

ABSTRACT

BATTS, TALITHA QUANICO. The Impact of Virtual Vocational Teacher Education When Integrating Apprenticeship Learning for Educators in Kenya: A Narrative Study to Justify Teacher Education to Stimulate Economic Growth and Workforce Development. (Under the direction of Dr. Michelle Bartlett).

Post-COVID-19, the internet has become an important resource for education for all students including primary, secondary, high school, colleges, and universities. This study examines the impact of teacher education when a virtual vocational learning environment is used to equip teachers with the necessary resources and tools to deliver the apprenticeship model in Kenyan community schools developing employable student graduates. This research is an example of how teacher education can ignite new teachers and invigorate seasoned teachers with the knowledge, attitudes, approaches, methodologies, and skills necessary to challenge individual growth and hold themselves to grand expectations. Teacher education coupled with an online specialized curriculum will give students access to course material that may not normally be available or easily accessible on a physical campus. It will also allow students to participate in apprenticeship programs in career and college pathways needed within communities to spearhead growth and development in areas of technology, science, education, and small business.

While the focus of this project is the impact of training teachers for better virtual engagement and participation through online technology and apprenticeship-style curriculum; understanding the needs of the students and their career aspirations is also key to student preparedness, workforce development, and community economic growth. Kenya's Vision 2030 placed special demands on public universities and Technical and Vocational Education and Training institutions as the leading engines that the economy must rely upon to produce trained levels of manpower, which will be needed to drive the economy toward the attainment of the

Vision. These educational institutions have been identified as a key source in the delivery of skills and that are required to deliver the government's development agenda. Like Kenyan TVETs, there are 942 community colleges in the United States of America. Over five million students are currently enrolled in public two-year degree-granting post-secondary institutions. This is an important finding because many graduates in the United States will remain in their communities if they are trained in specific career and college degree-granting programs that provide a lucrative financial return on their educational investment. Professional licensing and certifications are types of credentials driving student interest in additional training and education provided by alternative courses in vocational and trade fields where jobs can be promising.

The government of Kenya has been implementing reforms in Technical and Vocational Education and Training since 2013, much like H.R. 447 - National Apprenticeship Act of 2021. However, a comprehensive plan to guide the development and delivery to be undertaken by several Government Ministries and Agencies and a shared plan of action has been lacking. It is against this backdrop that the Ministry commissioned the development of a National TVET Blueprint, which includes identified entities responsible for implementation aspects and the achievement of time-framed targets. The National TVET Blueprint has outlined strategic and sustainable programs that will amplify the role of Technical and Vocational Education and Training institutions, align efforts to strengthen the Technical and Vocational Education system and ultimately equip youth with relevant skills that match the demands of the dynamic Kenyan economy in partnership with myEOD training and learning management systems to include more students with education and skills development for a more robust workforce development program.

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The Impact of Virtual Vocational Teacher Education When Integrating Apprenticeship Learning
for Educators in Kenya: A Narrative Study to Justify Professional
Development to Stimulate Economic Growth
and Workforce Development

by
Talitha Batts

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APPROVED BY:

Dr. Michelle Bartlett
Committee Chair

Dr. James Bartlett

Dr. Donna Petherbridge

Dr. Pam Howze

Dr. James Osler (consultant)

DEDICATION

This dissertation is dedicated to my daughter, Tiffany Makenna Hill, and my niece, Aubree Gray Batts who have been my sunshine when I needed warmth, love when I needed support, and laughter when I needed a break. It is because of you that I kept going and never considered giving up. It is because of you that I have embodied the strength of many before me to forge ahead to the finish line. I appreciate your phone calls, love, kind words, and bear hugs; you have truly been my source of good energy.

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BIOGRAPHY



Talitha Batts is an advocate for education with experience in Research, Policy, and Social Impact.

Talitha has over 25 years of experience in the Education, Small Business, Technology, and Economic Development sectors now leading the charge to bring customized curriculum and certifications to mission-driven organizations, entrepreneurs, and students who

aim to get a holistic understanding of advocacy and equity work and education. Talitha graduated from the University of North Carolina at Charlotte with a bachelor's degree in English & Political Science. Talitha eagerly brings her corporate, small business, and education experience to the non-profit sector creating education, policy awareness, and opportunities for diverse populations. Talitha completed a Master's in Education Technology from North Carolina Central University crafting her skillset for online learning management and program development. Talitha's keen business sense and pure motivation have also yielded positive results as an entrepreneur which gained her the 2017 Global Leadership Award from the All-Ladies League in New Delhi, India. Talitha completed her Doctorate in Community College Leadership from the Department of Education at North Carolina State University.

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CHAPTER 1: INTRODUCTION

Throughout history, economic rise and fall almost always sparked a significant loss of jobs (McGrath, 2022). With loss of jobs follows the need for innovative ideas and the creation of new opportunities for men and women to excel financially in their communities (OECD, 2016). Training a competent workforce and developing educational programs that groom students for jobs, in areas where employers are starving for development quickly, fills a need and ultimately sets the stage for economic recovery (USDOL, 2021). But what programs are needed, who will educate the next generation of employees and business owners and how will they access the knowledge? Post-COVID-19, the Internet has become a primary resource for education for all students including primary, secondary, high school, colleges, and universities (Zhu, 2020).

This study will examine the perceptions of educator's experiences from being trained to effectively engage students using an innovative virtual learning environment and their perceptions of the impact on student workforce development outcomes when students are allowed to couple online learning with practical experiences that focus on specific careers stimulating growth in the community. This research may provide an example of how training teachers to navigate virtual learning creates accessibility, flexibility, and cost savings while eliminating basic issues such as commuting. An online education will allow students of inequitable circumstances to access specialized job training courses that may not normally be available or easily accessible on a physical campus (Springfield, 2022). With increased teacher training, student opportunities to engage in apprenticeship-style learning and training needed to spearhead growth and development within communities are heightened.

The Constitution of Kenya places emphasizes training for the youth as a relevant matter for sufficient education and advanced training protected by basic human rights. According to the

Republic of Kenya (2019, p.25), Articles 43(1)(f), 53 (1) (b), 54, and 55 (a) make education a right of every Kenyan. Kenya's Vision 2030 places great emphasis on the link between training and the labor market, the need to create entrepreneurial skills and competencies, and strong public and private sector partnerships (Mauki, 2020). Research explains, "It articulates the development of a middle-income country in which all citizens embrace entrepreneurship and engage in lifelong learning" (Mauki, 2020, p.46). This has considerable importance for the kind of education and training systems required to deliver necessary skills, competencies, and attitudes. Kenya faces high youth unemployment which is attributable to inadequate jobs and inadequate skills and training, as well as limitations to entrepreneurship (Mauki, 2020). This is significant since about 80% of Kenya's population is below 35 years of age, according to data from the 2019 Census by Kenya's National Bureau of Statistics. The skills mismatch has contributed to the low admittance of graduates into the labor market and a high youth unemployment rate (Republic, 2020, p.5).

Arising from this, the Technical and Vocational Education and Training sector has made substantial gains, some of which include; supporting all Technical and Vocational Education and Training trainees from humble backgrounds with capital and loans from the Higher Education Loans Board to support their training; implementation of Competence-Based Education and Training curriculum; focus on industrial linkages and construction of Technical and Vocational Education and Training institutions in all sub-counties in Kenya (Dramou, 2020). The number of public TVET institutions has grown from 59 in 2014 to the current 191 while enrollment has grown from 55,945 in 2014 to the current 249,316 according to the Kenyan Institute of Curriculum and Development. Kenya's public education system has made great strides in recent years however many challenges remain. The National TVET Blueprint addresses the important

question: “What actions are needed to maximize the impact of TVET on training people for greater socioeconomic development?” The answer could be found in implementing online teaching and learning that includes virtual learning experiences that mimic hands-on training for immediate community impact and training.

Relevance of Community-embedded Learning to Modern Cognitive Apprenticeship

The relevance of community-embedded learning to modern cognitive apprenticeship lies in its ability to provide learners with opportunities to observe, engage in, and practice skills within real-life contexts. Nunynameh (2024) researched and found that “Faced with deep challenges with access to formal education, many West African countries are increasingly taking steps to reform their informal apprenticeship systems to make them a quality skills development alternative for their teeming youth.”(p. 224). This approach mirrors the traditional apprenticeship model where knowledge and skills are passed down through direct participation in the daily activities of a community of practice. Like many African countries, the need to develop skilled workers who can contribute to their community is critical. Adeoye et al. (2024, p. 10) explains, “The need to equip learners with 21st-century skills is crucial in the rapidly evolving education landscape. Traditional methods of teaching, which focus solely on knowledge transfer, are no longer sufficient.”

According to Kazmer, “Online learners often stay located in, and tied to, their communities, kinship networks, households, and workplaces” (2005, p. 190). Therefore, colleges that provide online education can create partnerships within the community to appeal to students to take their curriculum and training into networks throughout the community in which they already live and raise their families. Students can build connections with fellow students,

instructors, and community members who live and work near them creating apprenticeship opportunities that build wealth-opportunity among the demographic that resides there.

Online teachers and learners have a distinct opportunity to bring their virtual learning inside their personal spaces at home and work integrating the learning and practical experiences (Kazmer, 2005). “Community-embedded learning means that students already have ties to their communities: family and friends, memberships in clubs and social groups, and civic and volunteer activities.”(Kazmer, 2005). Many students who are studying online from their homes or schools nearby schools have the opportunity to remain in their communities and gain employment where they live and raise families. When given this opportunity for community-embedded learning conditions, students bring knowledge and skills back to their communities to further enhance economic development (Kazmer, 2005). Many studies about online professional development or support programs for instructors examine the implementation of online learning programs and how well students connect in their communities. As we evaluate the use of distance education to support both groups, teachers, and students when teachers choose distance learning as an option, Shumeiko posits “distance learning brought significant changes to supplementary education, impacting content representation, teaching methods, assessment, and digital interaction” (2024, p. 92).

Cognitive apprenticeship emphasizes that knowledge must be used in solving real-world problems. Cognitive focuses on developing actual skills, and processes (Collins, 2006). Students engaging in developing skills in this manner take practical, hands-on experiences from various settings and diffuse knowledge while applying the learned ability of many kinds. According to Collins (2006), Cognitive Apprenticeship focuses on four dimensions that constitute any learning environment: content, method, sequencing, and sociology (see Table 1.1).

Table 1.1*Principles for Designing Cognitive Apprenticeship Environments*

Dimension	Instructional Method	Description of Instruction
Content:	Types of Knowledge required for expertise	
	Domain knowledge	subject matter specific concepts, facts, and procedures
	Heuristic strategies	generally applicable techniques for accomplishing tasks
	Control strategies	general approaches for directing one's solution process
	Learning strategies	knowledge about how to learn new concepts, facts, and procedures
Method:	Ways to promote the development of expertise	
	Modeling	teacher performs a task so can observe
	Coaching	teacher observes and facilitates while students perform a task
	Scaffolding	teacher provides support to help the students perform a task
	Articulation	teacher encourages students to verbalize their knowledge and thinking
	Reflection	Teacher enables students to compare their performance with others
	Exploration	teacher invites students to pose and solve their own problems
Sequencing:	Keys to ordering learning activities	
	Increasing complexity	meaningful tasks gradually increasing in difficulty
	Increasing diversity	Practice in a variety of situations to emphasize broad application
	Global to local skills	focus on conceptualizing the whole task before executing the parts
Sociology:	Social characteristics of learning environments	
	Situated learning	students learn in the context of working on realistic tasks
	Community of practice	communication about different ways to accomplish meaningful tasks
	Intrinsic motivation	students set personal goals to seek skills and solutions
	Exploiting Cooperation	students work together to accomplish their goals

As seen in Table 1.1, the four dimensions of content, method, sequencing, and sociology are detailed to explain the framework of apprenticeship. Content defines the type of knowledge required for expertise. Of course, experts have to master the explicit concepts, facts, and procedures associated with a specialized area – what researchers call domain knowledge (Collins, 2006). Domain knowledge is generally found in textbooks, demonstrations, and classroom lectures. Collins found domain knowledge necessary but not sufficient for expert performance, providing insufficient clues for many students about how to solve problems and accomplish tasks in a domain. According to Collins (2006), if students want to learn to solve problems better, they need to learn how to relate each step in the example problems worked in the textbooks to the principles discussed in the text.

The method is a way to promote the development of expertise. The six steps of Methods are modeling, coaching, scaffolding, articulation, reflection, and exploration (Collins, 2006). While modeling allows the teacher to perform a task so students can observe, coaching allows the teacher to observe and facilitate while students perform a task. Scaffolding provides support to help the student perform a task. Then Articulation encourages students to compare their performance with others. And finally, Exploration invites students to pose and solve their own problems. Each step builds on the previous to assist the student in developing expertise.

Sequencing is the key to ordering learning activities by increasing complexity, increasing diversity, and focusing on conceptualizing the whole task before executing the parts (Collins, 2006). Through sequencing, for example, increasing task complexity, diversity and skills allows students to build a conceptual map before attending to the details of the overall activity (Collins, 2006). By sequencing learning activities in this way, learners can build upon their knowledge and skills in a logical and structured manner, leading to better understanding and mastery of the

subject matter. Sequencing helps learners build on their previous knowledge and skills by gradually increasing the level of difficulty and complexity of learning activities. It also allows learners to focus on the big picture before tackling individual parts of the task. While sequencing in education refers to the intentional order of presenting content and activities to students, the outcomes of sequencing in education can include improved comprehension, retention, and mastery of material. Sequencing promotes students to develop critical thinking skills, facilitates connections between different topics, and provides a structured approach to learning. Effective sequencing can engage learners, promote motivation, and lead to better student outcomes overall.

Distance learning is an easily imposed method to develop content, promote the development of expertise, deliver learning activities, and provide a social space for students to learn. The result of this interactive learning model is that students from an online learning world can provide hands-on practical training in which students share activities, technology, and space, and communicate with one another. Students create friendships, provide emotional support, work together, study together, and develop future professional networks, which leads to the stimulation of any community. However, effective teachers are critical to the development of student outcomes and the impact distance learning can create. According to Bachtiar (2024), “Teachers' self-efficacy in instructional strategy has been indicated for its crucial role and function and its profound implications on teaching practices and student outcomes.”

Defining the Term Economic Stimulation

Although the COVID-19 pandemic exacerbated the need for economic stimulation, many communities longed for growth, government, bank support, and increased economic activity to avoid an economic crisis or recession. But how can the implementation of online teaching and learning help stimulate a community's workforce and create a space for teachers to partner with

community leaders and engage in student's professional development while driving employment? Through curriculum and hands-on training and development, institutions can build a pipeline of skilled workers, gain workers with customized skills, boost retention, save money on wages, and make a positive return on investment.

Defining The Difference Between VLE and LMS

Electronic systems as a means of teaching and learning are at an all-time high. The increase in learning platforms has been steadily growing for many years. However, the impact of COVID-19 accelerated the need for diversification in learning and teaching methods to reach a larger quantity of users at various levels of education. As the need flourished and electronic platforms replaced traditional face-to-face classroom environments, the demand for trained faculty to teach curriculum online became more relevant. Virtual Learning Environments came onto the scene creating an opportunity for educators to deliver educational programs, course curricula, lectures, slideshows, assessments, and trainings by uploading course materials and interactive videos in module format. VLE is defined in educational technology as a web-based platform for the digital aspects of courses of study, usually within educational institutions. This environment also provides structure for the course and assessments at different stages throughout. The VLE format carved out space for companies such as Moodle, Blackboard, and Canvas to compete and create online synchronous and asynchronous opportunities for educators to engage with their students from anywhere. Therefore, the average VLE was uniquely built to focus on, "the administration of documentation, tracking, reporting, automation and delivery of educational programs, materials or learning and development programs for which the concept emerged from e-learning."

A Learning Management System (LMS) is closely related and has been thought of as equivalent to a Virtual Learning Environment. However, the slight difference lies within the demographic it serves. An LMS is defined as online customizable training and professional development for academics, corporations, and online learners to increase skills and contribute to company and institutional growth and success. There are over 1200 learning management systems available.

Background of the Problem

Covid-19 struck Kenya increasing the need for a dependable internet infrastructure. No internet left students with no school options. During the time students had no school, the country experienced an increase in homelessness and teen pregnancy. Over a period of three months in lockdown due to COVID-19, 152,000 Kenyan teenage girls became pregnant - a 40% increase in the country's monthly average (Patridge-Hicks, 2020). According to Global Citizen, these numbers from early July 2020, are some of the earliest pieces of evidence linking the COVID-19 pandemic to unintended pregnancies throughout the country.

Post COVID-19, many areas of the country received internet services. According to Data Reportal's Digital 2022 report, Kenya's internet penetration rate is 43% as of January 2022. Many educational institutions are now able to offer online curriculum through Learning Management Systems (LMS). Since the increased access to internet, schools can provide online education supplementing for the lack of ability to engage face to face.

However, online education via the new learning management systems increased the need for teachers to be trained. After six weeks of online training via ZOOM videoconferencing and the MYEOD learning management system, teachers were trained to use and implement curriculum from apprenticeship learning via a virtual learning environment. According to the

McKinsey Global Institute's December 2017 report, "Jobs Lost, Jobs Gained: Workforce Transitions in a Time of Automation," by 2030, more than 30 percent of the United States labor market and 375 million workers globally will need to change jobs or upgrade their skills significantly to continue to advance within the workforce (Jackson, 2020). The problem with the untrained workforce always existed and increased during the pandemic. Now, toward the end of the pandemic online learning continues to be an increasing need for students and teachers. Training teachers on how to communicate, develop technological literacy, assess, and evaluate, and apply concepts and time management skills increased chances for successfully trained online teachers.

The participants of this study were willing volunteers who were interested in the study and the opportunity to impress upon leaders the need for teacher education for virtual vocational skills development. The discussion of teacher professional development is not new however the implications for the diffusion of new innovative technology and processes for the development of future students through advanced teacher education has been examined. The participants consisted of current teachers from multiple educational institutions such as the University of Nairobi, business partnerships, and community organizations who are tasked with teaching coursework to enrolled students seeking employment in the local workforce. Each participant has provided thorough feedback, examined throughout the study.

Problem Statement

If we don't understand the impact of Teacher Education and technology training in a virtual learning environment to increase communication skills, technological literacy, time management skills, assessment and evaluation skills, and teaching students to apply concepts to real-world workforce opportunities, then we cannot ensure more employable student graduates

will remain in Kenyan communities stimulating economic growth and workforce development throughout the country.

The importance of teacher education and the skills needed to connect, learn, and develop strong engagement skills online cannot be understated. In today's digital world, teachers need to be able to reach students in meaningful ways and sustain relationships with them virtually. Teachers must have the capacity to create enjoyable learning experiences that engage students and deliver knowledge that will increase student competency in preparation for chosen careers (Mbonambi, 2023). Engagement skills ensure that students are actively participating in online learning activities, paying attention to the material, and feeling connected to their teacher and classmates. “Preparing educators to acquire and use these insights holds promise for generating the kinds of education that enable children ultimately to learn independently and thrive,” explains Darling-Hammond (2024). With the right tools and strategies, teachers can create a successful and engaging learning experience for their students, both online and in person.

Teachers play an important role in providing quality education, especially in the online learning environment. As researched by Kong (2023), “This study aimed to examine how a teacher development program changed teachers' content knowledge and collaborative engagement, which in turn influenced their students' learning achievement.” Kong (2023), Errabo (2024), and Adeoye (2024) agree that the diffusion of differentiated technology and advanced processes optimize students’ engagement and performance however teachers have to be equipped with tools, resources, and support to develop the student.

Apprenticeship-style learning can serve as a valuable tool for teacher training and has been proven to positively impact the development of students’ workforce skills. Apprenticeship learning provides an opportunity for teachers and students to gain hands-on experience in their

field, which can then be transferred to the workforce. According to John Dewey (2007, p.2), “all principles by themselves are abstract; they become concrete only in the consequences which result from their application.” Through apprenticeship learning, teachers gain insight into the nuances of the industry, which can help them develop more effective teaching strategies for helping students understand and apply the knowledge and skills necessary for success in the workforce. Additionally, apprenticeship learning helps teachers to better understand the needs of their students, which can lead to more tailored instruction and more meaningful connections between the curriculum and the workplace. Ultimately, apprenticeship learning can help to prepare students for the workforce by providing them with an opportunity to learn from experienced professionals and gain insight into their respective fields.

The research shows that “To teach is to first understand purposes, subject matter structures, and ideas within and outside the discipline” (University of Northern Iowa, 2024). Teachers who are knowledgeable about their subject matter and have strong instructional strategies can help students gain a deeper understanding and engagement with their material. With the right education, teachers can make a positive difference in the lives of their students. Through teacher education, educational institutions of all types are offering online education and apprenticeship options for students to gain knowledge, soft skills, and practical experience with local organizations and businesses within their communities, which could result in more employable student graduates remaining in Kenyan communities stimulating economic growth and workforce development throughout the country.

Purpose Statement

The purpose of this qualitative study is to explore the stories and lived experiences of TVET faculty and PhD students who receive teacher education and apprentice learning through a

virtual learning environment to aid in the transition from the traditional classroom environment to online teaching and learning post-COVID-19. Understanding their stories is important because as scholars we learn from one another's experiences, challenges, and successes. Through a series of daily training, teachers will learn to engage and deliver apprenticeship-style education to students enrolled at their educational institutions.

Teacher Education and technology training have a major impact on virtual learning environments. Despite its negative impacts, COVID-19 has accelerated the development of online education and provided opportunities for critical reflection on current educational practices (Green et al., 2020). By providing teachers with the skills and knowledge needed to effectively use technology, they are better equipped to create engaging and dynamic learning experiences for their students. According to Earnshaw (2018), "A critical aspect of ensuring that young Americans learn appropriate digital literacy skills is equipping educators at all levels with the same skills." With the right technology in place, teachers can create interactive lessons that can be accessed from anywhere, anytime, allowing for more flexible and personalized learning experiences for their students. Technology can also be used to create assessments that can provide valuable insights into student progress and allow for targeted instruction.

Teachers can create a virtual learning environment that is both effective and enjoyable for their students. They can provide support to their peers by answering questions and modeling practical uses of technology to support learning (Education, 2017). The 2019 Census by Kenya's National Bureau of Statistics, about 80% of Kenya's population is below 35 years of age. This is significant because Kenya faces high youth unemployment which is attributable to inadequate jobs and inadequate skills and training. The skills mismatch has contributed to the low absorption of graduates into the labor market and a high youth unemployment rate. The

Technical and Vocational Education and Training sector has been identified as a key enabler in delivering the skills and competencies required to deliver the Government's development agenda. But, for educational institutions to make a clear impact, teachers must be professionally trained to aid students in meeting the standards for employment in the Kenyan business community.

This paper will offer a good example of a qualitative research purpose and a breakdown of different reasons teacher education is important for student success and workforce development. It is through the lived experiences of the teachers that we will seek to determine the impact of teacher education, and apprenticeship-style virtual vocational teaching and learning.

Research Questions

The following research questions were used in this study. The research questions were developed to state the problem that this research will address.

Research Question #1: What are the lived experiences of instructors who received teacher education to transition from traditional classroom experiences to an online virtual learning environment apprenticeship model to better serve students?

Research Question #2: What are instructors who transitioned to an online LMS apprenticeship model perception of the impact of virtual teaching and learning on student workforce development outcomes?

Theoretical Framework

Diffusion of Innovation Theory

The Diffusion of Innovation Theory explains how over time a specific population adopts a new and innovative product or a behavior. Diffusion is "the process by which an innovation is

communicated through certain channels over time among the members of a social system” (Rogers, 2003, p. 5). The basic idea is to expose the population to the innovation in a way that is perceived to be new so the interest gradually increases while spreading through the targeted population. The outcome is the adoption of the new, innovative idea or product and ultimately diffusion throughout.

The Diffusion of Innovation Theory developed by Everett Rogers relates to this study in numerous ways as it provides a framework for understanding how new ideas and technologies spread through a population. The relevance of this study is it provides insight into the process of innovative solutions and technological concepts within a targeted population. According to Rogers, innovativeness is “the degree to which an individual or other unit of adoption is relatively earlier in adopting new ideas than other members of a social system” (2003, p. 22). When analyzing the different categories of The Diffusion of Innovation Theory, the stages used to attract adopters include Innovators, Early Adopters, Early Majority, Late Majority, and Laggards. Each of these categories plays a major role in the degree to which the innovative idea is seen as the best option and how easily it is adopted by the targeted population. The theory’s categories offer a structured approach to understanding and facilitating the adoption of new ideas. By applying the Diffusion of Innovation Theory to this study the role of peer influence in the diffusion process can be highlighted. Innovators and early adopters from the targeted population of the study could serve as opinion leaders, influencing the behaviors and acceptance of late adopters during the diffusion process.

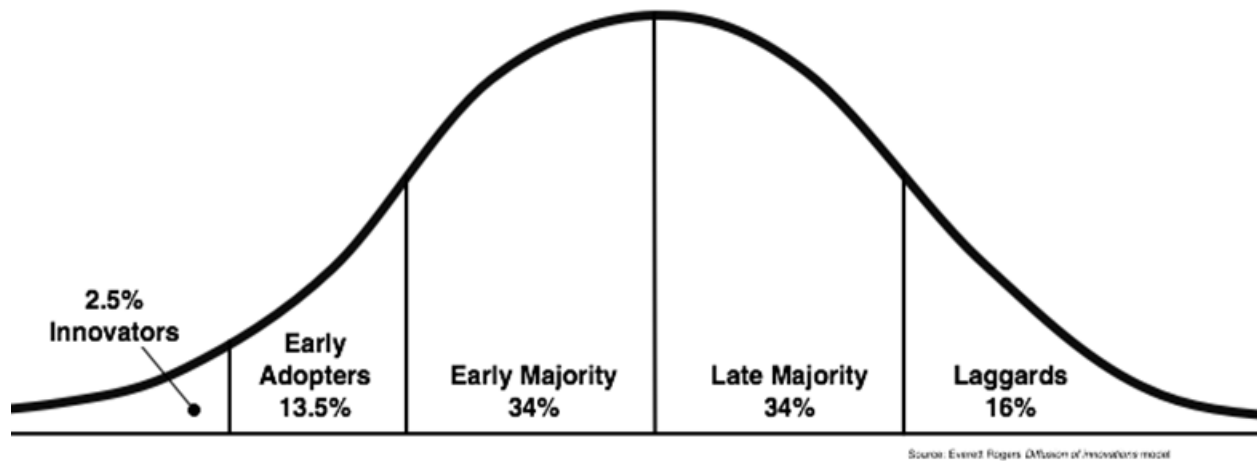


Figure 1.1 Five Adopter Categories in Diffusion of Innovation Theory

Kenyan educators who seek continual professional development, innovative ideas, and transformative systems prepare students to embrace the changes occurring in educational methods. “Scholars in education have extensively examined how innovations, ranging from teaching methods to technological tools, disseminate within educational systems and classrooms” (Ruihong, 2024, p.7). This study, based on the theoretical concept, examines the need for teacher education when integrating an innovative virtual system and new apprenticeship-style learning methods to prepare students for practice in the real world. The adopters, our teachers, are the targeted population. As the ideas of the new technology, teaching methodology, and overall ideas for advancement diffuse, some will become innovators and early adopters while others move slower taking the roles of late majority and laggards. Regardless of how fast the process of adaptation happens for the teachers, the goal of diffusion is confirmed when the new technology and ideas have been accepted. When applying the Diffusion of Innovation Theory, to the twelve teacher adopters interviewed for the study, five main factors tend to influence adopters and determine the degree to which innovation is seen, tested, valued, and understood. Rogers (2003) mentions the five attributes of an innovation that influence its

adoption: relative advantage in comparison to existing technologies, compatibility with the organization workflows and knowledge, complexity to implement, trialability, and observability of the development of the innovation both inside the organization and in competitors. Many times the rate of adoption is judged by the individuals of the targeted population's ability to perceive and comprehend the five characteristics.

Limitations/Delimitations

Limitations

This study has potential limitations. Three participant dropouts lowered the sample size. Lowering the sample size acts as a limitation because small sample sizes could produce inconclusive results. The participants in the study are peers from the same community which could impact their responses implicating bias in the survey feedback. The survey conducted in this research did not yield significant results. Instead, the survey led the researcher to limited responses with duplicated feedback indicating that the limited number of participants from the same community could be cited as a limitation of this study.

The limitations of this research lead to other topics that could be addressed in the future including The Increase In Employment Among students graduating from Apprenticeships.

Delimitations

This study has potential delimitations. The research questions were chosen to examine the need to examine more lived experiences of a more diverse population to include teachers from different areas of expertise and geographical locations. Another delimitation of the study is the Inclusion of another population of interest. For instance, adding a quantitative method to capture the economic impact of students graduating from the online coursework and

apprenticeship program in the community would capture a different group with significant interest in the outcome of this study.

Definition of Terms

The following definitions and operational definitions apply to these terms as used within the study:

Apprenticeship – A term to describe a working relationship between an employee and employer where the employee receives hands-on training to prepare for the actual job, he or she will be doing for pay, preferably within the community in which they live. (Collins, 2006)

Certification – an official document attesting to a level of status or achievement for the completion of teacher education. (Jackson, 2020)

Community college – an educational institution, sometimes called junior college or Technical, Vocational and Educational Training, usually two-year schools that provide affordable postsecondary education as a pathway to higher education and or apprenticeship education. (Security, 2012)

Degree-granting – postsecondary educational institutions that award accredited degrees. (Sparks, 2002)

Economy – the wealth and resources of a country or region, especially in terms of the production and consumption of goods and services. (Allan & Lewis, 2006)

Economic Stimulation – A term describing an increase in community growth through workforce development that feeds wealth back into the area where people live and raise their families. (Allan & Lewis, 2006)

Learning Management System – an online education platform that trains faculty and staff. (Barker & Grossman, 2013)

Modules – a form of teaching resources compiled and arranged in a systematic manner used for teaching staff and students (Barker & Grossman, 2013).

Professional credentialing – A term applied to mark one’s knowledge in a particular professional area. Professionals such as teachers choose to earn and maintain credentials for a variety of personal and professional reasons at different stages of their careers (Grossman, 1990).

Professional development – improving yourself through learning and training to advance your career (Mundry, 2005).

Teacher – For the purpose of this study a teacher is defined as a person who helps students to acquire knowledge, competence, or virtue, via the practice of teaching: schoolteacher, PhD student, business partner, business owner, lecturer, or community professional.

Teacher Education – training referring to programs, policies, procedures, and provisions designed to equip teachers with the knowledge, attitudes, behaviors, approaches, methodologies, and skills they require to perform their tasks effectively online in a virtual learning environment (Grossman, 1990).

TVET – Technical, Vocational, and Education Training institutions are government institutions in Kenya, East Africa used to train, educate, and develop skilled workforce throughout communities in Kenya. These post-secondary institutions are conveniently located within communities and are equivalent to two-year community colleges in the United States. The Technical and Vocational Education and Training institutions are committed to the efficient and effective delivery of its mandate of regulating and coordinating TVET training to assure its quality and relevance.

TVET complies with the TVET Act 2013 and all other applicable statutory provisions and continually improves its QMS based on the requirements of ISO 9001:2015, customer

feedback and appropriate international best practices. TVET shall ensure that this quality policy is communicated, understood, and applied; and that, together with established quality objectives, are reviewed annually. (TVETA, 2020).

VLE – a virtual learning experience includes an online learning system that engages with faculty to help them understand the best methods for teaching and learning soft and hard skills to prepare students for the workforce. The VLE creates an environment of interaction and hands-on (Barker & Grossman, 2013).

Workforce development – education and training of individuals to meet the needs of current and future business and industry to maintain a sustainable competitive economic environment (Coleman, 2022).

Significance of the Study

Through the comprehensive exploration of this study, the research will provide new insights into Teacher Education as an invaluable tool for teachers, providing them with the knowledge, skills, and resources to become effective educators. It helps teachers to understand the needs of their students, the curriculum, and teaching strategies to ensure that the online and traditional classroom is a productive learning environment. Teachers receive the help needed to understand the legal and ethical implications of their work and to stay up to date on the latest educational research. Providing teachers with the opportunity to network and collaborate with other educators, which can help them to share best practices and gain insight into different approaches to instruction, gives them the essential tools and knowledge they need to be successful in the field.

Secondly, a higher appreciation of the importance of teacher education by the community can result from this study. Teacher education can spark community development in many ways,

creating increased student engagement and learning, which can help create a positive environment for all community members. Teachers can use their knowledge to lead community projects and initiatives, such as providing educational resources or mentorship opportunities to students and families in the area. This can help to create a more supportive and enriching environment for everyone in the community. Teacher education can help to create a sense of pride and ownership in the community, as teachers become more involved in the lives of their students and the people in their neighborhoods.

Lastly, the adoption of highly effective and innovative teacher education into the educational system. Teacher education is an important part of any educational system and should be approached with creativity, innovation, and effectiveness. Developing programs that equip teachers with the skills, knowledge, and strategies needed to effectively engage their students in the online classroom is essential. To be highly effective and innovative in teacher education, we must create curriculums that are relevant to the current educational environment and use up-to-date and engaging teaching methods that include technology and virtual learning experiences. We must provide teachers with the necessary resources and support they need to be successful. By investing in our teachers, we can ensure that they are equipped to help their students reach their full potential.

In addition, the overview presented in this research will push for new paradigms, which will be helpful for future discussion of the importance of Teacher Education for teachers in TVETs through Kenya and its impact on the success of students and their preparedness for equitable workforce opportunities to drive economic stimulation in Kenyan communities.

Summary

In conclusion, as an impact leader working to improve equity in education, this research will influence my work and help me strategically think through creative ways to promote success by assessing the workforce needs and assuring teachers are trained to deliver a curriculum that prepares students for prime job opportunities throughout the community. Communities need forward-thinking leaders willing to partner with institutions and corporations to find solutions that give residents access to necessities such as broadband to increase educational opportunities. This research has allowed me to partner with Kenyan schools, teachers PhD students, and members of the community throughout Kenya giving a more precise view of the importance of teacher training and education, and the virtual delivery of apprenticeship learning for workforce development throughout Kenyan communities.

CHAPTER 2: REVIEW OF LITERATURE

This review of literature intends to establish a basis for the study and to provide a perspective on faculty professional development and the advantages of virtual learning in teacher education when preparing students for practical careers through apprenticeship style teaching and learning. Eden et al. (2024), Fütterer et al. (2024) and Pei et al. (2024) explain how online professional development can build a sense of support and community. Many express dissatisfaction with the professional development opportunities made available to them in schools and insist that the most effective development programs they have experienced have been self-initiated (National Research Council, 2006). Research suggests that professional development that engages teachers in instructional inquiry over an extended time through collaborative professional learning communities (PLCs) is effective in improving instruction and student achievement (McConnell et al., 2013).

According to González et al. (2023), Kohnke et al. (2024), and Pasique et al. (2023), effective online teacher professional development is essential to educators to meet the demands of modern education. Specifically, this review's content will support and focus on efforts to utilize the virtual apprenticeship learning model and its connection to workforce development and economic stimulation throughout the community. The development of faculty's professional skills, accessibility, and inclusiveness of virtual learning environments and systems, enhance teachers' interests and encourage peer-to-peer interaction (Abegglen et al., 2023; Venn-Wycherley, 2023). The impact of teachers' digital skills through professional development in virtual learning environments is important as virtual learning environments are changing the way our teachers deliver practical, on-the-job coursework (Elfeky et al., 2023). Connecting apprenticeship-style learning and its ability to cultivate a highly skilled workforce and the

integration of virtual teacher education in apprenticeship programs the results can be transformative for workforce development (Morris, 2023; Sottolare, 2023). In the past, most of these studies cite the continued prominence of one-time, short-duration workshops and presentations mandated by school leaders for all teachers, which are inadequate strategies for bringing about change in teacher practices (McConnell et al., 2013). The opinions and recommendations of professionals in education, technology, professional development, and apprenticeship will also be included in this review to examine the need for modern digital advancements in teacher professional development to complement the diffusion of innovative and technological apprenticeship programs in today's job market.

The result of the literature research is divided into five sections. The first section of the review discusses the perspectives of teachers who engage in professional development. The second section discusses the impact of virtual learning and the advantages of accessible learning experiences in teacher education. The third section explains the history of apprenticeship in workforce development. The fourth section analyzes findings from previous educational research and emphasizes the importance of skilled labor in the economic development of communities. The fifth, and last section is a detailed summary of the literature review.

Perspectives in Professional Development

“As a result of the Great Online Transition (GOT) that occurred during COVID-19, it is increasingly necessary to understand the digital competencies that are required for online and blended learning in the post-pandemic era,”(Gonzalez et al., 2023, p. 55). Perspectives on teacher education and professional development have shifted drastically, suggesting its importance for successful student outcomes (Mundry, 2005).

Over the years, professional development for teachers has been acknowledged and major shifts explained however the increase in activity specifically for online professional development has not been as evident (Meyer et al., 2023). It is significant that tools supporting teacher education and professional development employ approaches that will continue to increase knowledge beyond the initial advancements during COVID-19. Grosman et al. (2002) sought to reveal if teacher education made a difference in student outcomes.

The 21st-century model for teaching and learning has teachers working profoundly to ensure all students learn and schools demonstrate annual yearly progress, according to Mundry (2005). In an effort for schools to support the students who are continuously struggling, professional development for teachers has emerged as a primary resource to assist in improving student success and annual school progress (Darling-Hammond et al., 2017; DeMonte, 2013; Jaeger et al., 2024).

Professional development for teachers in Kenya commonly refers to opportunities for educators to continue learning and improving their skills to enhance their teaching practice. This can include attending formal and informal activities (Njenga, 2023), mentorship support (Echaune et al., 2023), training, participating in online courses, and collaborating with other educators. The goal of professional development in Kenya is to support teachers in staying up to date with the latest teaching strategies and technologies and improving student learning outcomes (Njenga, 2023; Nkundabakura et al., 2024). It allows them to continually grow and develop in their profession, which benefits both themselves and their students. In short, Mundry (2005) found that when it comes to student learning, teaching matters a great deal. Hence, there is a growing acknowledgment of teacher experience and knowledge as the promotion of student learning grows stronger. More experienced teachers are grounded in effective instructional

strategies and more often produce students with higher achievement outcomes. Past research found that “children who were taught by several ineffective teachers in a row were highly disadvantaged and performed lower than similar students taught by several more effective teachers in a row” (Mundry, 2005, p.9).

Professional development for teachers is a critical component in the evolving landscape of education, and Darling-Hammond et al. (2017) indicate that professional learning that translates to changes in practice cannot be accomplished in short, one-off workshops. When comparing teachers who have received meaningful, comprehensive professional development with those who have not, several key outcomes emerge, highlighting the importance of continuous learning and growth in the teaching profession.

Overall, Kenyan vocational teachers who engage in professional development activities often demonstrate improved teaching practices (Njenga, 2023). This adaptability can lead to a more dynamic and engaging learning environment for students, fostering greater student interest and participation. Professional development can also equip teachers with tools to differentiate instruction, meet the diverse needs of their students, and support all learners to achieve their potential. Moreover, the impact of professional development extends beyond teaching strategies to affect teacher confidence (Williams et al., 2023) and job satisfaction. Teachers who participate in ongoing learning opportunities tend to feel more confident in their instructional abilities and more connected to the latest trends and developments in education. This increased confidence can translate into a more positive online atmosphere, where teachers feel empowered to use more innovation in their teaching mechanisms. Additionally, the professional growth and renewal that comes from engaging with peers and experts in the field can enhance job satisfaction, potentially reducing teacher burnout and turnover rates.

The impact of virtual learning on the educational landscape has been profound and multifaceted (Sparks, 2002), reshaping how students acquire knowledge, interact with instructors, and engage with their peers. At its core, virtual learning leverages digital platforms and technologies to deliver instructional content outside of traditional classroom settings, allowing for greater flexibility in terms of when and where education takes place. This has made education more accessible to a diverse range of learners, including those who may have been marginalized or unable to participate in conventional schooling due to geographical, financial, or personal constraints.

However, the transition to virtual learning environments has not been without its challenges. Issues such as the digital divide have come to the forefront, highlighting disparities in access to necessary technology and reliable internet connections among students from different socioeconomic backgrounds. Additionally, the effectiveness of virtual learning has been a subject of debate, with concerns over student engagement, the ability to replicate hands-on or experiential learning experiences online, and the social isolation that may result from a lack of face-to-face interaction.

Despite these challenges, virtual learning has also spurred innovation within education technology, leading to the development of new tools and platforms designed to enhance online learning experiences. Interactive software, virtual labs, simulation-based learning, and adaptive learning technologies are just a few examples of how the field is evolving to address some of the limitations of virtual education. As educators and institutions continue to refine their approaches to online teaching, the potential for virtual learning to complement and enrich traditional educational models remains significant, suggesting that its impact will continue to be felt well into the future.

The shift towards virtual learning has undoubtedly transformed the way we approach education, offering a new realm of possibilities and challenges. As technology continues to advance, so does the way we engage with knowledge and learning. Virtual learning opens doors for students to personalize their educational journey, providing flexibility and accessibility like never before. This shift has enabled a broader range of individuals to partake in learning experiences, breaking down barriers for those who previously faced limitations. From interactive software to virtual labs and adaptive learning technologies, educators and developers are continuously refining online tools to enhance the virtual learning experience. By embracing these advancements and adapting teaching methodologies, to include virtual Apprenticeship Models, the potential for virtual learning to complement traditional education models is vast, promising a future where the benefits of both approaches converge to create a dynamic and enriched learning environment for all.

The Virtual Learning Environment is defined as a set of teaching tools designed to enhance a student's learning experience by including computers and the Internet in the learning process according to largely used in educational environments. According to Barker and Grossman (2013), VLE encourages independent learning and aids in discussions to help develop learning and contributes to creative teaching with access to relevant content, giving flexibility to delivery. A Virtual Learning Environment, according to Dillenbourg et al. (2002), can also be identified as a virtual campus understanding that a campus normally houses an entire program not just a curriculum and smaller courses.

The Advantages of Virtual Learning Environments are plentiful in education. “Virtual education has exploded during the past few years and become even more centric to the life of university and school worldwide during the outbreak of COVID-19 pandemic” (Dung, 2020, p.

45). There are three types of online courses, synchronous, asynchronous, and hybrid.

Synchronous online courses require an instructor and student to interact simultaneously. An

asynchronous online course does not require students and teachers to engage at the same time.

The hybrid online courses work to blend the synchronous and asynchronous formats in the same online course. The offering of virtual education has allowed teachers to expand their professional development and diversify methods of enriching teaching experiences (Dillenbourg et al., 2002).

Virtual learning has been widely utilized and appreciated by teachers and students because of its cost-effectiveness, flexibility, and convenience.

Apprenticeship, Virtual Resources and Labor Market

Apprenticeships allow visible learners an opportunity to combine formal teaching and learning with cognitive skills that foster real-world problem-solving ability (Medical College of Wisconsin, 2022). Through teaching and practical, hands-on experience, students develop crafted skills and processes from a person who has been doing the job longer or a person who performs at a more advanced level at the job. Teacher education is critical in the student's overall success when it weighs heavily on a teacher's experience and educational preparedness rather than academic completion of coursework.

The H.R.447 National Apprenticeship Act of 2021 bill provides statutory authority for the Office of Apprenticeship (OA) within Labor. The OA's responsibilities include (1) supporting the development of apprenticeship models; (2) recognizing qualified state apprenticeship agencies, and operating apprenticeship offices in states without a recognized agency; (3) providing technical assistance to state agencies; (4) periodically updating requirements for each occupation in the apprenticeship program and determining whether to

approve new occupations for the program; (5) promoting greater diversity in the national apprenticeship system; and (6) awarding grants provided by this bill.

Implication and Implementation of the National Apprenticeship Act 2021 is explained in summary in the act itself. H.R.447 describes apprenticeship as a workforce development strategy that trains a worker in a recognized occupation using a structured combination of on-the-job training and related instruction. In February 2021, the House passed the National Apprenticeship Act which the bill would build on existing administrative structures and policies that have been established through a combination of statute, regulations, and administrative action (Collins, 2021). Title I of the bill focused on the establishment of administrative and program standards. At the system level, Title I would codify the roles of the Office of Apprenticeship (OA) at the U.S. Department of Labor (DOL) and state-level apprenticeship units (Collins, 2021). At the individual program level, Title I would establish standards for individual registered apprenticeship programs, pre-apprenticeships, and youth apprenticeships. It would also establish policies regarding reporting and oversight of these programs and related research. Title II of the bill would authorize a series of competitive grants to support the expansion of apprenticeship as a workforce development strategy. The grants would be available to eligible partnerships to engage in specified activities with the intent of increasing the number of apprenticeship programs and participation in such programs (Collins, 2021).

The “Impact of Apprenticeship in Today’s Economy,” according to Public Consulting Group (PCG), the effects of apprenticeship programs on the economy are explained. Apprenticeships have proven to be powerful tools for the economy in the United States for many years with documented successes however they have never been adopted as an employment model outside of traditional trades such as construction and manufacturing (PCG, Human

Resources, 2021). Rather than outsourcing jobs, apprenticeships can help companies and organizations close workforce gaps, reduce turnover, and increase productivity while cultivating a more diverse, equitable, and inclusive work environment (PCG, Human Resources, 2021).

Apprenticeships and the Labor Market

According to the US Department of Labor (US DOL), apprenticeships in the labor market, 94% of apprentices who complete their programs are retained long-term by their employers and 87% of apprenticeship sponsors reported that they would strongly recommend registered apprenticeship programs (PCG, Human Resources, 2021, p. 1).

The Future of Apprenticeships is in teachers' hands to adopt the model and continue to implement it into current curriculum programs. The original National Apprenticeship Act called for labor standards to safeguard apprentices by extending contracts to include safe practices and brought employees and employers together to encourage communication of the laws however the most current bill authorizes a more coordinated effort to coordinate practices under a regulated guideline (Collins, 2021).

Author Jon Marcus explains how intermediaries connect education to work opportunities when there are diverse conditions following circumstances of global crisis. Apprenticeships can be an important resource for finding and training skilled employees. It is an opportunity to build a pipeline of talent who have received both the formal education and the practical experiences needed to successfully fill the many open roles through communities. “Intermediaries--also referred to as bridge builders, boundary spanners, conveners, and other names--fill the critical role of connecting all the parties in the system to empower people with the skills required in the labor force which include employers, educators, workers, and prospective workers” (Marcus, 2020, p. 58).

Virtual Apprenticeship Resources

In one article published by the Partnership on Inclusive Apprenticeship office in the U. S. Department of Labor (2023), it is explained how and why virtual work environments have become the norm worldwide. Many work environments have had to rethink how they deliver training and curriculum while shifting to an online format that continues to deliver high quality and achieve maximum results. During COVID-19 most businesses switched to remote work to protect employees' health. Remote virtual work created different circumstances including many benefits for which employees can learn and grow. Employers can create more diverse and inclusive workplaces, help mitigate risk, provide more flexibility for apprentices, provide more flexibility for employers, offer opportunities to tailor learning experiences and support participation by smaller companies who find it difficult to participate and onboard apprentices due to cost. By educating staff and putting the right structures in place, creating virtual apprenticeship programs can be successful, inclusive, and beneficial to the community.

Allan and Lewis (2006) explored the benefits and challenges of using a virtual learning community (VLC) as a workforce development vehicle. They argue that VLCs provide a flexible and responsive method for workforce development (Allan & Lewis, 2006). Although this paper clarifies the need for virtual learning communities in workforce development, the findings indicate the need for skilled facilitators to maintain work/life balance, and flexibility and establish relationships with employees who need access to technology-trained professionals.

According to Hassan and Gupta (2000), computers drive today's workforce. Online access is the way of the present and future of workforce development and employees who are not computer literate are being trained by employers via online programs. Computers are not going

away, only growing stronger in the workforce. Every employee must have some computer knowledge to successfully meet standards.

In another study, the authors examined “the effect of skill-biased technological change as measured by computerization on the recent widening of U. S. educational wage differentials” (Autor et al., 1998, p. 1). When incorporating computers into the labor market certain skill sets were no longer optional as technology drove jobs to hire more skilled workers trained to handle the job. Ultimately, trained, skilled workers did more in the industry than employees who were not technologically skilled.

In *Partnerships for a Future-Ready Workforce*, the authors explain why corporate partnerships are necessary to grow communities and develop a skilled workforce. Employers seek employees with both job-specific skills and employability skills to meet their current and future business needs. Given these shared interests, colleges, and businesses have a clear opportunity to form close partnerships to shape postsecondary education and workforce training (Beer et al., 2018, p. 2).

Summary

In conclusion, the comparison between teachers who have received professional development and those who have not underscores the value of professional growth opportunities in the teaching profession. Not only does professional development foster improved teaching practices and teacher well-being, but it also plays a critical role in enhancing student learning and achievement. It is important to set the stage for powerful professional learning and create schools that motivate continued professional development. This book stimulates discussion and encourages conversation as a learning tool that deepens the understanding of the overall subject. Sparks suggests the book engages teachers and principals in professional learning that is

standards-focused, and intellectually rigorous and provides a culture and support structure that puts professional learning, and collegial sharing of innovative ideas and practices at the forefront.

In the words of Dr. Ed Massey, “To be a good leader, you must give up what you are so you can transform into what you will become.” All the articles researched speak to the changes necessary for teachers to engage in professional development opportunities to continue crafting their skills and become leaders in their schools and support colleagues and students. Teacher education in Curriculum and Instruction, software tools, and professional development lean towards leadership development and create ROI within the community.

CHAPTER 3: METHODOLOGY

This qualitative narrative inquiry study examines the importance of teacher education in a virtual vocational learning environment. The researcher obtained information from the perspective of the individuals who share lived experiences of training and professional development as their new knowledge and collective efforts enhance virtual classroom engagement. This chapter gives a detailed overview of the methodological approach and design in the study and descriptions of the researcher's role. An explanation and detailed components of the research design is provided, and the order of the research process is described. This chapter also includes an analysis of the stories and experiences of teachers who were trained for apprenticeship-style learning in a virtual learning environment. Understanding their stories is important because teacher professional development directly impacts our student body which drives the workforce and economic development in most communities. This study addresses the problem by uncovering the professional development teachers need around coursework development aimed at improving the workforce to improve economic development in communities through innovative online education and apprenticeship driven by local institutions. At this stage in the research, the online course instruction and curriculum is defined as the myEOD Global Online Education and Apprenticeship Program providing quality education and training for skills development relevant to learners, employers, industry, and the job market.

Research and Design

This study used a qualitative narrative research approach to determine the impact of teacher education on the outcome of student work development in the community in which they live. Teachers were selected to participate in the study based on their ethnicity, level of education, and their current position in teaching and learning. These contextual themes were

used to categorize participant demographics and verbatim responses to research questions on digital online training outcomes. In this study, “Qualitative research can be defined as research that draws from natural language data in order to understand the particularity and variation of individual experience and its meaning” (Sevilla-Liu, 2023, p. 210). All teachers selected to participate taught in some capacity, either in the traditional school setting or online in a virtual learning environment. The teacher, in this study, is defined as “a person who helps students to acquire knowledge, competence, or virtue, via the practice of teaching”(Wikipedia, 2024, p. 1). The teachers' lived stories were analyzed using structured interview questions to determine the mindset and attitudes of the teachers and how they felt the teacher education they received in a three-day workshop impacted their professional development. Narrative research can relate to all different types of events and stories, and be used to transfer the experiences and knowledge of a specific group to others (Bair et al., 2024; Fernandez-Nieto et al., 2024; Maharaj-Sharma, 2024).

The stories of the selected teachers in the study were analyzed using Thematic Coding, commonly used in narrative research (Cernasev & Axon, 2023). The ten qualitative narrative themes allowed the researcher to determine similarities and differences between the participant's responses. It allowed the researcher to group the responses so alignment between the teacher's responses was clear. Each participant was given a pseudonym to protect their identity and keep the responses confidential. The theme noted the number of contributing participants, the number of answers for each topic assigned, and the quotes formed from the overall theme.

Narrative Inquiry Design

According to Connelly et al. (1997, pp. 665-674) “teacher knowledge research is part of a revolution in how educators think about classroom practice.” One way to explore this is through a narrative inquiry. In a narrative inquiry, recorded lived experiences of individuals or small

groups are collected for the research study. The recorded interviews reveal the perspective of the experience from the individual's recollection (Hiratsuka, 2022). Narrative is both a phenomenon and a method (Connelly & Clandinin, 1990). Narrative inquiry, also called narrative research, is the study of people's experiences. This study is a collective narrative of ten teachers' lived experiences for which real-life experiences are documented. The experiences shine light on these individuals' perception of virtual professional development learning environments and the impact they feel virtual professional learning environments have on teachers' professional practices and student preparedness for workforce development within their community.

This narrative inquiry of teacher experiences looks at virtual professional development environments as a “research strategy” to discern whether teachers see virtual professional development environments as helping improve teachers' professional practices and student readiness for the workforce. The unit of analysis was the virtual professional learning environment. If virtual professional learning environments are implemented correctly with abundant training options, will teachers' perceptions of virtual learning be positive toward influencing teacher professional practices? Narrative inquiries look at the uniqueness and commonality of people and programs (Stake, 1995). Through this study, a probe was conducted into teachers' views and understanding of virtual professional learning environments and their perception of how it affects student preparedness for the workforce. A collective narrative was the appropriate approach for this study because it used teacher profiles to analyze perceptions teachers have of professional learning communities and their effect on teachers' professional practices.

Stories in narrative inquiry help lead the researcher toward a better understanding of phenomena. “When engaging with narrative inquiry, we become co-participants to co-construct

the knowledge alongside the participants across places and times,” explains (Lindsay & Schwind, 2016, p.14). One advantage of using this method is the unique relationship between the researcher and participants while allowing the participants to tell their stories (Crabtree & Miller, 2023). The profiles allow the participants to describe their view of reality and through these encounters, the researcher can better understand participants’ actions (Crabtree & Miller, 2023).

The Site

The study took place at the University of Nairobi, Nairobi Kenya within the Department of Diplomacy and International Studies, which has participated in the myEOD Training for professional virtual learning environments. This was done to ensure that it is the expectation of the local community and the university graduate school officials to implement a reputable, professional virtual learning environment and to ensure that the university and the surrounding districts had access to various levels of myEOD training ongoing in the implementation of virtual professional learning environments if needed. All participants were trained along with leadership officials at the university level in an apprenticeship program. The common philosophy of myEOD, adopted from Driving Technology and Innovation Daily’s, shared principles of online education: Build Relationships, Collaboration, Emphasize deadlines, Offer alternatives, Peer feedback, Prompt feedback, Respect, and Set high expectations (Cook, 2021).

The University of Nairobi’s Department of Diplomacy and International Studies was selected as the site from which to draw the sample(teachers). The University of Nairobi has expectations that individuals participating in professional virtual learning environments training through The Department of Diplomacy and International Studies are in good standing within the community and will work to increase knowledge and advance practices for the benefit of all

students and community partners. Second, ten teachers were chosen. The teachers were chosen because they were one of the following: veteran teachers at the university, student teachers preparing for education careers, lecturers, business partners, or community professionals preparing students for the workforce through virtual training. These teachers had completed teacher and professional development training in their areas of expertise before and understood the virtual training received was to improve practices of virtual teaching using apprenticeship style learning in a virtual learning environment.

Participants and Sampling Method

This study used purposeful sampling in which the subjects were chosen by the researcher based on judgment of their typicality (Cohen & Manion, 2007). To further describe purposeful sampling, Patton (2002), defines it as criterion sampling “picking all cases that meet some criterion” (p. 243). The criteria used to determine the samples in this study are they must have teaching experience and intend to practice teaching students in some respect that will allow them to use professional virtual environments to educate students.

In this study, ten teachers from various backgrounds and teaching areas of expertise, have made the transition from face-to-face to teaching in a virtual learning environment. They instruct students who are seeking education to become a viable asset in their community’s workforce. Teachers were invited to participate in the study with the hopes of having a minimum of ten teachers agree to participate, and they did.

myEOD Apprenticeship Program

The myEOD Apprenticeship Program is a two-year academic and on-the-job, training with an employer. Participants apply for the apprenticeship program through a rigorous application process, interview with the program staff, and then selected to participate in the

program. The myEOD Global apprenticeships offer a unique opportunity for individuals to gain valuable skills and experience in an international setting. We are here to provide the necessary guidance, academic resources, skills training, and licensure that will place students on the road to a lucrative and well-balanced career. Here are a few things to know about our global apprenticeships:

- **Cultural Immersion:** myEOD Global apprenticeships provide a chance to immerse oneself in a new culture, language, and way of life. This experience can broaden one's perspective and foster a greater understanding of different customs and traditions.
- **Professional Development:** Participating in myEOD's Global Apprenticeship Program can enhance one's professional skills and knowledge in a specific field. Working in a different country allows apprentices to learn from experts in the industry and gain a global perspective on their chosen career path.
- **Networking Opportunities:** myEOD's Global Apprenticeship Program offers a unique opportunity to connect with professionals from around the world. Building a global network can open doors to new career opportunities and collaborations in the future.
- **Personal Growth:** Living and working in a foreign country can be a transformative experience that challenges individuals to step out of their comfort zone and adapt to new environments. This personal growth can lead to increased self-confidence and resilience.
- **Cross-Cultural Communication:** myEOD Global Apprenticeship program provides a platform for individuals to develop their cross-cultural communication skills. Learning to navigate different communication styles and norms is essential for building successful relationships in a globalized world.

Overall, myEOD Global Apprenticeship Program offers a valuable learning experience that can shape one's personal and professional growth in profound ways.

Instruments Used in Data Collection

This research employed structured interviews. Structured interviews consist of “one in which the content and procedures are organized in advance” (Cohen & Manion, 2007, p. 309). In structured interviews, the researcher has little freedom to make changes to the wording of the questions (Cohen & Manion, 2007). Structured interviews are considered better because they provide a standardized format for asking questions, which allows for more objective and reliable evaluations of candidates. This type of interview also ensures that all candidates are asked the same questions in the same order, which helps to eliminate bias and ensure fairness. Additionally, structured interviews are typically more efficient and effective.

Cohen and Manion (2007) further state that three attributes need to be present in interviews: trust, curiosity, and naturalness. Trust allows the interviewer and interviewee to build a relationship free of personal egos and focus on a common goal. Curiosity is related to inquisitive thinking and addresses the desire to know other people's views, interests, and perceptions. Naturalness is the ability of the interviewer to be unpretentious to get a clear picture of the interviewees' thoughts. Humbling oneself, to study the suggestions of the interviewees from an unobstructed view. The data is then used to substantiate or reject the hypothesis (Cohen & Manion, 2007). The interview questions are listed in Appendix A. The researcher developed the interview questions from the research questions. In addition, the interview questionnaire has some questions that provide the researcher with background and demographic information about the participants (Fitzpatrick et al., 2004).

Data Collection

The following steps were used to collect data for this study:

- Step 1: Identify the research question and objectives for the study.
- Step 2: Select the appropriate sampling method.
- Step 3: Choose the data collection tool, the interview.
- Step 4: Develop a data collection plan.
- Step 5: Pilot the data collection tools and make any necessary adjustments.
- Step 6: Collect data according to the plan.
- Step 7: Clean and organize the collected data for analysis.

Interview Preview

The interview preview is described in detail to explain precisely how the researcher conducted data gathering. To set up an interview, the researcher first determined the date and time that worked for both parties. Then, communicate the location of the interview, whether it will be in-person or virtual, and provide any necessary details such as video conferencing links and make sure to confirm the location with the interviewee before the interview to avoid any confusion.

Interview Notes

The researcher took notes during and after each interview. Notes were separated into two columns. One column for notes giving further evidence of the participant during the interview such as body language, notes on tone of voice, mood, etc. In the second column, recorded notes of the researcher's reflection on the interviews were noted.

The interviews were set up to allow the participants to share their perceptions and professional experiences working in virtual learning environments while providing a safe space

to encourage productive, usable feedback. This allowed the researcher to see if the teachers' perceptions of improved practices have a direct impact on their training and work in virtual learning environments. The interviews were conducted after school from 35 minutes to 45 minutes per individual educator. If an interviewer could not meet due to illness or leave, a phone interview was scheduled and conducted later. The interviews were recorded using ZOOM video conferencing.

Interview Questions

1. Do you feel that you have gained or lost some professional autonomy working in professional virtual learning environments? If so, what has changed and how do you feel about that?
2. Why have you stayed in education and continued to teach since the transition from traditional face-to-face to virtual teaching and learning?
3. How do you feel about virtual professional development? Do you feel that it works and is beneficial? Is virtual professional development accessible to you and your team?
4. Would you thrive if your institution provided a more structured VLE?
5. Do you feel that VLE's impact all teachers equally or does it impact ILTs, lateral entry, novice, and veteran teacher differently?
6. How effective do you feel VLE's are in changing negative attitudes and in helping newly hired teachers to continue teaching at the school?
7. How effective do you think VLE's are in learning ways to engage better and reach more students in practical workforce development?
8. What do you feel is the most useful component of VLE training?

9. What do you feel is the least useful component of VLE training?
10. Does VLE training minimize or increase teacher stress and burnout?
11. If VLE's were eliminated at your school, would you seek to transfer to another school that has a VLE?
12. Does the existence of a VLE at your school make the school a more engaging place to teach and learn?
13. Are you more engaged or communicative since your VLE training than before VLE training was implemented?
14. In what ways, if any, has working in VLE training affected or changed your professional practice?

The interview questions came from the researcher's experience with virtual learning environments and staff development. The researcher has participated in monthly implementation training of virtual learning environments which gives insight into the components of virtual learning environments and has attended several professional virtual learning environments and curriculum development workshops delivered by higher learning professionals. The researcher has participated in virtual learning environments at the university administrative level and oversees professional virtual learning environments for non-profits, and community organizations. Table 3.1 follows and describes the alignment of the Interview subject matter and the research investigation research questions.

Table 3.1*Interview and Research Question Alignment*

Research Question	Interview Question
<p>Research Question 1: What are the lived experiences of TVET instructors who received teacher education to transition from traditional classroom experiences to an online virtual learning environment apprenticeship model to better serve students?</p>	<p>Interview Question 1: Do you feel that you have gained or lost some professional autonomy working in professional virtual learning environments? If so, what has changed and how do you feel about that?</p> <p>Interview Question 2: Why have you stayed in education and continued to teach since the transition from traditional face-to-face to virtual teaching and learning?</p> <p>Interview Question 3: How do you feel about virtual professional development? Do you feel that it works and is beneficial? Is virtual professional development accessible to you and your team?</p> <p>Interview Question 4: Would you thrive if your institution provided a more structured VLE?</p> <p>Interview Question 5: Do you feel that VLE's impact all teachers equally or does it impact ILTs, lateral entry, novice, and veteran teachers differently?</p> <p>Interview Question 6: How effective do you feel VLE's are in changing negative attitudes and in helping newly hired teachers to continue teaching at the school?</p>
<p>Research Question 2: What are TVET instructors who transitioned to an online LMS apprenticeship model perception of the impact of virtual teaching and learning on student workforce development outcomes?</p>	<p>Interview Question 7: How effective do you think VLE's are in learning ways to engage better and reach more students? And is it practical workforce development?</p> <p>Interview Question 8: What do you feel is the most useful component of VLE training?</p> <p>Interview Question 9: What do you feel is the least useful component of VLE training?</p> <p>Interview Question 10: Does VLE training minimize or increase teacher stress and burnout?</p> <p>Interview Question 11: Does the existence of a VLE at your school make the school a more engaging place to teach and learn?</p> <p>Interview Question 12: Does the existence of a VLE at your school make the school a more engaging place to teach and learn?</p> <p>Interview Question 13: Are you more engaged or communicative since your VLE training than before VLE training was implemented?</p> <p>Interview Question 14: In what ways, if any, has working in VLE training affected or changed your professional practice?</p>

Data Analysis

The purpose of data analysis is to gather useful information to answer the research questions in the study. The research questions were developed to help gain insight into the attitudes of the participants in the study about virtual learning environments. The research and interview questions came from existing research by Bhat (2023) and (White, 2014) and from the researcher's own professional experience, worked into the context of this study's purpose. Two research questions formed the foundation of the study: (1) What are the lived experiences of instructors who received teacher education to transition from traditional classroom experiences to an online virtual learning environment apprenticeship model to better serve students preparing for the workforce? (2) What are instructors who transitioned to an online VLE apprenticeship model perception of the impact of virtual teaching and learning on student workforce development outcomes?

To answer these questions, the researcher interviewed ten participants. The interview contained fourteen questions. Questions in the interview correlate to the research questions (See Appendix A for the list of interview questions). Research Question #1 will align with interview questions 1, 2, 3, 4, 5 and 6. The responses from the interviews will allow the researcher to determine if teachers perceive that working in virtual learning environments affected their decisions as professionals. The questions will give insight into whether they feel professional virtual learning environments have an impact on their professional practices. Research Question 2 is designed to explore the possible impact of teacher education on educators and student preparedness for workforce development in their communities. The researcher examines if collective planning, data analysis, digital learning tools, and other components of virtual learning environments improved the professional development of teachers and thus impacted student

preparedness for the workforce in the community. The theory is teacher education in virtual learning environments that use apprenticeship style or hands-on learning techniques prepare students for the workforce within their community. Questions 7, 8, 9, 10, 11, 12, 13 and 14 are linked to this Research Question #2. In addition, the researcher transcribed the data to from the interviews into a document. The data was separated into specified groups. The groups were coded using the following segments: impact of virtual learning environments on the teacher's professional development, virtual learning environments as an agent of change, components of virtual learning environments, effects of apprenticeship style learning, and perceptions of teacher education in virtual learning environments on students. The process continued until all data was coded and themed.

The information gathered during coding shaped the findings by highlighting themes repeated by the participants. Research shows items that seem to be the most important to the participants have formed the categories for the coded segments. The information gathered in each segment was used to answer the research questions for this study.

Limitations of the Methodology

This study had the following limitations:

Funding for institutions has been a huge limitation countrywide. The Board of Governors has not budgeted for public institutions to receive funding for online education opportunities and all funding must be raised from private entities. Lack of funding makes it impossible for all public institutions to incorporate the online apprenticeship model of teaching and learning into their instruction.

This study could also be improved by having an increased sample size and adding another group of participants such as students so there would be a more balanced view of results including placements of graduates into apprenticeships throughout the community.

Adding a quantitative method to capture the economic impact of students graduating from the online coursework and apprenticeship program on the community would be beneficial however is a limitation in this study. This design was limited to the data set and any findings or recommendations were not generalizable to all virtual learning environments nor to all teachers. Depending on the successful implementation and operation of the VLE, different VLE's may or may not impact teachers' experiences. The narrative study method also can be seen as a limitation because of the inability to draw cause-and-effect relationships or test hypotheses. Teachers may not have felt comfortable telling how they feel because the researcher is a foreigner and not a resident or citizen of their country. The country's civil unrest and Citizen Protest Day may have affected the morale of the teachers. Protest Day can be viewed as a stressful time where citizens are asked to stay in their homes and not attend classes, work, or activities outside due to the increased chance of violence in the streets.

Summary of Methodology

To summarize, this is a qualitative narrative study of teachers referred by the Department of Diplomacy and International Studies at the University of Nairobi in Nairobi, Kenya, East Africa. Kenya faces high youth unemployment, which is attributable to inadequate skills and training, as well as limitations to workforce opportunities. With 80% of Kenya's population below 35 years, the skills mismatch has contributed to low admittance of graduates into the labor market and a high youth unemployment rate. As participants of this study, ten educators agreed to attend teacher education training to the impact of innovative virtual teacher education when

integrating practical learning that can be used immediately on the job. While training teachers effectively to train students to become an instant addition to the workforce in their community, economic growth can be offered at a faster rate. The researcher collected the information and used the results to come up with the findings presented in Chapter 4.

Trustworthiness and Validity

Trustworthiness and validity are critical elements in assessing the quality and reliability of a research paper's data. Trustworthiness refers to the degree to which the study's data and findings are dependable and credible. To establish trustworthiness in this research, often usage of various strategies such as triangulation, member checking, and providing a clear and transparent methodology. Triangulation involves using multiple data sources, methods, or theories to cross-verify results. Member checking entails sharing findings with participants to ensure accuracy, while a transparent methodology allows others to understand and replicate the study.

The researcher documented all the steps involved in the research process building a detailed report as outlined in the study procedure and utilized measures of validating the data by triangulating all data sources (Creswell, 2013, p.19) for categories, patterns, and themes. In addition, the researcher used member checking to obtain participant feedback to ensure interpretative accuracy (Ary et al., 2014, p. 533). After the interviews were transcribed, the researcher presented participants with a written account to obtain their agreement with the reported information. All data sources have been kept secured, stored electronically, and kept on secure hard drives accessible solely to the researcher. The data sources and related materials will not be kept following the study and will be destroyed.

Validity, on the other hand, pertains to the accuracy and truthfulness of the data and whether the research truly measures what it claims to measure. Validity can be broken down into

several types, including internal validity, external validity, construct validity, and content validity. Internal validity focuses on the extent to which the study accurately establishes a cause-and-effect relationship, free from confounding variables. External validity examines whether the findings can be generalized to other contexts or populations. Construct validity assesses whether the tools and procedures used in the research measure the theoretical construct they intend to measure. Content validity ensures that the research covers the entire range of the concepts being studied.

To enhance both trustworthiness and validity, this research has been meticulously designed and utilizes appropriate sampling techniques, and sizes and applies data collection and an analysis method. Peer review and replication studies will play essential roles in verifying the trustworthiness and validity of research findings. By adhering to these principles, researchers can produce high-quality, reliable data that contributes meaningfully to their respective fields.

CHAPTER 4: RESULTS

This chapter reports the findings of this qualitative case study, which includes data gathered from ten participant's interviews and survey feedback from a three-day workshop spanning several topics training teachers in virtual vocational teacher education. These findings provide answers to the research questions posed:

1. What are the lived experiences of instructors who received teacher education to transition from traditional classroom experiences to an online virtual learning environment apprenticeship model to better serve students?
2. What are instructors who transitioned to an online LMS apprenticeship model perception of the impact of virtual teaching and learning on student workforce development outcomes?

Participant Demographics

The following is a review of the participant demographics, their respective and collective responses to interview questions, and an analysis of a three-day teacher education workshop that serves as a strategic training session for virtual vocational teacher education. The ten participants in this research are academic leaders serving throughout the community within Kenya, West Africa. All the participants serve in teaching capacities that engage and impact students within their respective areas of expertise. Four participants are adjunct professors, however, in most cases, they are full-time permanent employees in their areas of expertise and teach in an apprenticeship style to students in their respective communities the skills necessary for the area's workforce. The participants, four males and six females, work and live in Kenya. The breakdown of demographic data representing the participants is shown in Tables 4.1 and 4.2.

Table 4.1*Participant Demographics: According to Contextual Theme*

Participant's Identification Number	Contextual Theme: Works in Education (Yes or No)	Contextual Theme: Ethnic Origin (by Continent)	Contextual Theme: Highest Level of Education
P1	No	African	Juris Doctorate
P2	Yes	African	Doctorate
P3	Yes	African	Doctorate
P4	No	African	Bachelor's
P5	No	African	Bachelor's
P6	Yes	African	Doctorate
P7	No	African	Bachelor's
P8	No	African	Bachelor's
P9	No	African	Bachelor's
P10	Yes	African	Master's
P11	Yes	African	Master's
P12	Yes	African	Master's

Table 4.1 provides detailed and in-depth qualitative narrative thematic data on the research investigation Participant's demographics. The initial "Participant Codes" (as Identification Numbers P1 through P12) are provided in column one. More detailed information is provided as "Qualitative Narrative Contextual Themes" related to the following topics: "Works in Education," "Ethnic Origin," and lastly "Highest Level of Education".

Table 4.2*Participant Demographics: According to Contextual Theme*

Participant's Identification Code	Contextual Theme: Continent of Origin	Contextual Theme: Identified Gender	Contextual Theme: Current Title/Position
P1	African	M	Attorney
P2	African	F	Professor
P3	African	F	Adjunct Professor
P4	African	M	Community Leader
P5	African	M	Business
P6	African	F	Professor
P7	African	F	Community Leader
P8	African	F	Government
P9	African	F	Business
P10	African	M	Student Teacher
P11	African	M	Teacher Role
P12	African	F	Teacher Role

Table 4.2 provides detailed and in-depth qualitative narrative thematic data on the research investigation Participant's demographics. The initial "Participant Codes" (as Identification Numbers P1 through P12) are provided in column one. More detailed demographic information is provided as "Qualitative Narrative Contextual Themes" related to the following topics: Continent of Origin, Identified Gender, and lastly Current Title/Position.

To maintain the confidentiality of all participating individuals, each participant was assigned a numerical representation as a "Participant Identification Code," P1 through P12. The workshop participants were assigned to either focus group A or B.

Research Findings

Immediately following the Institutional Review Board's unconditional approval, emails were submitted to all participating individuals in teacher roles. The teachers responded agreeing to attend a three-day virtual vocational teacher education training geared to enhance professional development. In addition to the three-day training, teachers also agreed to a formal assessment of the training to determine the impact of their lived experiences. Following the training, each participant filled out a survey and set up a one-on-one interview for further analysis. Following is a summary of participant verbatim responses corresponding either directly, or indirectly to the guiding research questions. Tables 3 and 4 display participant responses relative to each guiding research question.

Research Question 1. What are the lived experiences of instructors who received teacher education to transition from traditional classroom experiences to an online virtual learning environment apprenticeship model to better serve students? Participants' verbatim responses to questions posed in the individual and focus group interview protocols included language that denotes inclusive practices such as collaboration, shared governance, belongingness, and descriptions of working relationships.

Participant responses corresponding to Research Question 1 established the fact that these teachers appreciate and welcome professional training and unified engagement of other professionals in a virtual vocational online environment. In many instances, teaching philosophies and methods preferred the online environment. Instructors spoke about the importance of fostering a sense of community and engagement in the virtual classroom, which required different techniques than those used in face-to-face settings. They highlighted creative approaches to online discussions, collaborative projects, and the use of multimedia resources as

key to maintaining student interest and participation. Moreover, the transition to an online VLE apprenticeship model underscored the value of flexibility and adaptability, not only in teaching methods but also in addressing the diverse needs of students. This shift has led to a more student-centered approach, where personalized learning paths and feedback mechanisms are integral to the educational process.

Overall, the lived experiences of these instructors reflect a journey of adaptation, learning, and growth. Through their teacher education and transition to an online apprenticeship model, educators have developed a deeper understanding of how to leverage technology to enhance learning outcomes. Despite initial challenges, the shift opened new avenues for innovation in teaching and learning, fostering environments where instructors and students can thrive in an increasingly digital world.

As indicated in Table 4.3, all participants in the study agree that instructors who received teacher education to transition from traditional classroom experiences to an online virtual learning environment apprenticeship model to better serve students will have a positive impact on the teachers and the students for better academic preparedness. Table 4.4 displays participant responses relative to Research Question 2 as a guiding research question.

Table 4.3*Research Question 1 Verbatim Responses*

Participant Code	Contextual Theme: Digital/Online Training Outcomes Verbatim Responses
P1	In my experience, it has been nice to be remote and have access. However, if teachers had training for the transition, we would be more effective for student's career preparation.
P2	Currently, this type of teacher education is nonexistent. We have never been trained to transition from face-to-face to online teaching and learning. The impact of proper training would benefit our students and overall well-being of the teacher career
P3	I was not professionally trained to teach using specific methods to organize my course for more engagement online. This content is needed and support for my teachers is needed.
P4	This course training for career and professional development I can implement it immediately.
P5	All the sections were helpful and useful as I prepare my classes for virtual learning.
P6	I found all sections of the course useful. Career and professional development help teachers inform and prepare students for what is expected in the market.
P7	I found the career development and use of social media tools more impactful in my transition because these are some of the key areas I would like to include with more emphasis.
P8	Learning how to strategically organize my course, questions and content was impactful. I learned that there is order and requires skill and development ongoing to master online learning and engagement.
P9	Career development is the missing link in Kenya. We need to link the lecturer to the work force.
P10	All sections of the course have been useful for transitioning. I also learned the way one treats their audience determines how much you will learn from them. Understanding your audience is key to audience participation and overall development through engagement.
P11	All aspects of the training taught are key and starting implementation will be useful. Most important is the learning of teaching students how to write their profiles to position them for the market. The idea of professional certifications so students will gain from short courses is good online training
P12	Each and every aspect of the course has been useful to help the transition from traditional to face-to-face teaching and learning. Currently teaching virtual and using course information like professional development and adding accreditation to our CV's, can improve teacher and student development.

Research Question 1 Narratives

Participant 1 – Jim

Jim is an outstanding citizen with a passion for his community. He has been an Attorney for over fifteen years serving in both the public and private sectors. Jim works to provide students with opportunities to develop skills within the legal area, lending his legal expertise to develop a curriculum and teach a legal course. Although Jim has enjoyed his remote capabilities, he has found that there are some restraints to working remotely. Jim expressed his frustration with the lack of stable wifi in some remote areas outside of the city which caused some students to either forfeit the class or remain in the city at late hours to assure access and connection. Jim has also found it difficult to connect with his students virtually to spark the same interest as he once did when students were face-to-face. Jim said, “It has been nice to be remote and have access, however, if teachers had training for the transition, we would be more effective for student's career preparation.” To understand how additional teacher education would be beneficial, I asked, “How effective do you feel VLE’s are in learning ways to engage better and reach more students in practical workforce development? Profoundly, Jim suggested that the VLE is ultimately not the problem but the lack of teacher education for effective student outcomes was the major issue. As a participant in the teacher education provided for this study, Jim found the course effective in learning ways to engage better and impactful for virtual teaching and learning.

Participant 2 – Bonita

Bonita is a Professor. She has been working for her university for six years and experienced the heavy impact on higher education during the global pandemic, COVID-19. She recalled the urgency of the university to remove the students and quickly get them to their home

destinations if assistance was needed. Tragically, the pandemic continued to keep students away from residential education throughout the country for an extended period. As a professor, Bonita was ecstatic to participate in the virtual teacher education workshop. She felt the program was needed and overdue for teachers who have been inquiring about additional professional development for online courses. Bonita said, “Giving teachers new, innovative ideas and ways to deliver lessons to students is important to the overall success of the course.” The excitement of receiving new tools and resources to arm Bonita as she prepared for her virtual classroom was shared between Bonita and other participants. The continuous commitment to improvement and learning innovative approaches to virtual teaching was reaffirmed in Bonita's dedication to attending the multi-day training.

Participant 3 – Olivia

An Adjunct professor, Olivia, is working in higher education and continues to go to school to complete her doctorate in education. Olivia remembers the difficult times for students during the pandemic but has only experienced the post-pandemic impact of teaching virtually since she has never taught in a traditional, face-to-face classroom setting. Her students have remained online after the university reopened to the students leaving her and other brand new Professors to the single experience of virtual classrooms. Olivia described the virtual environment as simpler but cold and uninviting. She expressed, “I was not professionally trained to teach using specific methods to organize my course for more engagement online. This content is needed and support for my teachers is needed. Overall, the gain of the new knowledge outweighs the negatives and all of the professional training will be used to increase student engagement and hopefully reach more students in practical workforce development.

Participant 4 – Roscoe

Roscoe, a Community Leader, has been allowed to teach in partnership with the university in a program that works to reach students in rural areas with less opportunity for an education. Roscoe feels he has gained professional autonomy in working in the professional virtual learning environment. He is excited about the opportunity to connect with students and serve in an area in which he feels he is experienced in teaching. Being present during the multiple-day virtual teacher training gave Roscoe the tools and resources to engage better and reach more students for practical workforce development. Feeling that the training was useful in every area, Roscoe expressed his gratitude for the innovative tools that he could implement immediately that would prepare students and help stimulate positive attitudes.

Participant 5 – Charlie

Charlie is a business owner from a rural area outside the city. Charlie has the opportunity to teach an entrepreneurship class while mentoring students interested in pursuing small business as a career. Charlie has established a great reputation with his students and enjoys virtual education. However, after participating in virtual teacher education to assist teachers in the transition from traditional classroom experiences to an online virtual learning environment, Charlie stated “All the sections were helpful and useful as I prepare my classes for virtual learning.” Charlie enjoys education and plans to continue teaching entrepreneurship while running his business as it gives his students access to more practical experiences.

Participant 6 – Tiffany

Tiffany, a Professor at a nearby university has been consistently teaching online for over three years. She feels that “all sections of the course are useful and career and professional development help teachers inform and prepare students for what is expected in the market.”

Tiffany has challenges with keeping her students engaged with the lesson since the option to stay online has been given to all students. She says, “Students refuse to turn on their cameras and we have no policy to make them engage with the camera turned on.” Tiffany would like to participate in more virtual teacher education. She believes it will help the structure of her class and bridge the gap between student interest and engagement.

Participant 7 – Melva

Melva, a Community Leader with a desire to impact her students through preparedness feels that teacher education for virtual education and apprenticeship learning is not optional. She expressed the necessity of arming our educators with the necessary skills, resources, and tools to prepare students for the jobs of tomorrow. In her effort to advocate for more teacher training, she said, “I found the career development and use of social media tools more impactful in my transition because these are some of the key areas I would like to include with more emphasis.” Melva works every day to improve the curriculum for her classes. She believes strengthening engagement with students will help students identify with career opportunities and help put them on a path of fulfillment in their career choices.

Participant 8 – Silvie

Silvie is a government employee who enjoys teaching as a professional. Silvie was educated in Kenyan schools and later received her higher education from a Kenyan school. She understands the need for teachers to receive the training necessary to keep students engaged and prepare them to practice in their areas of expertise. Because Silvie comes from a government background, she is learning how to organize her course better to meet the objectives of the class and keep students thoroughly engaged in the material in an online course. Silvie said, “I learned that there is order and requires skill and development ongoing to master online learning and

engagement.” As she is learning to become a better teacher online, Silvie is committed to continual professional development for teachers as she advocates for advanced technology, processes, and methodology changes

Participant 9 – Arlatha

Arlatha is a business owner who struggled to keep her business open during the height of the global pandemic. After reopening her small business post-COVID-19, Arlatha decided to further serve her community by enriching the lives of students and preparing them for small business through instruction. Arlatha hopes to structure an apprenticeship program and provide hands-on training for students truly interested in working in their field once their coursework is complete. To Arlatha, the most important part of her work is the impact being made on her students and the Kenyan community. Career development is the missing link in Kenya. We need to link the lecturer to the workforce. When asked about professional development in Kenya among teachers, Arlatha clearly showed and desire to express the need for teachers to receive more training and link their respective course material to the interest of the student career paths., if possible. Arlatha says, “We need to link the lecturer to the workforce.”

Participant 10 – Jackson

Jackson is a student teacher. As a student teacher, Jackson is a graduate of a Kenyan school of higher education. Jackson has been a student teacher for nearly a year and is looking forward to a permanent position as a full-time teacher. His overall thoughts about virtual teacher education were extremely useful and necessary. He says, “I also learned the way one treats their audience determines how much you will learn from them, and understanding your audience is key to audience participation and overall development through engagement.” Jackson believes all sections of the training course have been useful for transitioning.

Participant 11 – Randelman

Randelman is in a teacher role and was asked to participate in this study. Randleman participated in each day of the teacher education training. He felt the opportunity to receive education on building capacity through virtual teaching and learning was priceless. Randelman believes that “All aspects of the training taught are key and starting implementation will be useful. He is an advocate for apprenticeship learning and wishes to engage more with training to prepare students and lead to job opportunities in the future.

Participant 12 – Jasmina

Jasmina is in a teacher role and was asked to participate in this study. She is from a small village and truly excited about the opportunity she has been given to take on a teacher role alongside a senior educator. Jasmina would like to continue her education and someday become a full professor at a Kenyan university. Jasmina stated, “Training courses must be continued to see the real impact on student development over time.” It was clear Jasmina favored more teacher education. Her enthusiasm exceeded the other participants as she expressed her love for the virtual teacher education training. Jasmina was especially appreciative of the education improving teacher and student professional development such as resume and CV instruction for career discussion and job placement.

Research Question 2. What are instructors who transitioned to an online LMS apprenticeship model perception of the impact of virtual teaching and learning on student workforce development outcomes?

Table 4.4**Research Question 2 Verbatim Responses**

Participant Code	Contextual Theme: Digital/Online Training Model—Verbatim Responses
P1	To implement a program benefitting student outcome, teacher education must be more time training and more tools for development are necessary
P2	Having physical training in addition to online training for more in-depth learning practices
P3	More games for professional collaboration between teachers for interaction and share of ideas
P4	The training would be more fitting to our needs if it were longer in duration and more courses given throughout the year.
P5	Teachers, for more impact, should share software to assist in learning.
P6	The time, it needs more time to get maximum benefit.
P7	Have more days to get into the depth of the workshop details and have a face to face to do the practical aspects of the training
P8	I wish there are written tools and guides for the training to reference
P9	Include bootcamps in how to prepare for career also.
P10	It is a good training course. Connectivity is a challenge but that is not the course's fault.
P11	Professional development for teachers is a huge lag especially for virtual teaching and learning. This type of course for teachers to show long term student development and impact would be sustainable if the course were more depth and delivered more times throughout the year for consistency. The tools are needed to continue growth in our department.
P12	Training courses must be continued to see the real impact on student development over time.

As indicated in Table 4.4 much like Table 4.3, all participants in the study agree that instructors who received teacher education to transition from traditional classroom experiences to an online virtual learning environment apprenticeship model to better serve students, will have positive impact on the teachers and the student for better academic preparedness. In addition, comments reflected in the Verbatim Responses indicate that their overall perception of the impact of virtual teaching and learning on student workforce is based directly upon need. Uniformly all agreed that the training was exceptionally good but to produce viable student

impact tools are needed to continue the growth and development of their specific education departments and programs.

Initial Coding

The coding process was iterative and included strategies of manual coding and the use of Otter.ai, and a computer-assisted qualitative analysis data analysis software Qualtrics. Several types of coding were utilized and applied to the data. The first cycle of coding of one-on-one participant interview transcripts was applied and resulted in the identification of several emergent themes which included communication, resource accessibility, assessment, synergy, workforce development, and culture.

The types of coding (Saldaña, 2013) utilized in the first cycle of coding included a combination of Process, Otter.ai, and Value codes. Process coding, sometimes referred to as “action coding,” captures actions and includes or ends with gerunds such as “practicing, reporting, or communicating.” Otter.ai coding utilizes a verbatim word or selection of the participant’s actual language. Values coding represents participant values, beliefs, and attitudes or perspectives. The use of Values coding was essential in this research due to the high premium placed on the perspectives of academic leaders in the study. According to Saldaña (2013), neither Process, Otter.ai, nor Values coding should be used as a sole data coding approach; each is appropriate for most qualitative research coding.

Qualitative Narrative Analysis into Detailed Thematic Analysis

The subsequent tables in this research investigation present groups of "Thematic Codes" that form each theme based on the original Research Questions. The remainder of this dissertation uses a thematic analysis approach drafted from the initial qualitative narrative analysis. Multiple phases of in-depth analysis allowed the dissertation’s research questions to be

answered with initial coding. The initial coding resulted in ten themes which allowed the researcher to examine the codes and the commonalities. Secondly, initial coding created a way to group similar codes in ways that deemed meaningful given the research questions. The common threads across multiple codes identified by the researcher became the overarching themes that ultimately ties the themes together. The overarching theme becomes the overriding theme that answers either research question one or two that were presented at the outset of the research investigation. The two research questions that provide the essential conceptual framework for this research investigation were:

Research Question #1: *What are the lived experiences of instructors who received teacher education to transition from traditional classroom experiences to an online virtual learning environment apprenticeship model to better serve students?*

Research Question #2: *What are the instructors who transitioned to an online LMS apprenticeship model perceptions of the impact of virtual teaching and learning on student workforce development outcomes?*

Ten prominent “Qualitative Narrative Analysis Themes” emerged as a result of multiple reviews of the interview transcripts included: (a.) Shared Curriculum and Instruction Model; (b.) Course Organization and Online Presence; (c.) Digital Citizenship; (d.) Resource Accessibility; (e.) Collaboration; (f.) Virtual Training for Student Engagement; (g.) Virtual Training for Workforce Development; (h.) Apprenticeship Model; (i.) Virtual Culture; and lastly (j.) Preparedness. The following tables in the next section illustrate the information shared by each participant during individual and training group interviews relative to the ten initial themes identified in the strategic plan process. The two themes with the greatest number of comments

shared by participants were: (a.) Shared Curriculum and Instruction Model and (d.) Resource Accessibility.

Table 4.5

Qualitative Narrative Analysis Theme 1: Shared Curriculum and Instruction Model

Initial Thematic Codes	<i>n</i> of Participants Contributing (<i>n</i> = 12)	<i>n</i> of Transcript Excerpts Assigned (<i>n</i> = 12)	Thematic Sample Quotes
Employment is needed.	12	10	“Most students are looking for jobs to help take care of their extended families.”
Coursework parallel to existing jobs.	12	12	“It is important to teach coursework that will help deliver jobs that will impact their future and well-being.”
Relevant teaching is needed.	12	12	“We need to structure ourselves to be more prepared to teach what students need to support their community.”

Table 4.5 provides the in-depth thematic analysis of the Qualitative Narrative Analysis Theme 1: “*Shared Curriculum and Instruction Model.*” Participants overwhelmingly reported the importance of shared curriculum and instruction to train students online for vocational workforce through an apprenticeship model. Many participants shared their concerns for the lack of virtual vocational curriculum shared between teachers and the constant need for relevant training to impact student’s future workforce development.

Table 4.6

Qualitative Narrative Analysis Theme 2: Course Organization and Online Presence			
Initial Thematic Codes	<i>n</i> of Participants Contributing (<i>n</i> = 12)	<i>n</i> of Transcript Excerpts Assigned (<i>n</i> = 12)	Thematic Sample Quotes
Lack of needed tools is evident.	12	12	“Our primary issue with course organization is mostly due to lack of variety of tools, resources and reliable internet connection.”
Learning Management Systems need security and prof. development.	12	12	“Many of us are faced with learning management systems that fail due to privacy issues, lack of collaboration and professional development.”
Need to integrate the right tools.	12	12	“The challenge is not only in selecting the right tools but also in integrating them seamlessly to provide a cohesive learning experience.”

Table 4.6 provides the in-depth thematic analysis of the Qualitative Narrative Analysis Theme 2: “*Course Organization and Online Presence.*” The shift toward online education, accelerated by global events such as the COVID-19 pandemic further drove the necessity of a strong online presence for teachers. For many of the participants, this transition has been challenging yet enlightening, pushing them to explore new pedagogical tools, digital platforms, and modes of interaction that can enrich the educational experience beyond physical boundaries. Most participants expressed a mix of excitement and apprehension about the possibilities and challenges of online teaching. On one hand, digital technologies offer innovative ways to engage students, personalize learning experiences, and access a wealth of resources. However, maintaining a strong online presence requires significant effort in time, technical skills,

professional development, and creativity to ensure active participation and foster a sense of community among students.

Table 4.7

Qualitative Narrative Analysis Theme 3: Digital Citizenship			
Initial Thematic Codes	<i>n</i> of Participants Contributing (<i>n</i> = 12)	<i>n</i> of Transcript Excerpts Assigned (<i>n</i> = 12)	Thematic Sample Quotes
Digital Citizenship is useful.	12	12	“We found the Digital Citizenship portion of the teaching extremely useful.”
The need for this type of education has increased.	12	12	“The need for this type of education has increased every year.”
Teachers find Digital Citizenship beneficial.	12	12	“Many teachers have highlighted several aspects of digital citizenship education that they find especially beneficial.”

Table 4.7 provides the in-depth thematic analysis of the Qualitative Narrative Analysis Theme 3: “*Qualitative Narrative Analysis Theme 3: Digital Citizenship*”. Professional development plays a crucial role in enhancing teachers’ understanding of digital citizenship. Continuous training and access to updated resources are essential for educators to keep pace with the evolving digital landscape. Schools and districts that prioritize digital citizenship education and provide their staff with ongoing learning opportunities help ensure that teachers are not only proficient in using technology but are also prepared to teach their students how to navigate the digital world responsibly and ethically. As digital citizenship continues to evolve, the need for comprehensive education in this area becomes ever more critical, making it imperative for

educators to seek out and engage with resources that will bolster their understanding and teaching of digital citizenship. Many teachers understand the importance of digital citizenship and strive to incorporate its principles into their curriculum. This includes teaching students about the ethical use of information, understanding the permanence of their digital footprints, recognizing, and responding to cyberbullying, and maintaining privacy and security online. However, the extent of this understanding can vary widely among educators depending on several factors such as their own comfort with technology, professional development opportunities they've received, and the resources available within their schools or districts.

Table 4.8

Qualitative Narrative Analysis Theme 4: Resource accessibility

Initial Thematic Codes	<i>n</i> of Participants Contributing (<i>n</i> = 12)	<i>n</i> of Transcript Excerpts Assigned (<i>n</i> = 12)	Thematic Sample Quotes
Diverse educational resources are needed.	12	12	“The availability of diverse educational resources, ranging from textbooks, digital content, and interactive tools, would empower many of our educators.
Educators need to create customized lessons.	12	12	“Educators need to build customized lessons that would cover curriculum requirements.”
Customized lessons need to cover much for student impact.	12	12	“Customized lessons that would cover curriculum requirements and create a richer understanding for better student impact.”

Table 4.8 provides the in-depth thematic analysis of the Qualitative Narrative Analysis

Theme 4: “*Resource accessibility*”. Resource accessibility is immensely beneficial for teachers,

serving as a cornerstone for effective teaching and learning environments. At its core, resource accessibility ensures that teachers have the tools, materials, and information they need to deliver higher-quality education customized for the diverse needs of their students. This not only facilitates a more engaging and interactive classroom experience but also significantly enhances the learning outcomes for students. Resource accessibility supports professional development for teachers. Access to educational research, professional training materials, and networking with fellow educators opens opportunities for teachers to continuously improve their teaching strategies and stay updated with the latest educational trends and best practices. This ongoing professional growth is crucial for the teacher's career advancement and for maintaining a high standard of education in the classroom.

Table 4.9*Qualitative Narrative Analysis Theme 5: Collaboration*

Initial Thematic Codes	<i>n</i> of Participants Contributing (<i>n</i> = 12)	<i>n</i> of Transcript Excerpts Assigned (<i>n</i> = 12)	Thematic Sample Quotes
Teacher Collaboration accelerates growth.	12	12	“Teacher Collaboration accelerates the way for professional growth and development, as educators are exposed to diverse perspectives and teaching techniques.”
Teacher Collaboration supports the exchange of ideas.	12	12	“The exchange of ideas from Teacher Collaboration encourages teachers to reflect on their own practices, experiment with new strategies.”
Teacher Collaboration pushes teachers to adopt innovation and innovative ideas.	12	12	“The exchange of ideas from Teacher Collaboration also encourages teachers to adopt innovative approaches to teaching that may have been outside their purview.”

Table 4.9 provides the in-depth thematic analysis of the Qualitative Narrative Analysis Theme 5: “*Collaboration*”. Collaboration among teachers is not just beneficial; it is transformative, reshaping educational landscapes into more dynamic, supportive, and effective environments for both educators and students. When teachers work together, they combine their strengths, share their expertise, and support each other’s growth, leading to an enriched learning environment that fosters higher student achievement and satisfaction. One of the key benefits of teacher collaboration is the enhancement of educational quality. Through shared planning, teachers can design more engaging and diverse lesson plans that cater to the varied learning needs of students. This collective approach allows for the incorporation of different teaching

styles and strategies, making lessons more comprehensive and accessible. Moreover, collaboration encourages the development of professional skills among teachers. It provides a platform for continuous learning, where teachers can exchange feedback, discuss new educational trends, and tackle classroom challenges together. This ongoing professional development is crucial for adapting to the ever-evolving demands of education.

Table 4.10 provides the in-depth thematic analysis of the Qualitative Narrative Analysis Theme 6: “*Virtual training for student engagement*”. Virtual training has become an indispensable tool in education, offering many opportunities to enhance student engagement. In an era where digital literacy is as crucial as reading and writing, virtual training platforms have revolutionized the way we approach learning and teaching. These platforms not only accommodate diverse learning styles but also break down geographical barriers, making education more accessible to all. One of the key advantages of virtual training is its ability to offer interactive and personalized learning experiences. Through multimedia content, such as videos, quizzes, and interactive simulations, students can engage with the material in a way that suits their learning pace and style. This level of interactivity keeps students motivated and engaged, leading to better retention of information and a more enjoyable learning experience. Additionally, virtual training platforms often incorporate gamification elements, turning learning into a fun and competitive activity that encourages continued engagement.

Table 4.10**Qualitative Narrative Analysis Theme 6: Virtual training for student engagement**

Initial Thematic Codes	<i>n</i> of Participants Contributing (<i>n</i> = 12)	<i>n</i> of Transcript Excerpts Assigned (<i>n</i> = 12)	Thematic Sample Quotes
Virtual Training is very useful.	12	12	“Virtual training for student engagement along with any other training provided is extremely useful.”
Incorporating Virtual Training into the curriculum extends classroom boundaries.	12	12	“By incorporating virtual training into the standard curriculum, many of our teachers can transcend traditional classroom boundaries.”
Virtual Training is relevant and can create personalized learning experiences.	12	12	“By incorporating virtual training into the standard curriculum, many of our teachers can transcend traditional classroom boundaries which will offer students a more engaging and personalized learning experience.”

Table 4.11

Qualitative Narrative Analysis Theme 7: Virtual training for workforce development			
Initial Thematic Codes	<i>n</i> of Participants Contributing (<i>n</i> = 12)	<i>n</i> of Transcript Excerpts Assigned (<i>n</i> = 12)	Thematic Sample Quotes
Virtual Training helps education to keep up with current innovative trends in technology.	12	12	“The way the world is evolving, with AI and other technology, it is increasingly important to have virtual training for workforce development.”
Accessibility is critical.	12	12	“Accessibility is crucial for our teachers and students.”
Virtual Training is essential as classrooms have become virtual.	12	12	“Many of us have not returned to the classroom full time since COVID-19 and our classrooms are officially virtual.”

Table 4.11 provides the in-depth thematic analysis of the Qualitative Narrative Analysis Theme 7: “*Virtual training for workforce development*”. Moreover, virtual training is a cost-effective solution for workforce development. It eliminates the need for travel and accommodation expenses, and because materials can be accessed online, it reduces the need for physical resources. Additionally, the scalability of virtual training means that it can accommodate an unlimited number of participants, making it an ideal solution for large-scale professional development initiatives. As the educational landscape continues to evolve, virtual training for teachers will undoubtedly play a pivotal role in ensuring that educators are well-equipped to meet the demands of the 21st-century classroom, benefiting students and the broader society. This form of professional development leverages digital technology to deliver training sessions in an accessible, flexible, and engaging manner. It allows educators to enhance their

teaching skills, integrate modern technologies into their classrooms, and stay abreast of the latest educational trends and methodologies, all without the constraints of physical location or the limitations of traditional training schedules.

Table 4.12

Qualitative Narrative Analysis Theme 8: Apprenticeship model

Initial Thematic Codes	<i>n</i> of Participants Contributing (<i>n</i> = 12)	<i>n</i> of Transcript Excerpts Assigned (<i>n</i> = 12)	Thematic Sample Quotes
The Apprenticeship Model builds practical experience.	12	12	“The Apprenticeship Model is an excellent way to take practical experience and traditional types of learning together.”
The Apprenticeship Model aids in workforce training.	12	12	“The Apprenticeship Model is an proven way to train students for the immediate workforce.”
Implementing the Apprenticeship Model into education creates a skilled workforce.	12	12	“Implementing this strategy into teacher education would train students and create a pipeline of skilled workers that find work that is needed throughout our community.”

Table 4.12 provides the in-depth thematic analysis of the Qualitative Narrative Analysis Theme 8: “*Apprenticeship model*”. The apprenticeship model, a time-honored approach to skill development, holds significant potential in preparing students for the workforce, especially in today's rapidly evolving job market. This model, characterized by learning through practical experience under the mentorship of skilled professionals, can be a powerful tool in the educational arsenal, offering students direct insight into their chosen fields, fostering a deeper

understanding of industry standards, and developing critical workplace skills. One of the key strengths of the apprenticeship model is its emphasis on hands-on learning, which allows students to apply theoretical knowledge in real-world settings. This practical application not only reinforces learning but also enables students to acquire a range of soft skills, such as teamwork, communication, and problem-solving, which are highly valued by employers across industries. Moreover, apprenticeships can provide students with a clearer understanding of their chosen career paths, helping them make informed decisions about their futures and reducing the skills gap in the workforce. However, integrating the apprenticeship model into the broader educational system requires thoughtful planning and collaboration between educators, industry professionals, and policymakers. Schools must develop partnerships with local businesses and organizations to offer students meaningful apprenticeship opportunities. Additionally, curricula need to be designed to bridge academic learning with the demands of the workforce, ensuring that students are not only gaining specific technical skills but are also being prepared to adapt to the changing dynamics of the global job market. Through such collaborative efforts, the apprenticeship model can significantly enhance the way teachers prepare students for successful careers, making education more relevant, engaging, and effective in meeting the needs of both students and employers.

Table 4.13*Qualitative Narrative Analysis Theme 9: Virtual culture*

Initial Thematic Codes	<i>n</i> of Participants Contributing (<i>n</i> = 12)	<i>n</i> of Transcript Excerpts Assigned (<i>n</i> = 12)	Thematic Sample Quotes
Virtual Culture in teacher education is pivotal.	12	12	“Virtual culture in teacher education has emerged as a pivotal aspect of preparing all future educators.”
Virtual Culture integrates digital tools.	12	12	“By integrating things like digital tools and online platforms into teacher education programs, we are encouraging a culture of innovation needed among our teaching professionals and aspiring teachers who will come after us.”
Virtual Culture in teacher education prepares educators for the digital age.	12	12	“Adopting a virtual culture in teacher education is a strong commitment to preparing educators for the digital age.”

Table 4.13 provides the in-depth thematic analysis of the Qualitative Narrative Analysis Theme 9: “*Virtual culture*”. Virtual culture has increasingly become a significant aspect of educational systems, particularly in influencing teacher success. At its core, virtual culture in education encompasses the norms, values, and practices that emerge from the use of digital platforms and online environments for teaching and learning. Its importance to teacher success can be seen through several lenses, including adaptability, community building, and professional development. Firstly, virtual culture promotes adaptability among educators. In today's rapidly changing technological landscape, teachers are required to continuously adapt to new tools and methods of instruction. A strong virtual culture within an educational institution encourages

teachers to embrace change, fostering a mindset of continuous learning and innovation. This adaptability not only enhances their teaching practices but also prepares students for a future where digital literacy is paramount. Moreover, virtual culture is pivotal in building a supportive community among educators. Online platforms and social media allow teachers to connect, share resources, and collaborate beyond the confines of their schools or geographical limitations. This sense of community is crucial for teacher success, offering a network for support, inspiration, and exchange of ideas. It combats professional isolation, particularly in remote or rural settings, and enriches the teaching experience through diverse perspectives and expertise. Lastly, virtual culture plays a vital role in the professional development of teachers. The wealth of online courses, webinars, and forums available provides educators with accessible opportunities for enhancing their skills and knowledge. This continuous professional growth is essential for teacher success, enabling them to stay current with educational trends, pedagogical strategies, and subject matter expertise. Furthermore, virtual culture fosters a culture of sharing and reflection, essential components of effective professional development. In conclusion, the importance of virtual culture to teacher success cannot be overstated. It equips educators with the adaptability required in a digital age, fosters a supportive community for sharing and collaboration, and offers abundant opportunities for professional growth. As the educational landscape continues to evolve, embracing and nurturing virtual culture within educational institutions will be key to empowering teachers and enhancing the learning experience for students.

Table 4.14*Qualitative Narrative Analysis Theme 10: Preparedness*

Initial Thematic Codes	<i>n</i> of Participants Contributing (<i>n</i> = 12)	<i>n</i> of Transcript Excerpts Assigned (<i>n</i> = 12)	Thematic Sample Quotes
Professional development is needed Kenya.	12	12	“Professional development is crucial to the preparedness of educators in Kenya.”
Professional development connects training and classrooms.	12	12	“Professional development will serve as a connection between our initial training and the demands of classrooms.”
Professional development enables educators to be aware of the latest trends in research.	12	12	“Professional development will enable educators to refine their teaching strategies, stay abreast of the latest educational research, and effectively address the diverse needs of our students.”

Table 4.14 provides the in-depth thematic analysis of the Qualitative Narrative Analysis Theme 10: “*Preparedness*”. Professional development training for teachers plays a crucial role in enhancing the educational experience and overall academic success of students. By engaging in continuous learning and development, teachers can stay abreast of the latest educational strategies, technologies, and pedagogical methods, enabling them to deliver high-quality education that meets the evolving needs of their students. This type of training not only enriches the teacher's knowledge and skill set but also fosters a dynamic and innovative learning environment that can significantly impact students' engagement, motivation, and achievement. One of the key benefits of professional development is the opportunity for teachers to learn and implement new teaching approaches that cater to diverse learning styles and needs. This diversity

in instructional methods ensures that education is accessible and effective for all students, encouraging a more inclusive classroom environment. Moreover, professional development often includes training on integrating technology into the classroom, which can enhance learning experiences and prepare students for the digital world. By incorporating educational technologies, teachers can make lessons more interactive and engaging, thus improving students' understanding and retention of material. Furthermore, professional development supports teachers in developing stronger classroom management strategies and creating more positive learning environments. This aspect of training is critical for fostering a safe and supportive space where students feel valued and motivated to learn. Additionally, teachers who participate in ongoing professional development are better equipped to inspire critical thinking, creativity, and problem-solving skills in their students, preparing them for future challenges and opportunities. Investing in professional development for teachers is an investment in the future success of students, equipping them with the knowledge, skills, and attitudes necessary to thrive in an ever-changing world.

Summary

The shift from traditional in-person teacher education training to virtual formats has significantly altered the landscape of teacher preparation. This transition, accelerated by global events such as the COVID-19 pandemic, has brought both challenges and opportunities for educators in training. Comparing these experiences sheds light on how professional development using a virtual model influences the development of future teachers.

One of the primary advantages of virtual teacher education training is the flexibility it offers. Learners can engage with course materials and participate in training sessions from anywhere with an internet connection. This accessibility can lead to a more diverse cohort of

teacher candidates, as geographical and scheduling constraints are minimized. Furthermore, the virtual environment can enhance digital literacy among teachers, a crucial skill in today's increasingly digital learning environments. However, this mode of training also presents challenges, notably the reduced opportunity for hands-on, practical teaching experiences. While simulations and virtual teaching practices can offer some level of practical experience, they may not fully replicate the complexities and unpredictability of a real classroom.

On the other hand, virtual teacher education training can provide interactive and collaborative experiences that increase unity, belonging, and preparedness online. The sense of community and support that develops through face-to-face interactions with peers and instructors can significantly enhance the learning experience. However, these programs can be less accessible for individuals with scheduling conflicts or those living far from educational institutions, potentially limiting the diversity of the teaching workforce. Additionally, the transition from traditional classroom teaching to an online virtual learning environment (VLE) has proven to be both challenging and rewarding for instructors who have undergone specific teacher education for this shift. These educators have shared varied experiences that highlight the complexities and opportunities presented by this transition. Their insights shed light on the lived experiences of adapting to and thriving within an online apprenticeship model designed to better serve students in a digital age.

One of the key themes that emerges from these instructors' experiences is the steep learning curve associated with mastering modern technology and pedagogical strategies. Many educators noted that despite initial struggles with unfamiliar platforms and tools, the comprehensive training they received was instrumental in helping them overcome these hurdles. The hands-on, practical components of their teacher education, which often mirrored the

apprenticeship model they would be using with their students, were particularly appreciated. This approach not only helped them to familiarize themselves with the digital tools but also allowed them to experience firsthand the student perspective, thereby enhancing their empathy and teaching strategies.

Another significant aspect of their experiences was the evolution of their teaching philosophies and methods to suit the online environment. Instructors spoke about the importance of fostering a sense of community and engagement in the virtual classroom, which required different techniques than those used in face-to-face settings. They highlighted creative approaches to online discussions, collaborative projects, and the use of multimedia resources as key to maintaining student interest and participation. Moreover, the transition to an online VLE apprenticeship model underscored the value of flexibility and adaptability, not only in teaching methods but also in addressing the diverse needs of students. Overall, the lived experiences of these instructors reflect a journey of adaptation, learning, and growth. Through their teacher education and transition to an online apprenticeship model, educators have developed a deeper understanding of how to leverage technology to enhance learning outcomes. Despite initial challenges, the shift opened new avenues for innovation in teaching and learning, fostering environments where instructors and students can thrive in an increasingly digital world.

Instructors who have made the transition to an online Learning Management System (LMS) apprenticeship model have observed a nuanced impact of virtual teaching and learning on student workforce development outcomes. This shift has been propelled by the need for flexibility, accessibility, and the integration of technology in educational frameworks. Their perceptions are shaped by the advantages and challenges that come with this model, reflecting a complex picture of its effectiveness in preparing students for the workforce.

One of the notable positive impacts observed is the enhancement of digital literacy among students. Instructors note that the online LMS apprenticeship model immerses students in a digital environment, necessitating the development of technical skills that are increasingly vital in the modern workplace. This includes familiarity with digital tools, online communication, and the ability to navigate and utilize various software platforms. As a result, students emerge from their apprenticeships not only with the specific vocational skills related to their field of study but also with a robust set of digital competencies that are highly valued in today's job market.

In conclusion, both virtual and traditional teacher education training have their merits and drawbacks. The ideal approach might lie in a blended model that combines the accessibility and flexibility of online learning with the practical, hands-on experiences of traditional in-person training. Such a hybrid model could prepare future teachers with the digital skills necessary for modern education while ensuring they gain the invaluable real-world experience needed to manage a classroom effectively. As the education sector continues to evolve, so will the methods by which we prepare the next generation of teachers, striving always to meet the needs of both educators and learners in an ever-changing environment.

CHAPTER 5: SUMMARY AND CONCLUSIONS

In this chapter, the findings from the two research questions are discussed, paired with an exploration of the themes that were generated during the analysis. This section synthesizes the results, providing an interpretation of the data in the context of the study. In addition to exploring these insights, the chapter will also present the implications of the research and propose directions for future inquiry.

Discussion of Findings for Research Question #1

A summary of research findings for the study's Research Question #1 follows and includes a series of Discussion Findings for Research Question #1-Based on Recurring Themes; and a Summary of Final Research Question #1 Findings.

Research Question #1: *What are the lived experiences of instructors who received teacher education to transition from traditional classroom experiences to an online virtual learning environment apprenticeship model to better serve students?*

This qualitative narrative analysis study was designed to examine the experiences of educators in Kenya advocating for professional development to assist in transitioning from classroom to online teaching and learning. In the Findings for Research Question #1, results implicate participants felt receiving virtual teacher education to transition from traditional classroom to online virtual learning would improve teaching skills.

Improved Teaching Skills

Professional development provides educators with the opportunity to enhance their teaching skills, learn new instructional strategies, and improve their overall effectiveness in the classroom. This ongoing learning is essential because the educational landscape is continually evolving and teachers must adopt to new, innovative ideas, best practices, and technological

advancements to effectively meet the needs of their students and collaborate with other professionals and peers.

Increased Student Engagement

By participating in professional development, educators can learn new ways to engage students in the learning process, which can lead to increased student motivation and participation.

Better Classroom Management

Professional development can help educators develop better classroom management techniques, which can lead to a more positive learning environment for students.

Access to New Resources

Professional development can provide educators with access to new educational resources, such as technology tools, teaching materials, and research-based practices, which can improve student outcomes.

Improved Collaboration

Professional development can also provide opportunities for educators to collaborate with their peers, share best practices, and learn from one another, which can lead to improved student outcomes.

Summary of Research Question #1 Findings

Novice teachers lack the support needed to excel in content-specific areas of teaching and learning and would advance faster with the aid of structured professional development and mentoring from more experienced peers. . It is not a secret; effective teaching is complex. Every teacher must understand the subject matter and be able to engage with their students' recognizing strategies that may work one year, may not work the next. However, the teacher's knowledge

and qualifications in the subject matter allow for adjustments as material and content change to align with the student's assessed needs.

On the other hand, expert teachers who have more years of experience must continue to challenge themselves with advanced professional development opportunities that continue to advance their knowledge and careers. By teachers continuing to research, seeking knowledge through working with other teachers on lesson design, and participating in professional development programs and resources, teachers are encouraged to sharpen teaching skills making the student experience greater and more successful.

Thematic Coding was used to code data obtained from individual participant interviews and focus group interviews yielding several initial themes and categories. In addition, a content analysis process was applied to review report documents.

Discussion of Findings for Research Question #2

Research Question #2: What are instructors who transitioned to an online LMS apprenticeship model perspective of the impact of virtual teaching and learning on student workforce development outcomes?

As mentioned in the literature review the research establishes a basis for the study and a perspective on faculty professional development and the advantages of virtual learning in education. The first question in this study sought to determine the lived experiences of instructors who received teacher education to transition from traditional classroom experiences to an online virtual learning environment apprenticeship model to better serve students. The second question in this study set out with the aim of assessing the importance of instructors who transitioned to an online LMS apprenticeship model perspective of the impact of virtual teaching and learning on student workforce development outcomes.

Increased Knowledge of the Latest Trends

The results of this study show that teachers unanimously agree that professional development enables educators to be aware of the latest trends in research, connects training to classrooms, and is critical to Kenyan education and development.

Apprenticeship Models

This study supports evidence from previous observations, Lepper et al. (1982) discuss the importance of creating learning environments that ideally model the apprenticeship model. As a result, (Collins, 2006, p.47-60) explains, “Apprentices learn skills in the context of their application to real-world problems, within a culture focused on and defined by expert practice.” This study has been unable to demonstrate that virtual vocational apprenticeship model teacher education taught in a virtual learning environment directly impacts workforce development in Kenyan communities. It seems possible that these results are due to the need to replicate the study at more Technical and Vocational Education and Training institutions throughout Kenyan communities and future research should focus on more focus groups with more participants.

Summary of Research Question #2 Findings

Teachers who receive teacher education and participate in professional development programs have increased knowledge of the latest trends and opportunities to better serve students as they transition to an online LMS apprenticeship model. Increased teacher education helps teachers stay current and develop new and exciting techniques on subject matter directly impacting students in today’s workforce. The teachers enhancing development through continuous improvement were more likely to collaborate with colleagues and adapt to the online and diverse needs of the students.

Teachers determined teacher education to extend apprenticeship models in virtual vocational teaching and learning is an opportunity to improve workforce development. However, due to the limitations and inability to replicate the study at more Technical and Vocational Education and Training institutions, the results are inconclusive.

Implications for Policy

Virtual teacher education and professional development have the potential to revolutionize the way educators are trained and continuously supported, with excellent implications for student outcomes. One of the primary theoretical implications is equity in access to high-quality training resources. Unlike traditional in-person programs that may be limited by geographic location and financial constraints, virtual platforms can provide equitable access to a diverse array of training modules, resources, and collaborative opportunities.

Implications for Practice

Integrating apprenticeships into educational pathways can significantly transform students into a viable workforce within their communities, with many implications for practice. This approach not only fosters a more engaged and skilled labor pool but also strengthens the bond between education and industry, ensuring that the curriculum is aligned with real-world requirements.

Firstly, for students, apprenticeships offer a unique blend of learning and working, enabling them to acquire practical skills while continuing their education. This hands-on experience is invaluable, as it not only enhances their employability but also provides them with a clearer understanding of their field of interest. For educators and institutions, the challenge lies in designing programs that are both academically rigorous and relevant to industry needs. Collaboration with local businesses and industries is key, as it ensures that students are learning

skills that are in demand, thereby increasing their chances of finding meaningful employment in their community post-graduation.

For the community and local industries, the implications are equally significant. By nurturing a home-grown workforce, communities can reduce reliance on external talent, which in turn can bolster local economies. Furthermore, businesses that participate in apprenticeship programs can shape their future workforce, ensuring that employees are skilled and aligned with the company's culture and values. This symbiotic relationship between education and industry can lead to innovative solutions and advancements, driving both economic and social progress. In conclusion, the integration of apprenticeships into educational pathways presents a promising avenue for producing a viable workforce. Its success, however, hinges on the cooperation between educational institutions, students, and the business community. By working together, they can create a workforce that not only meets the current needs of the local economy but is also equipped to adapt to future challenges.

Recommendations for Future Research

Recommendations for future research are as follows:

Recommendation #1: Expand TVET Research Sites

Replicate at more Technical and Vocational Education and Training institutions throughout Kenyan communities. The importance of expanding educational research across a broader spectrum of schools within the Kenyan community cannot be overstated. Replicating studies in diverse educational settings offers a wealth of benefits, ensuring that the findings are not only more robust and reliable but also universally applicable across various socio-economic, cultural, and geographical landscapes within the country. By extending research efforts to include a wide array of schools, from urban centers to rural areas, researchers can capture a

comprehensive snapshot of the educational challenges and successes faced by Kenyan students and educators alike.

One of the key reasons for advocating for such replication is the potential to identify and understand the unique factors influencing educational outcomes in different settings. Kenya's diverse community encompasses a rich mosaic of cultures, languages, and traditions, which in turn shape the educational environment and learning processes. Through comparative analysis, researchers can uncover specific needs and effective strategies that are tailored to the unique contexts of schools across the country. This approach not only enhances the validity of the research findings but also ensures that the recommendations made are practical and actionable for policymakers and educational practitioners working in varied contexts.

Furthermore, broadening the scope of research to include more schools throughout the Kenyan community is crucial for fostering inclusivity and equity in education. It ensures that the voices and experiences of students and teachers from underrepresented or marginalized areas are heard and considered in the development of educational policies and programs. Such inclusive research practices contribute to building a more equitable education system that recognizes and addresses the diverse needs of all learners. Therefore, future research endeavors must prioritize replication across a wider range of schools, as this will significantly contribute to the advancement of education in Kenya, making it more responsive, inclusive, and effective for every child and educator in the community.

Recommendation #2: Focus Groups

Future research should focus on more Focus groups with more participants. Future research initiatives in Kenya could significantly benefit from a more extensive utilization of focus groups involving a larger number of participants. This approach not only promises to offer

deeper insights into the diverse perspectives within the Kenyan community but also ensures a more inclusive understanding of the issues at hand. Kenya, with its rich tapestry of cultures, languages, and social dynamics, presents a unique opportunity for research across various fields such as public health, education, agriculture, and technology adoption. By engaging more participants in focus groups, researchers can tap into a wealth of qualitative data that reflects the complex interplay of factors influencing Kenyan society.

The expansion of focus group sizes and their frequency within the Kenyan context allows for a more nuanced exploration of communal perspectives. It encourages the representation of minority voices that are often overshadowed in broader surveys or quantitative research methods. For instance, in public health research, understanding the community's attitudes towards vaccination, maternal health, or nutrition requires not just the views of the majority but also the concerns and suggestions of marginalized groups. Similarly, in education, the varied educational aspirations and challenges across different communities can be better understood through detailed, dialogue-driven focus group discussions.

To maximize the effectiveness of these larger and more diverse focus groups, researchers must adopt culturally sensitive methodologies and employ facilitators who are not only fluent in the local languages but also deeply familiar with the social and cultural nuances of the Kenyan communities. This approach ensures that discussions are conducted respectfully and inclusively, encouraging participants to share openly and honestly. Moreover, leveraging technology to conduct virtual focus groups can also widen the reach, allowing participation from remote or traditionally underrepresented areas. By broadening the scope and scale of focus group research in Kenya, scholars and policymakers can derive more robust insights, leading to more informed and effective interventions.

Recommendation #3: Research Infrastructure Barriers

Understanding the technology and infrastructure barriers of teachers in Kenya to aid in their ability to train and deliver virtual courses, should be addressed in future research. In Kenya, the integration of technology in education faces numerous challenges, particularly for teachers. One of the primary barriers is the lack of adequate infrastructure. Many schools, especially in rural areas, suffer from limited access to electricity and internet connectivity. This infrastructural deficit makes it difficult for teachers to utilize digital tools and resources effectively. Even in urban areas where these utilities are more accessible, the costs associated with maintaining reliable internet connections and purchasing necessary hardware can be prohibitive.

This research is pivotal for the advancement of professional development for all educators throughout Kenya. In recent years, the academic community has increasingly recognized the importance of identifying and overcoming these barriers to enhance the quality and efficacy of virtual teaching and learning. Future research efforts must be directed toward developing a comprehensive understanding of these obstacles, which range from financial constraints and limited access and location challenges.

Recommendation #4: Evaluation of Mentorship and Virtual Learning

Post COVID-19, technology has continued to transform education globally. As Kenya works to embrace digital advancements in education; mentorship and virtual learning are recommended as invaluable guidance. It is imperative to focus on the professional development of teachers through mentorship and virtual learning. Investing in these areas not only equips educators with the necessary skills to navigate the digital landscape but also enhances the overall quality of education provided to students. Through mentorship, teachers can share best practices, acclimate to new technologies, learn new teaching strategies, and offer support to one another.

By establishing a mentorship program for Kenyan teachers, new teachers who are more technologically advanced can pair up with seasoned teachers who may have more experience. Fostering a collaborative learning environment for developing professionals, this approach empowers teachers to become confident and proficient in using digital tools while helping one another, ultimately benefiting their students.

Conclusion

This research is a culmination of four years of mental development and physical work. This dissertation study was deliberately designed to address the question of the importance of teacher education and professional development when teaching in Kenya.

It is the researchers's final thought that professional development for teachers is critical to ensure students are receiving education pertinent to training for the jobs that impact the workforce of our communities. Due to the small sample size tested in this study, this researcher does not find sufficient evidence to support teacher education impacting the workforce development of Kenyan communities. However, recommendations for practice included replicating the study at more Technical and Vocational Education and Training institutions throughout Kenyan communities and increasing the sample size; Understanding the technology and virtual learning barriers Kenyan teachers face; and the need for teacher's mentorship programs and virtual learning to overcome lack of training and resource disparities.

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APPENDICES

Appendix A: Interview Protocol

Introductory

This interview will begin with an introduction. “Hello, my name is Talitha, and I will be conducting an interview of the effects of professional learning communities on teacher retention and teachers’ professional practices.” I would like to ask questions to acquire your perceptions of how virtual professional learning environments affect teacher retention and your professional practices, if at all. Your name will not be recorded or used nor will any factors that could identify you. You will be assigned a pseudonym for the study. The interview should take 30 to 45 minutes. If time begins to run short, it may be necessary to interrupt you to push ahead and complete this line of questioning. Do you have any questions about the interview or its purpose? Please state whether you have received and signed the form giving your consent. May I continue?

To facilitate our notetaking, we would like to audio and video record our conversations today. For your information, only researchers on the project will be privy to the tapes which will eventually be destroyed after they are transcribed. In addition, you must sign a form devised to meet our human subject requirements. Essentially, this document states that: (1) all information will be held confidential, (2) your participation is voluntary, and you may stop at any time if you feel uncomfortable, and (3) we do not intend to inflict any harm. Thank you for agreeing to participate.

You have been selected to speak with us today because you have been identified as someone who has a great deal to share about teaching, learning, and assessment. Our research project focuses on the improvement of teaching and learning activity, with particular interest in understanding how faculty in academic programs are engaged in this activity, how they assess

student learning, and whether we can begin to share what we know about making a difference in virtual vocational education. Our study aims to document your lived experiences in virtual training to try learning more about teaching and learning, and hopefully learn what professional development faculty will need to help improve student learning and workforce development.

Let's get started...

1. Tell me about how you think working in professional virtual learning environments impacts your professional autonomy.
2. How has transitioning from traditional face-to-face to virtual teaching impacted your passion for teaching? How has this transition impacted on your intention to stay in the field?
3. What do you think are the benefits of virtual professional development?
4. What types of virtual professional development are accessible to you and your team?
5. What are your thoughts about your institution providing a more structured VLE?
6. How do VLE's impact teachers?
 - a. Can you provide examples of how VLE's impact new teachers differently?
 - b. Can you provide examples of how VLE's impact lateral entry teachers?
 - c. Can you provide examples of how VLE's impact veteran teachers?
7. How does the professional development you have received impact how you teach in a virtual learning environment?
8. What professional development would you like to have in order to improve your teaching in virtual learning environments?
 - a. What PD for VLE's around student engagement would interest you?

- b. What PD for VLE's around assisting students in practical workforce would interest you?
9. Considering the PD you have had and the PD you would like to have, how do you best learn in future training?
10. Do you have any closing comments or questions for me?

Closing

Thank you for agreeing to our interview today. We appreciate your participation. The interview will be transcribed from the recording using all the privacy and consents agreed upon. When the research has been completed, you will receive a link to the dissertation in its entirety. Again, thank you for your participation.

PD = professional development

VLE= virtual learning environment

WF= Workforce

Appendix B: Sample Gatekeeper Letter

January 11, 2023

Department of Diplomacy and International Studies

University of Nairobi

Nairobi, Kenya East Africa

Dear Dr. Patrick Maluki:

I am currently conducting research on the impact of innovative virtual teacher education when integrating apprenticeship learning for educators in Kenya and the effects it has on their professional practices. I am writing to request your permission to interview ten teachers in your program. As a doctorate candidate at North Carolina State University, this will satisfy the requirements for my dissertation. The study will take place after class hours or at the staff participants' convenience and will consist of ten forty-five-minute interviews. The information will be shared with all participating people involved and can be used to plan more effective staff development for professional virtual learning environments.

Sincerely,

A handwritten signature in black ink that reads "Talitha Batts". The signature is written in a cursive style and is placed on a light gray rectangular background.

Talitha Batts

Doctorate Student

North Carolina State University

Appendix C: Agenda Template

Theme: Virtual Teacher Education: Emerging Learning Technologies and Digital Content

Agenda Item	Lead	Time	Written and Linked Materials
Purpose of the Workshop <ul style="list-style-type: none"> • Review “Why” • Review Format and Schedule • Introductions • Icebreaker 	Dr. Patrick Maluki/Talitha Batts	30 mins	
Organizing Your Course <ul style="list-style-type: none"> • Syllabus • Video Conferencing Tools • Class Recordings • Discussion Boards • Virtual Lockers • Privacy-Virtual Backgrounds • Contact information • Glossary 	Talitha Batts	30 mins	
Digital Citizenship <ul style="list-style-type: none"> • Define • VLE • Mindfulness and Respect • Global Citizenship 	Talitha Batts	30mins	
Social Media and Media Tools <ul style="list-style-type: none"> • Facebook • Instagram • WhatsApp • Twitter • LinkedIn • Eventbrite • Pinterest • TikTok • YouTube • Clubhouse and Yapp 	Talitha Batts	30mins	
Coding <ul style="list-style-type: none"> • Scratch • Blender 	Talitha Batts	30mins	

<ul style="list-style-type: none"> • Drones 			
Careers and Professional Development <ul style="list-style-type: none"> • Cover Letter • Resume • Mock Interviews • Internships/Scholarships/Employment Opportunities • Opportunities Board • Professional Dress 	Talitha Batts	30mins	
In-demand Skills <ul style="list-style-type: none"> • Computing • Programming • Digital • Marketing • Sales • Technical • Medicine • Finance • Engineering • Construction 	Talitha Batts	30mins	
Forming Alliances <ul style="list-style-type: none"> • Workshops • Conferences • Virtual Teams • Social Media Collaborative Groups • Mentor/Mentee Relationships • Shadowing 	Talitha Batts	30mins	

Appendix D: Sample Certificate of Achievement



**CERTIFICATE
OF ACHIEVEMENT**

This certificate is proudly presented to :

In recognition of successful completion of

MYEOD TEACHER EDUCATION

Training aimed to provide educators with knowledge to improve virtual learning experiences and prepare students for the workforce

Talitha Batts
President and CEO
Trainer

_____ Date

