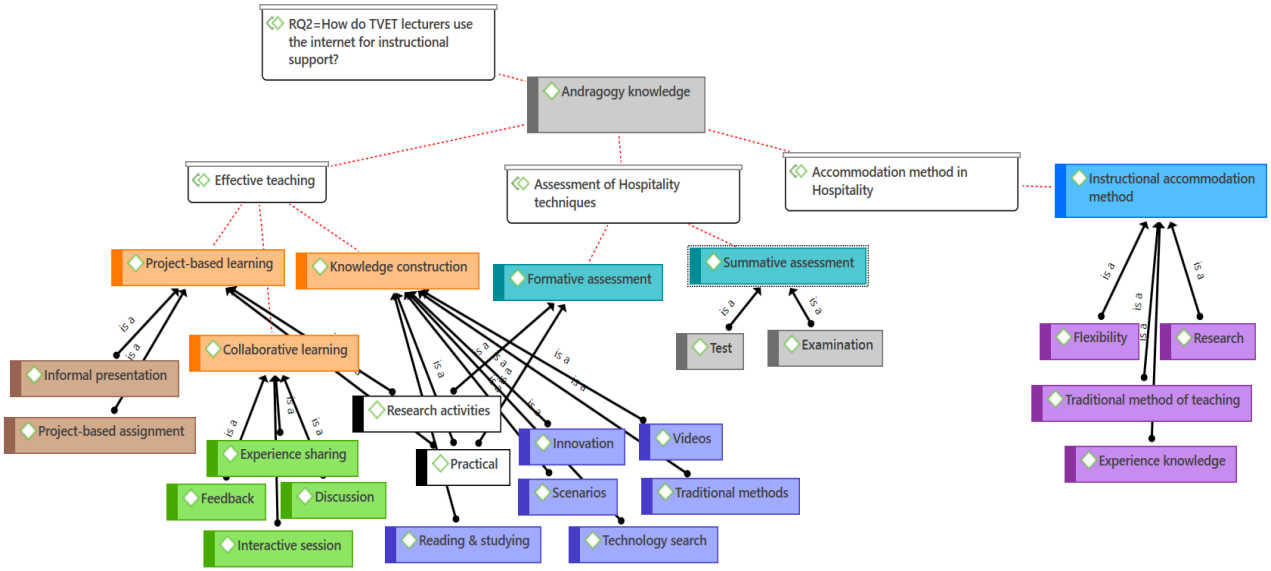


Figure 5.10. Internet Use for Instructional Support

Findings related to Research Question Two and its theme and subthemes

The diagram below, figure 5.11 shows the andragogy themes and sub-themes as according to the data from interviews.

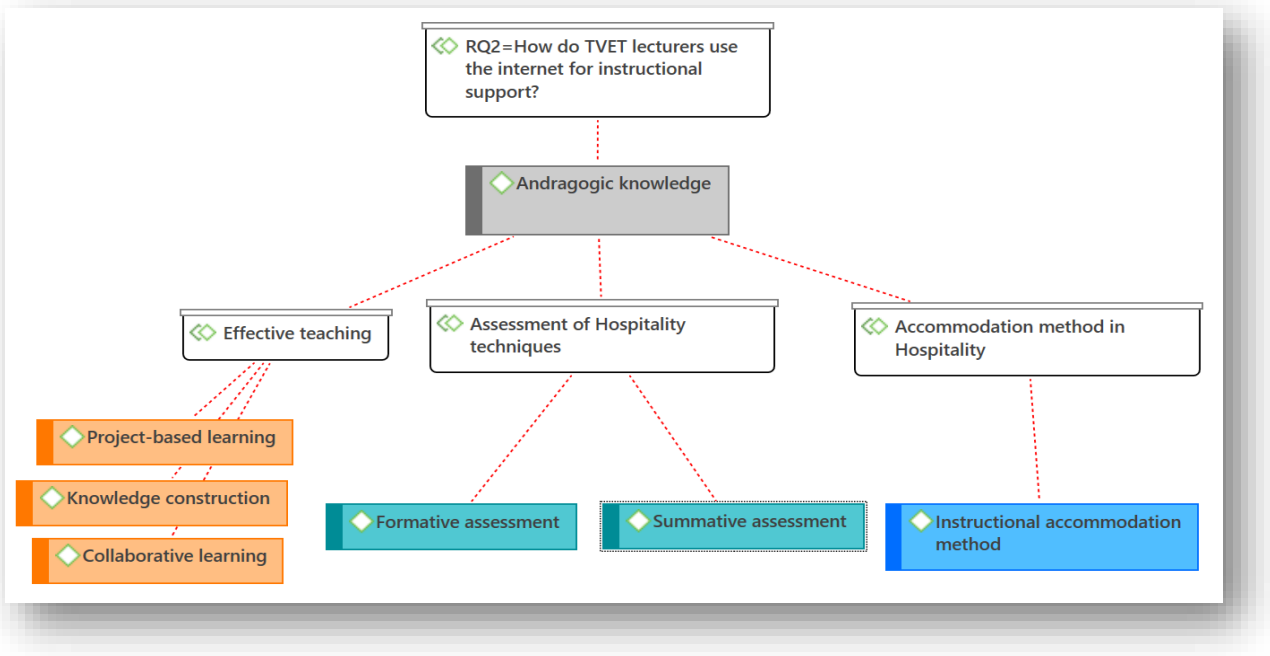


Figure 5.11. Lecturer's use of internet for Instructional Support

Findings related to effective teaching

Effective teaching yielded three sub-themes, including project-based learning, knowledge construction and collaborative learning. The diagram below in 5.12 summarizes the three effective teaching factors as described by Hospitality lectures which are: project-based learning, knowledge construction and collaborative learning.

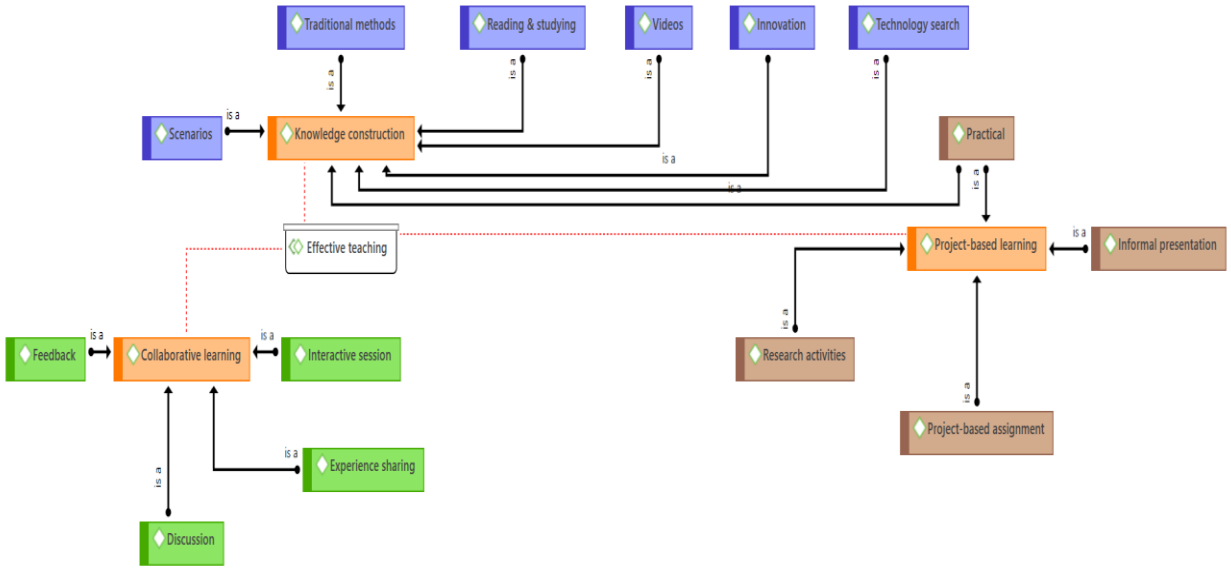


Figure 5.12. Effective Teaching and Learning Methods

Findings related to Hospitality Assessment techniques

Formative assessment and summative assessment are the two sub-themes under this category. Assessments in the Hospitality department in TVET Colleges is a continuous process. However summative assessment come in the form of written examinations. This diagram displays the emerging themes under formative and summative assessments in TVET Colleges.

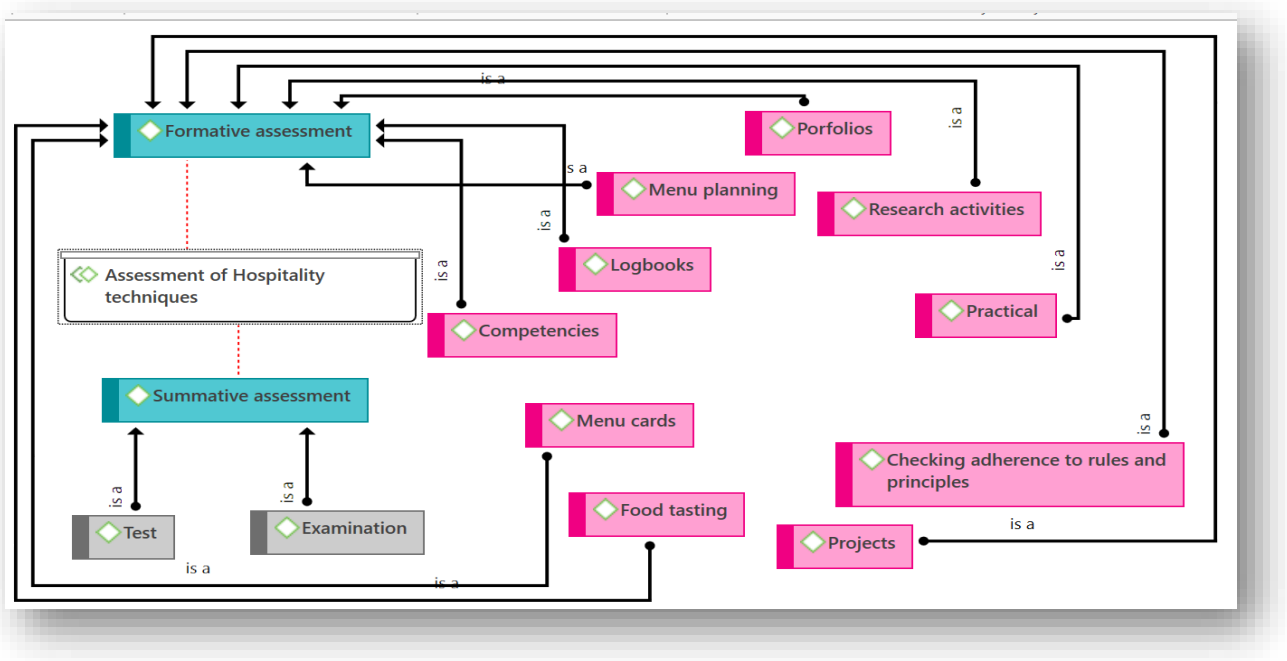


Figure 5.13. Hospitality Assessment Techniques

Findings related to Accommodation methods in Hospitality

Instructional accommodation method is the sub-theme in this category. Figure 5.14 presents the different instructional methods that emerged in the studywhich Hospitality lecturers employ in their classrooms to accommodate different learning needs. Accommodation methods are not designed to reduce learning outcomes but to modify the teaching methods to achieve learning objectives for all students and in all learning situations (Beech, 2010).

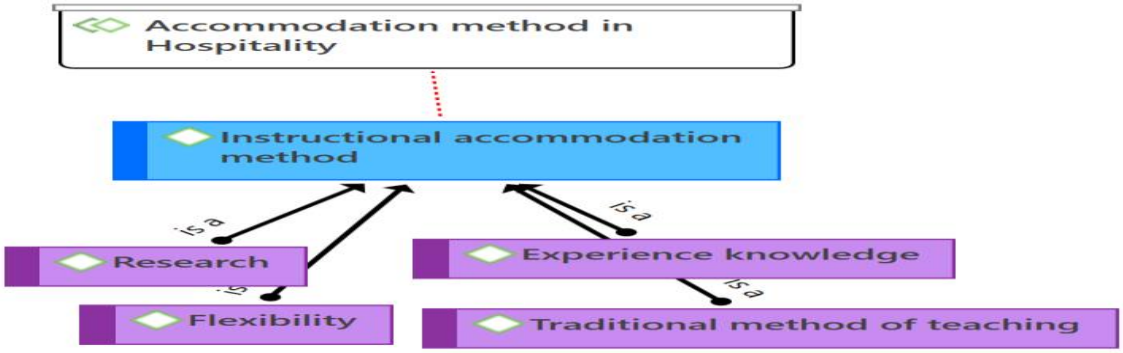


Figure 5.14. Accommodation methods in Hospitality

Findings related to Research Question Three

Four themes emerged from research question three that asked what in ways do TVET lecturers use the internet to implement skills/work-based learning. The themes include Andragogy Content Knowledge, Technological Content Knowledge, Technological Andragogy Knowledge, and Technology Andragogy and Content Knowledge. Figure 5.15 present RQ Three.

AN OVERVIEW OF RESEARCH QUESTION 3 (themes and subthemes)

The diagram below; figure.15 illustrates the themes and subthemes that emerged from the discussions of how Hospitality lecturers use internet in their classrooms. Lecturers revealed that they used internet, for andragogy and content knowledge integration, enhance their andragogy teaching methods, technological content knowledge and andragogy content knowledge.

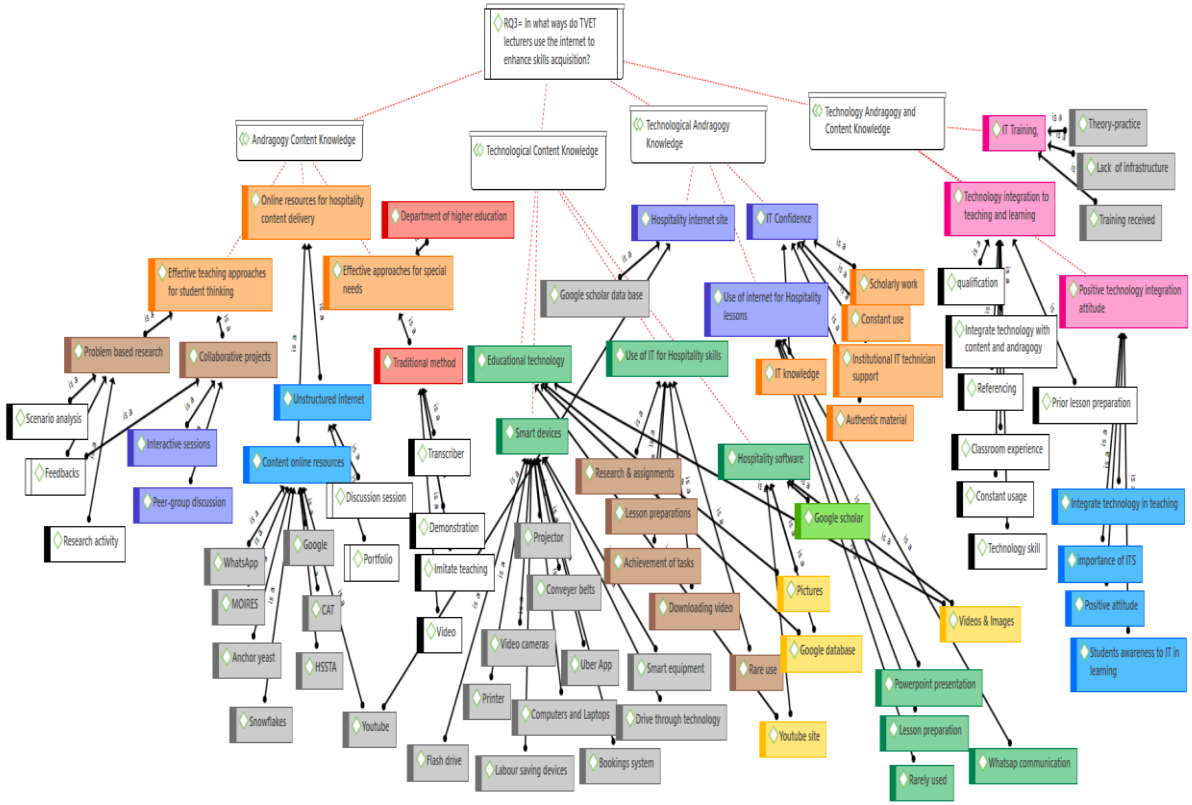


Figure 5.15. Overview of findings relating to the use of internet to enhance skills acquisition

Findings related to Andragogy Content Knowledge

Three subthemes namely: Effective teaching approaches for student thinking, online resources for hospitality content delivery and effective approaches for special needs emerged from the data. Based on figure 5.16 lecturers used internet for andragogic content knowledge of lecturers effective teaching approaches for student thinking, online resources for hospitality content delivery and

approaches for special needs. Effective student approaches for student thinking, involves problem based research and collaborative projects; online resources for hospitality content delivery, involved unstructured internet and online content resources; effective approaches for, included the use of traditional methods and depending on the Department of Higher Education.

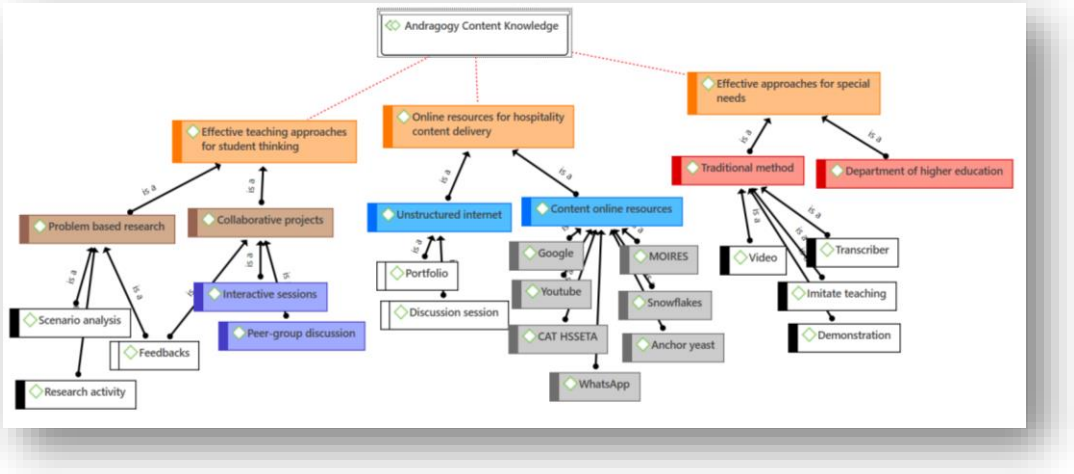


Figure 5.16. Andragogy Content Knowledge

Findings related to Effective teaching approaches for student thinking

Problem-based research and Collaborative projects were the two themes emerging from this category. Lecturers used problem-based research and collaborative projects to promote thinking among students.

Findings related to Problem based research

Scenario analysis, research activities, and feedbacks were effective teaching approaches used by lecturers in the hospitality industry to enhance problem-based research.

Participants' words:

> *...I think the use of examples, giving situations or scenarios to students and asking them to analyze the scenario*
>
> *... we allow students to conduct individual research and produce reports, menus and practical activities*

Findings related to Collaborative projects

Interactive session peer-group discussion and feedback were effective teaching approaches used to enhance collaborative projects in hospitality schools. One of the participants affirmed that the majority of their students are visual, as they want to see how things are done both theoretically and practically. Therefore, there is the need to avoid the traditional method of teaching. To achieve effective teaching, this participant opted for interactive classes. This was an important consideration, as their involvement will also aid their learning.

Below was the response from this participant

> *...Most of my students are visual... In theoretical classes, I to avoid the traditional way of teaching where I do most of the talking but rather opt for interactive classes where students are involved in the learning*

Participants' responses

> *...To guide students thinking and learning, I use a lot of practical and research*

... The more feasible and accessible way is to give them a situation to analyze, scrutinize as well as make suggestion or point out mistakes. For their research they may even have to do informal interviews among peers to get the information

... we allow students to conduct individual research and produce reports, menu's and practical activities

Findings related to online resources for Hospitality content delivery

These yielded two subthemes namely unstructured internet and Content online resources. One of the participants agreed that specific online resources exist for teaching and learning in the Hospitality class, however, she was mainly comfortable using the traditional methods of teaching which among others involve the use of textbooks. Her words are expressed as

...There are specific online resources because, I use mainly traditional methods of teaching

...We discuss, bring in activities that we do together, assign them research topics to go and read and collect information, then we discuss their findings together

Findings related to unstructured internet

Lecturers used internet mainly in an unstructured way to enhance content and general knowledge, which includes google search, WhatsApp communication and information sharing, accessing educational pages like CAT HSSTA , product information pages e.g. snowflake, moirés, as well as to support discussions and development of student portfolios.

Participants' words

...Students are given assignments to build up their Portfolio files, which requires them to do some research and be creative using internet. Even though they build paper portfolios that requires and lot of thinking and internet research

Findings related to Content online resources

Three of the participants were of the opinion that there are specific ways of utilizing the internet for enhancing hospitality content delivery as it is dependent on the needs of the lesson**.** For example, YouTube was used to clarify concepts and WhatsApp for sharing information like videos, text, and general communication with students. Also, for videos purposes, CAT HSSTA was ideal for teaching and learning as students have the options for notes and videos loaded on their site. Thus, CAT HSSETA are useful content for Hospitality and Tourism and are usually recommended for Hospitality lecturers. For practical teaching, the Moirés site was specified for access the most recent and contemporary recipes and methodology that assists in lessons. Snowflakes and anchor yeast were also specified for their importance in practical workshops for TVET lecturers.

Participants' words in this regard is

> *…There are times when we refer students CAT HSSTA, they usually have notes and videos loaded on their site. I use CAT HSSETA because It has content for Hospitality and Tourism, ... For practical's, sometimes I use Moirés site for recent recipes and methods that assist in my lessons. Sometimes I use snowflakes … Anchor yeast used to also provide practical workshops for TVET lectures that would also help us for our lessons*
>
> *...I use YouTube to clarify concepts and WhatsApp to share information like videos, text and general communication with students*
>
> *... I may ask them to bring a recipe, in the recipe look for specific things depending on the needs of our lesson and when they bring the recipe we discuss the specification*

Findings related to Effective approaches for accommodation of special needs

Traditional methods and the Department of higher education emerged from this category as methods in which Hospitality lecturers depended mainly on accommodation. Lecturers used mainly traditional methods of accommodating special needs and situations in their

classrooms, which were not reliant on technology. In some more advanced cases that may involve physical disabilities, the Department of Higher Education intervenes by bringing in specialists.

Participants' words

> *...To accommodate special needs, there are times where we have to outsource specific tools or materials to assist our learners, once I had a deaf student, so the college had to apply for a transcriber to transcribe for the student through the Department of Higher Education*

> *...So, I use mainly demonstration, videos and also allow the students to practice what we are learning*

Findings related to Technology Content Knowledge

Four sub-themes emerged from this theme, namely: Smart devices, Hospitality software, use of technology for Hospitality skills, and Educational technology.

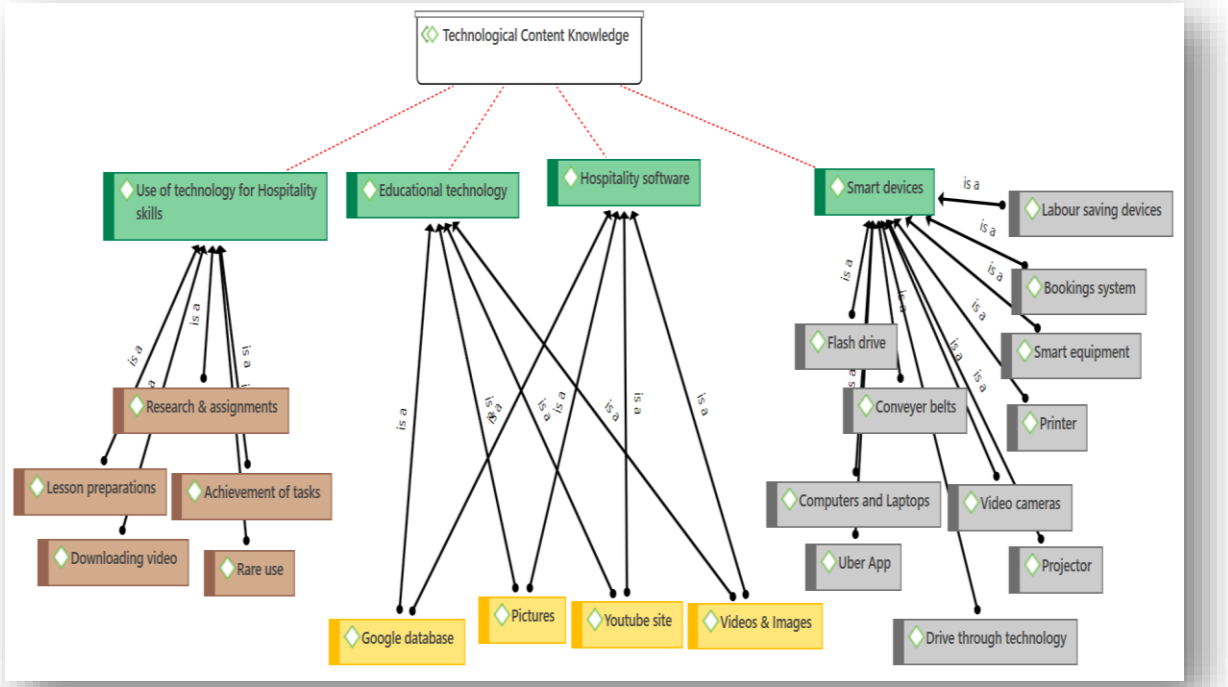


Figure 5.17. Technological Content Knowledge

Findings related to Smart devices

Participants' words

> *...The main technological tool used in the Hospitality industry is mainly the computer and internet. When they start with a portfolio, they must go to the internet, to research the information and be creative with some of the ideas from the internet*
>
> *...Hospitality employees must be able to use computers, online order for home delivery like Uber Eats application, drive through technology, systems used in hotels for making reservations and bookings, conveyer belts*
>
> **…** *Projector, flash drive and printer. For practical's, stove, microwaves oven, food processors, blenders and may other labour saving devices for almost all the departments*
>
> .
>
> **…** *The technologies used in the Hospitality industry is the booking system software's*

Findings related to Hospitality software

> *...The downloaded pictures assist students' creativity, especially during cooking practical's and table laying*
>
> *... Google that the students use for research*
>
> *.... I use google scholar a lot to read about the status of the Hospitality industry and general google for videos and pictures. I refer students to google or download a video for them to enhance the creativity of my students*

Findings related to Use of Technology for Hospitality skills

All hospitality lecturers used technology, however their use varied according to the period of teaching, experience in the hospitality industry and the time of tertiary graduation. The use of technology became more frequent with longer exposure to the hospitality industry as well as recent tertiary graduation. It was difficult to determine how much was due to each of these factors. From the evidence of the hospitality lecturers, the older their qualification and the longer the period of teaching in the college, the less they were likely to use technology. Their minimal use could be attributed to the curriculum structure which was not designed to incorporate technology. Lecturers used technology for basic integration into teaching, lesson preparation through downloading videos to enhance the understanding of content, research and assignments, as well as capturing marks and completing tasks.

Participants' words

> **…***I personally use technology once in a while to download pictures and cooking methods for teaching aids. I only use google, and try to minimize the need for students to use google because they haven't leant the online information ethics of avoid plagiarism*

> *...I can sometimes refer them to a certain site, like Google Scholar - they can go to assist them in doing certain tasks. As they engage with the content and tasks, it allows them to develop critical thinking skills*

> *...preparing my lesson, like getting more information to enhance the content in the textbook*

Findings related to Educational technology

Participants incorporated educational technology into their traditional teaching and learning methods, resulting in very minimal integration. Some of the hospitality lecturers explored new and advanced technology. The most popular technology among the participants was the use of YouTube videos. They also downloaded pictures and used google databases.

Participants exact words

> *…They downloaded pictures to assist students creativity, especially during cooking practical's and table laying*
>
> *… Google that the students use for research*
>
> *…. I use google scholar a lot to read about the status of the Hospitality industry and general google for videos and pictures. I refer students to google or download a video for them to enhance the creativity of my students*

Findings related to Technological Andragogic Knowledge

Three sub-themes emerged from this theme including, technology use Confidence, Hospitality internet site, and use of internet for Hospitality lessons. Figure 5.18 below presents lecturer's knowledge of technological use, which includes confidence in exploring technology, visiting Hospitality sites on the internet as well as the use of internet in the classroom to enhance classroom activities.

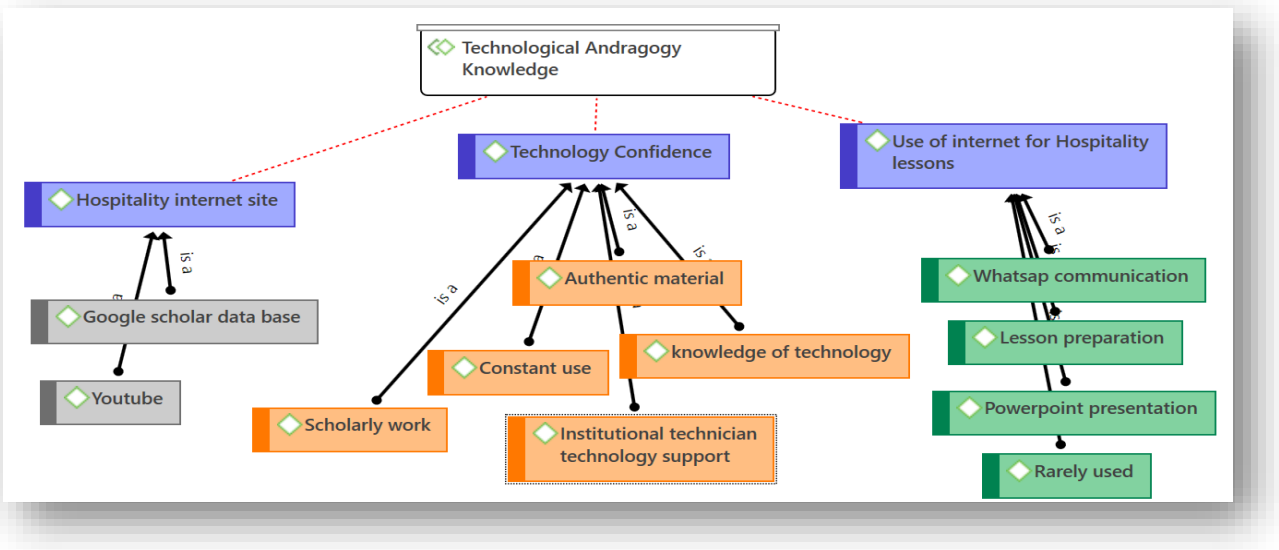


Figure 5.18. Technological Andragogic knowledge

Findings related to Lecturer's confidence using internet technology

Participants identified the following as boosting their confidence in technology use when choosing technology to enhance teaching methods, they include technology skill and competence, Institutional technology uses technical support, scholarly information, consistency of internet information with that of textbooks, and content books or guides.

One of the participants explained that inspiration to use technology is driven by content. According to this participant, some topics are best delivered through the use of textbooks or field trips while others may demand the use of videos. Thus, using video technology enhances teaching and learning.

Below are some extracts from participants

> *...What inspired my choice of technology is the content that I am teaching*
>
> *...I am very confident because the IT technician always assist when we encounter problems. When you need help you get help immediately*
>
> *... When I did my Postgraduate Diploma in Higher Education, I learnt a lot about using technology in the classroom, even though I do not use a lot of technology in my teaching, I have enough confidence to use technology*
>
> *... I am very confident because, I use the internet a lot for my lesson preparations and also for my own personal assignments as Masters student*
>
> *...I have enough confidence to use technology. I learnt that not everything on the internet is good for learning, there are specific websites that provide authentic material*
>
> *...When choosing technology, I find confidence in having it match the information in the textbook, therefore I consume the information first and be confident before I can use it for my class*

In addition, one participant expressed the need to address content derived from online databases before utilizing them in class. This participant explained that to have confidence in using an internet source for enhancing teaching methods in Hospitality, the choice of the videos must be screened for authenticity. To achieve this, the lecturer needs to first watch, and study the video, browse different ways of teaching specific content, and critically access the reviews of the effectiveness of the method before having enough confidence to use it in class. This is to avoid confusing or misleading students in class.

Below is the word of this participant

... What gives me confidence in the choice of videos that I download from the internet, is its ability to address almost all the content it enhances in the textbook. Very careful to select a video that close to the steps in the textbook, for example if I feel there is a step that has been omitted, then its not a good video because it might cause confusion or mislead the students

Findings related to Hospitality internet site

A participant expressed that not all online databases are scholarly and useful for educational purposes. The participant identified google scholar as having scholarly peered review articles and recommended this for enhancing instruction of Hospitality.

Furthermore, all of the participants except for two agreed that there are technological tools that can enhance teaching and learning in the Hospitality sphere. One of those that disagreed explained that the curriculum is pre-structured, and it does not include the use of technology. This particular participant indicated further that she does not have any specific online resources rather, she conducts online freelance browsing and uses information that supports the content of her class.

Below are participants' words

… *there are specific websites that provide authentic material e.g. google scholar*

… *I don't have specific sites that I visit*

… Remember our curriculum is pre-structured and it does not include the use of technology, Hence I do not even have specific online resources or sites that I use but I just take anything that supports what I am teaching that day

Findings related to use of internet for Hospitality lessons

> **…** *There are no specific sites but mainly use WhatsApp to send notes, record lessons, PowerPoint presentations and refer them to internet for research. They deliberate on them as assessments so well*

> **…** *I believe in lifelong learning as a lecturer to improve the content and stay relevant*

> **…** *I do not use any technological tool no website to assist me with teaching methods, I rely on my teaching training and experience*

Findings related to Technology Andragogy and Content Knowledge

Three sub-themes emerged from this theme including technology integration to teaching and learning, Technology use Training, and Positive technology integration attitude. Figure5.18 presents the lecturer's views on their technological andragogic content knowledge integration in their teaching and learning. Lecturers expressed an enthusiasm for the integration of technology in their classroom, even though their technology training and proficiency differed in various levels. All of them revealed to have taken a computer introduction course during their tertiary training and have used a computer throughout their studies and career. One of the lecturers had attended a formal training for technology integration, another one had taken the initiative to educate herself through videos and consulting with other lecturers from other Universities. A common concern among the lecturers was for the department to provide educators with ICT training.

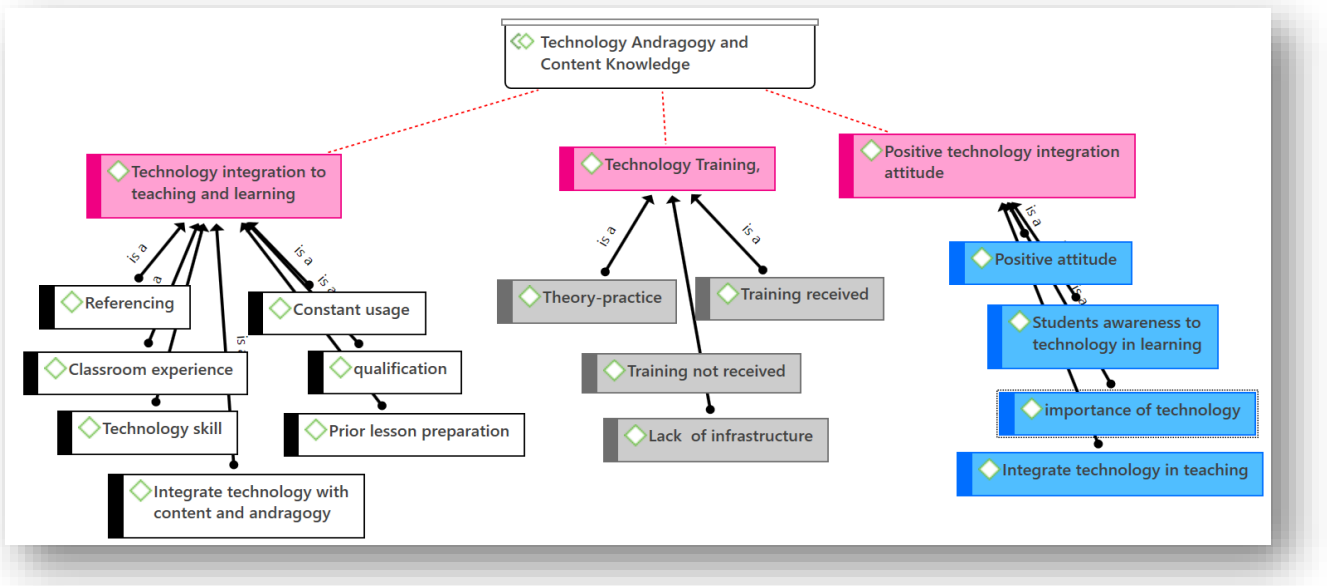


Figure 5.18. Technological content knowledge results

Findings related to technology integration to teaching and learning

It emerged from the data that the confidence of the lecturer to integrate technology with content and andragogy was dependent on experience in the classroom, referencing from colleagues, planning before lessons, qualification, current position, and constant use of technology. Possession of technology skills was found to be important for the integration of technology in teaching and learning in Hospitality. It also affords lecturers to recognize the appropriate technologies that will align with textbook content.

Participants' words

> *...I am very confident in my ability to integrate technology with content and andragogy, because of my experience in the classroom, qualification and the current position that I hold in management, I use a lot of technology. I also have the understanding of what should be happening in the classroom*
>
> **…** *When I joined the College, I did a lot of referencing from my colleagues and planning before lesson. As I continue teaching, I have gained confidence especially on the content and teaching methods*
>
> *... I gain confidence the more I use technology and I normally choose technologies that will align with textbook content when I do use technology*
>
> *... I try to make sure that I also watch videos and browse different way of teaching specific content, and also look at the reviews of the effectiveness of the method*

Findings related to Technology Integration Training

It emerged from the qualitative data that technology training was important for equipping lecturers with necessary technology knowledge and skill. This will enhance the integration of technology in teaching and learning in Hospitality. The majority of the participants have received computer skills training in tertiary school which they still use but have forgotten most of the knowledge due to lack of technological resources and use and lack of constant technology integration training.

A number of the participants who had received technology integration training complained that they could not implement the skills in their teaching environment. This was because of the discrepancies between theory and practice. Two of the participants agreed that they had never received any specific training for integration except the basic computer skills from their tertiary training/qualification and the one acquired from a learning experience.

Below is the word of some of the participant:

> *...I have attended a training on using technology but to be honest we haven't started using it in our classrooms and also it was not every Hospitality lecturer who received that training. A lot of the things we learnt, it was hard to put them into practice because of the lack of resources*
>
> *...I hope the College improves the infrastructure, so that we can be able to put those skills into practice. The other challenge is not having internet throughout the Campus, because students always complain about data if you ever ask them to do get something on the internet*
>
> *...I have never received any specific training for integration except the basic computer skills from tertiary*
>
> **…** *I have never received formal training, most of the online learning skills are more from my learning experience especially the postgraduate diploma in higher education*

Findings related to Positive attitude towards technology integration attitude

Participants had confidence and enthusiasm about the idea of integrating technology into their andragogy, supplement content as well as enhance creativity for both students and lecturers. All participants perceived technology as an essential and critical need in Hospitality classrooms, considering the nature of Hospitality industry that is dominated and driven by technology. One of the participants, explained how the lack of digital skills has had a negative impact on the graduates they produce. She further explained that these graduates are further deemed incompetent because they lack digital skills or sometimes their digital proficiency is far below work standard. Thus, technology integration is an essential component of Hospitality teaching and learning.

Participants' words

> *...but I feel they must be taught how to use the internet because not everything they see on the internet is appropriate for their learning, but they need to know the specific sites they have to visit for authentic information*
>
> *... especially now that economically we try to draw the internationals you cannot only focus on the traditional*
>
> *...I also try to encourage my students to use the smartphones they own for smart reasons, even though I am the one who use technology a lot and I generally feel technology important in Hospitality classroom because when students graduate with their certificate and join the industry they will use technology everyday of their working life*

SUMMARY

This chapter presented the results and discussions of the study. The research questions focused on the participant's views of integrating internet technology into their teaching and learning. The research further examined and described how familiar the participants were with the use of technology for teaching and learning, the extent to which they used internet technology to support instruction, how internet could be used to enhance content for the development of Hospitality technology skills and how internet technology was integrated in their classrooms.

CHAPTER 6
CONCLUSION AND RECOMMENDATIONS

CONCLUSION

The purpose of the study was to explore the use of internet in hospitality courses in TVET colleges. The findings of the study revealed that hospitality lecturers consider technology to be an integral part of teaching and learning, particularly because it drives the Hospitality industry. An important factor that determined the use of technology and internet in Hospitality classrooms was the availability of resources like computers and laptops as well as internet connection. Majority of the lecturers used their personal laptops for lesson preparation and demonstration of specific skills and concepts prior to the Covid 19 situation. When Covid 19 pandemic hit the world, enforcing changes in the learning environment, the department of higher education in Gauteng provided all lecturers in the three Colleges with laptops. Lecturers highlighted that their technology integration can be attributed to their tertiary training in Hospitality, which offers computer skills and the use of software's like learning management systems.

Hospitality lecturer's qualifications equipped them with technology skills and content knowledge in hospitality. Lecturers who have been in the teaching profession longer were less likely to use technology beyond, typing lesson plans, downloading pictures and videos. However, the results revealed the longer the lecturer worked in hospitality industry the most likely they will have an enthusiasm for integration of technology in their teaching and learning. Those lecturers who had a recent tertiary qualification and postgraduate qualification were most likely to explore the most advanced technology integration in their teaching and learning activities. On average hospitality lecturers in these colleges reported very minimal use of technology for accommodation, leaning more towards the addition of more content resources from the internet as method of accommodation, while they focused on the traditional methods of

accommodation. This study also revealed that the level and proficiency of hospitality lecturers in effectively integrating technology into teaching and learning largely depended on the lecturer's discretion.

The findings of the study suggest that at the time of the investigation, all the lecturers had access to a laptop and internet. The department of higher education distributed laptops for the Covid 19 emergency teaching and learning, however internet access remained a challenge for most of the lecturers, considering that College premises still have areas that do not have enough internet coverage. Hospitality lecturer's technology integration for instructional support was limited mainly to word processing and web search. Technology embedded activities that often enhances andragogy that hospitality lecturers used were project based activities, research based activities and activities that promote creativity e.g portfolios. The internet gave lecturers access to additional resources when planning lessons and communication among college stakeholders through emails and WhatsApp texts. One of the colleges also had a software for record keeping, managing student's information portfolios and hospitality equipment management, that hospitality lecturers often used. Working with computer systems and application in the college was important for lecturers to improve their confidence in technology integration.

Internet technology was largely used by lecturers to clarify concepts because of its visual nature, helping lecturers to explain abstract concepts through pictures and videos. Students were given YouTube videos to understand culinary steps in hospitality, look for creative ideas and to further understand specific content. Self- determined learning activities were used to encourage student's engagement with content as lecturer's write, produce and create new knowledge. According to the lecturers, they perceived project-based learning to be important for hospitality students to develop critical thinking skills.

Technology integration among lecturers varied significantly by experience and attitude. Lecturers with a longer and recent exposure to the hospitality industry used technology more and efficiently than lecturers who had a limited and very old industry exposure, a notion which supports Knowles (1977) argument on adult learning articulates that, it is self-directed and centered around the context of an

individual's need (Margaret A. Thompson & Michael Deis, 2004). Therefore, the longer the lecturer had been working and was familiar with the hospitality industry requirements, the more their teaching and learning interest would lean towards closing gaps in the industry and further lead to them developing their that would properly align with industry requirements. According to Margaret & Michael (2004) adult learning must be structured in a way that addresses their real-world problems as opposed to pedagogy that focuses on building knowledge. He argued that experience and readiness to learn fuels the desire to learn specific content in adult learning, hence exposure to the industry could be one of the motivating factors in technology integration by hospitality lecturers. The integration of technology by Hospitality lecturers was acknowledged to support effective development of Hospitality skills: effective communication and critical thinking skills as students engage in experiential project based activities, aligning with andragogy principle which asserts that adults learn better from problem based than content-based environments, considering that their motivation for learning is intrinsic based on their experience and accumulated needs (Dean, 2014). The Hospitality department in TVET Colleges teaches Hospitality skills therefore lecturers were prepared to integrate technology in their classroom because they believed it is important for their students who are preparing to join a technology driven Hospitality industry. Collaboration skills, reading, writing and the ability to argue effectively also develops as they engage in peer to peer activities. The videos and pictures downloaded from the internet by lecturers were used t emphasize and enhance student's creativity.

Lecturers were keen and enthusiastic about using internet technology to support instruction, enhance content as well as promote creativity. Even though lecturers were comfortable with the idea of integrating technology in their teaching and learning, nearly all the lecturers expressed the need for the department of higher education to invest in training them for technology integration skills, in the areas of hardware, software, computer applications and networking. Correspondingly, to andragogy, learning among the lecturers is viewed as experiential and problem focused, to meet their professional needs as well as solve technology integration problems in the Hospitality field. They described their need for technology integration training as an essential requirement in their hospitality department because of the nature of the hospitality industry that is immersed with technology systems, software's and application. Even though some of the lecturers indicated to have attended technology integration training, they argued that the training was not well customized

for their classroom needs, hence they regarded the training as not helpful. Therefore, there is a need for lecturer's training to be crafted in a way that addresses their classroom problems, be practical, valuable to both educators and students as well as applicable to the contemporal classrooms. Knowles (1977) in Thompson and Deis (2004), emphasized that adults have the tendency to actively engage in learning that is perceived to be necessity in their daily lives, which requires that integration training models and content be embedded in lecturers' real life classroom experience as well as Hospitality industry work.

LIMITATIONS

The findings of this study presented with some limitations. The study could have been conducted face-to-face with some observations, however due to the COVID 19 situation, it was conducted strictly virtual, with limited time and resources because phone calls were costly. The study also was limited to the experience of eight TVET college lecturers and specifically hospitality lecturers in a single province, therefore the experience of the lecturer's use of internet use cannot be generalized across: the country, institution, and disciplines in TVET colleges. The researcher may also have been limited by the availability of resources that equipped her to make calls because the study was not funded. The ongoing lockdown in South Africa limited movements, delayed the processes of getting in touch with participants and receiving feedback from the participants. There was insufficient time dedicated to the research and therefore not enough time available to engage with participants to cultivate an understanding of the in depth information about internet integration in the classroom for pedagogical purposes. Due to this fact most lecturers relied on College facilities for internet and communication with the researcher.

RECOMMENDATIONS

Future research is recommended, first in applying the TAWOCK framework and approaching the Hospitality industry, together with other Hospitality stakeholders to explore how it can be practically applied to achieve effective technology integration in Hospitality that will improve graduate's digital skills. More research is needed to evaluate the effectiveness of the framework, by collecting evidence. Secondly, future researchers in the field of Hospitality education must investigate and evaluate the role the Department of Higher

Education in supporting lecturers through the process of technology integration in Hospitality. Thirdly, future research may also o explore the socio-economic family background of students in specific Colleges as part of the integration process to ensure equity and inclusion, because students from less socio-economic backgrounds may struggle to have access to technology and internet resources for learning, affecting the level at which lecturers use technology in the classroom.

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