



Wholesale&Retail

LEADERSHIP CHAIR



Cape Peninsula
University of Technology



*"Collaboration opens the window
to a world of opportunities."*

Project 2024/12:

**The Impact of the Wholesale and Retail SETA's ICT Skills
Capacity Building Programme on South African Youth's Access
to Digitisation, Employment, and Entrepreneurship in the
Wholesale and Retail Sector.**

Compiled by Dr D Paradza

FINAL REPORT

DATED 30 April 2025

APPLIED RESEARCH
LEADERSHIP DEVELOPMENT
SERVICE TO RETAIL COMMUNITY

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Chapter 1

Introduction

Dabbous, Barakat, and Kraus (2023) note that the digital revolution has, in the recent past, been characterized as one of the largest drivers of innovation, economic growth, and social improvement. Just like most other nations, the massive influence of ICTs integration through different sectors has totally transformed how people in South Africa use technologies and how business is conducted nowadays (Alao & Brink, 2022). Digital technology has impacted supply chain management, company strategy frameworks, and consumer behavior in the wholesale and retail industries (Carlisle, Ivanov & Dijkmans, 2023). To those who are aware of this, there have been opportunities and challenges.

The Wholesale and Retail Seta has, in this era of digital transformation, undertaken a massive ICT Skills Capacity Building Programme, affording young South Africans the wherewithal to be successful in this digital age (W&R Seta, 2024). This course of study is designed specifically to equip students from South Africa with the relevant skills to successfully compete in this fast-evolving digital economy. It is a proactive response to the challenges of the digital era, argue Langthaler and Homa (2020). In consideration of the importance of ICTs, the program aims at reducing the digital divide by equipping the youth with different skills in software understanding, digital literacy, and data analytics ability (Alao and Brink, 2023). The W&R SETA has launched a fully-fledged ICT skills capacity-building initiative to enable South African youth to succeed in the digital era.

The South African youth need information and communication technology skills for employability, entrepreneurship opportunities, and economic empowerment (Alao & Brink, 2023). In this age of fast-evolving technology and market conditions, this is an era where knowledge in information and communication technology can open up possibilities for innovation, creativity, and value creation in the economy (Gomes & Lopes, 2022). The W&R SETA program produces tech-savvy entrepreneurs, hence creating a new generation of visionary leaders who, using technology, will be able to better socio-economic situations; this will further increase youth employment in the wholesale and retail sectors (Molnar, 2019).

While there is increasing awareness of the importance of ICT skills for adolescent

development, there is still a lack of adequate assessment of the benefits accruing from training in ICT skills for youth in particular. Although study evidence suggests that knowledge of information and communication technologies may increase both career and entrepreneurial opportunities, many of the results are either youth or geographically specific. (Oyadiran & Lawal, n.d.; Capasso & Mark, 2021; Alam et al., 2022). Given that fact, therefore, it may be challenging to ascertain the overall effect of the ICT skills program on a wider scope of the youth, especially in developing countries like South Africa, which has enormous disparities in socio-economic backgrounds. The given study also tends to discuss the contributions of W&R SETA's ICT Skills Capacity Building Programme towards entrepreneurial activities pursued by the South African youth.

The programme implements its goals to bridge digital divides and improve employability because it aligns with South Africa's National Digital and Future Skills Strategy (2020). The initiative mirrors the National Development Plan 2030 because it works to achieve three main objectives: inclusive economic expansion and skilled workforce development and youthful employment reduction. Through its implementation the programme helps fulfil Post-School Education and Training (PSET) Framework requirements by establishing accessible flexible learning systems integrated with technology to handle digital transformation in workplace and education settings.

This therefore calls for an investigation into the exact impacts of training in ICT skills among youth across different regions and demographic groupings in South Africa for the derivation of a holistic understanding of the way in which ICT skills could empower the youth and contribute to socio-economic development, hence the need for this study. This report responds to calls for further research in the area of ICT and young entrepreneurs' development of skills.

Background

Digital skills and IT have become very important in the current market for getting a job and starting a successful business abroad (Lastauskaite & Krusinskas, 2021; Arbeláez-Rendón et al., 2023; Simonova* et al., 2020). Technology and the rapid development of the digital environment are quickly making technology literacy and digital competencies crucial in contemporary employments and company businesses.

Gaining significant traction in companies is the need for skilled tech workers who can handle the increasingly complex digital tools and platforms that companies seek to integrate into their operations as new changes in technology happen (Simonova* et al., 2020; Atsu et al., 2014; Lastauskaite & Krusinskas, 2021).

The high level of unemployment, especially among the youths, depicts a very serious socio-economic problem. Going by recent data, the country still keeps a high total unemployment rate, while the unemployment among youths worsens the economic situation of the country. There is a great divide between the number of competent candidates and the open positions in fields where technology plays a key role (Alao & Brink, 2022).

The South African youth face several barriers in their quest to acquire and avail themselves of better opportunities regarding ICT-related skills. Among the issues contributing to the gap are quality education, proper infrastructure for ICT, and relevant skill development programs. This limits their capacity for taking part in the digital economy because of their restricted job and entrepreneurial opportunities (Oyadiran & Lawal, n.d.; Langthaler et al., n.d.). The Wholesale and Retail Sector Education and Training Authority (W&R SETA) has been instrumental in addressing these concerns by implementing programs designed to equip young people with the digital skills they require. The development of the capacity for youth in IT and digital skills is another essential initiative in this regard taken by W&R SETA. The curriculum for the program has strongly integrated basic digital and IT skills with the aim of increasing employability and an entrepreneurial spirit among youth. The training is given over several months in a hybrid approach that combines online and in-person instruction to accommodate a range of learning styles and provide accessible for everyone (W&RSETA, 2024).

To determine the effectiveness of this endeavour, a robust evaluation procedure is in place. The key performance indicators range from the employment status post-program completion, improvement of income status, number of businesses created directly relating to the learned skill, to significant improvement in competency of a particular skill. This measure will be important in establishing the impact of the training on the individual and South African economy at large, according to Alam et al. (2022) and Gomes & Lopes (2022). Using this framework, the potential transformative

impacts of the ICTs skills developed by W&R SETA will be reviewed in relation to enabling the South African youth to thrive in the digitalized global economy.

Problem Statement

The W&R SETA ICT Skills Capacity Building Programme functions as an essential strategic initiative dedicated to providing digital training for South African youth to build their professional capabilities and entrepreneurial initiatives. Multiple knowledge deficiencies within the programme pose obstacles to maximize its operational efficiency even though it supports National Digital and Future Skills Strategy (2020) and National Development Plan 2030 and PSET Framework.

There exists no available evidence documenting graduates' long-term employment status as well as their income growth or business achievements after completing the program. The absence of this information makes it difficult to determine the lasting effect on economic empowerment (Alao & Brink, 2023). The program fails to present data about population groups broken down by geographic areas or gender and disabilities even though the nation wants to improve digital access for all (DHET, 2020; National Planning Commission, 2012).

Additionally, the absence of structured post-training support, such as job placement or mentorship, limits the translation of digital skills into real opportunities. Few studies monitor how training material fits industry requirements creating a problem because relevant skills might not be taught effectively (OECD, 2016; Manyika et al., 2013).

The program meets limited success in its objectives related to youth job creation and digital literacy because of its implementation gaps as explained by the Digital Divide Theory (van Dijk, 2005). If the program does not receive focused interventions and all-encompassing assessments it will fail to achieve its transformative objectives which results in a wasteful use of resources and ongoing economic social inequalities.

National development support from the programme will improve by implementing future initiatives that use inclusive data collection methods while conducting relevant

curriculum checks and creating extended tracking systems together with integrated support mechanisms. Such measures will allow the initiative to fulfill its purpose in developing youth both technologically proficient and economically productive..

Research Objectives

The main purpose of this paper is to examine how the W&R SETA's ICT Skills Capacity Building Programme impacts South African youth's access to digitization, employment, and entrepreneurial prospects in the wholesale and retail industry. The study seeks specifically to:

- Analyse how the program has contributed to the improvement in ICT proficiency and digital literacy among the youth.
- Scrutinise the extent to which the program has helped the youths to get employment or start their own businesses in the wholesale and retail trade.
- Identify challenges faced and those that negatively impeded the implementation of the program.
- The broader implications of the program for youth development, education, and economic empowerment in South Africa.

Research questions

What impact does the ICT Skills Capacity Building Programme delivered by the Wholesale and Retail SETA have on South African youth regarding their ability to access digitisation and employment and entrepreneurship prospects in the wholesale and retail field?

The research study analyses the following three sub-questions to answer its main question about Wholesale and Retail SETA's ICT Skills Capacity Building Programme's effects.

- How effective is the programme in enhancing the digital literacy and ICT skills of participating youth
- What are the pathways through which the program has generated better employment conditions and entrepreneurship improvements among young market workforce members in wholesale and retail operations?
- Which solutions has the program implemented to close the digital divide while

providing digital resources for disadvantaged youth communities?

Hypothesis

The following theories can be developed considering the above study questions:

- Participants of the W&R SETA's ICT Skills Capacity Building Programme demonstrate significantly higher levels of digital literacy and ICT competencies compared to non-participants from similar demographic backgrounds.
- There is a positive correlation between programme participation and youth employment rates and entrepreneurial activity in the wholesale and retail sector.
- The programme's targeted interventions (e.g., access to devices, internet connectivity, and digital skills training) have significantly reduced the digital divide for youth in underserved communities.

Significance of the Research Project

The findings of the research might reveal how the development of ICT skills directly affects customer involvement and business process in the retail and whole-sale industries. Younger and better ICT-skilled individuals may come up with more innovative ways of operating different industries which shake traditional company models and open up new avenues for business development.

The article also highlights the potential for ICT proficiency and digital literacy to empower young South Africans. To increase youth's economic independence, the study offers a framework for better employability and entrepreneurial success through the provision of essential digital tools and skills.

Additionally, this research contributes to policy makers and educators in terms of adjusting laws and curricula in a way to favourably meet the requirements arising from the digital economy. Understand which specific ICT skills increase employability, and entrepreneurship will render governments' policies and educational strategies more effective.

Furthermore, this study contributes to the corpus of academic literature by filling up a critical knowledge gap about the unique effects of ICT skills on youth, particularly in

diverse socioeconomic contexts like South Africa. By offering a fresh perspective on how technology proficiency might spur socioeconomic growth, it broadens the discussion on digital education and how it might inspire young people to undertake entrepreneurial endeavours.

From a practical perspective, findings will help the development of international youth capacity-building programs that are comprehensive and relevant. Key stakeholders will be better prepared to give young people the overall challenges and methods that work for ICT training to equip them to create success in the digital society.

Delimitation of Study

With a focus on wholesale and retail, it investigates the specific impact that has been created within the South African economic sector by the Information and Communication Technology Skills Capacity Building Program developed by the Wholesale and Retail Sector Education and Training Authority.. Geographically, the analysis is restricted to South Africa; global conditions or consequences for other countries must be considered.

This study focuses solely on the program's immediate effects on youth, whom the African Union defines as those who fall between the ages of 15 and 35. This study does not account for the effects on other age groups or industries. Moreover, it overlooks the possible long-term impact in favour of assessing the program's results over a specified period of time after its implementation.

These limitations bring forth many details that need to be accounted for in establishing the real effect of ICT training programs on the employability and entrepreneurial activities of youth in South Africa.

Summary

Lately, the digital revolution has emerged as a major force behind social, economic, and innovative improvement. In this vein, the diffusion of ICTs into different spheres of activity has dramatically affected the nature of logistics, the adoption of corporate strategy, and customer behaviour, particularly in the wholesale and retail sectors in South Africa. For instance, the W&R SETA has gone to the extent of developing a fully-fledged ICT Capacity Building Program with the purpose of overcoming the digital

divide. Its curriculum provides training in digital literacy, use of software, and knowledge on data analysis-all very critical in workplaces and wider business operations. Even though general appreciation may be made of ICT competency being crucial, much current research studies how this competency actually relates to the youth.

Chapter 2: Literature Review

Introduction

This chapter has reviewed the literature concerning the facilitation of employment contracts by ICT and how unemployment rates could be reduced. In this regard, the discussions covered such topics as theoretical frameworks, the role of ICT in economic growth, and implications for employment, entrepreneurship, and digitization. The discussion further incorporates an overview of the Wholesale and Retail Seta's Information and Communication Technology Skills Capacity Building Programme.

The wholesale and Retail Seta's Information and Communication Technology (ICT) Skills Capacity Building Programme

The South African economy has witnessed little growth over the past decade, which has subsequently affected the economic and social standing of the country. The impact of the COVID-19 pandemic, compounded with corruption and inadequacies in service delivery, such as power by ESKOM, has further complicated the possibility of socio-economic change within the nation. Without adequate power to produce key commodities, companies project deemed productivity, therefore equating to stagnant growth and further overhead trimming (BloombergNews, 2024; News24, 2024).

Overhead trimming is essential in such a landscape, as productivity and income have misaligned with spending. Areas where business can potentially reduce cost or involvement are explored in such circumstances, and human capital, like all the other facets of a business, is reviewed for efficiency. The efficiency analysis can be viewed from two standpoints, the retrenchment of human resources with redundant duties and roles and the possible expansion of human resources, which in most cases is significantly reduced (Kose & Ohnsorge, 2020; Unger, 2022). So what would this mean to the youth seeking employment in such an economy, given the current layout of the socio-economic nuances?

Youth are worst hit by economic stagnation as businesses can't create sufficient job opportunities to match the demand for labour. As they have to compete with more established and experienced competitors, youth tend to be the casualties of stagnant economies. As Arbeláez-Rendón et al. (2023) and Alao and Brink (2022) posit, "this

is further fused with social challenges that the South African (SA) youth face, such as the poverty gap, lack of infrastructure, poor educational facilities, affordability, inequality, lack of education, lack of access to information, and high demand for IT skills, which few SA youth possess."

The ICT youth development initiative, which was started by the South African Whole and Retail Seta, was created to help ease some of the difficulties mentioned above by aiding the young people and improving their access to ICT infrastructure and other resources. The project thus targeted responding or adding to the ICT skills of the youth in ways that would lead to further development of their ICT capacities to birth new entrepreneurial ventures in W&RSeta. The most recent available W&R SETA report by W&RSeta, 2024. In this paper, the private household and private enterprise are shown as the lead contributors in the employment gains. When properly executed, this assistance system can boost market activity and production while assisting in reducing the mentioned youth unemployment rates (Folea & Folcut, 2024; Gomes & Lopes, 2022; Alao & Brink, 2023).

Theoretical Frameworks

Numerous theoretical frameworks have been utilized to explore ICT skills development concerning youth entrepreneurship and the impact on unemployment, including Sustainable Competitive Advantage Theory (SCA), Richard Florida's three Ts (talent-tolerance- technology) framework, Sustainable Livelihood Theory, Economic Theory of Entrepreneurship, and PEST analysis framework, to mention a few (Alao & Brink, 2022; Arbeláez-Rendón et al., 2023; Belitski, Korosteleva & Piscitello, 2023; Dabbous, Barakat & Kraus, 2023; Fitrea & Khusaini, 2023; Folea & Folcut, 2024). Each theoretical framework applied was suited to specific research goals, thereby providing a plethora of theories to ascertain ICT's impact on youth employment. For the sake of this study, the most prominently applied research theories will be explored to provide insight into the parameters and impact on ICT skills. The theories, which are further discussed below, include the Diffusion of Innovation Theory (DIT), the Digital Divide Theory (DDT), and the Technology Acceptance Model (TAM).

Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM) is a widely used technique in a number of study domains that assess technology adoption to determine how well a technology is adopted by particular segments of the public. It works on two levels, namely, the perceived usefulness of the technology and its perceived ease of use (Davies, 1989). The conceptual framework of the model focuses on how the advancement of technologies could be retooled for processes to be done efficiently, with time-saving and less time taken to complete a process. In the latter, the user is the most prominent, and much attention is paid to how they perceive the technology regarding difficulty in its application. The potential for the use of technology can be examined by taking the two concepts and then exploring how technology interacts with the operating system in use (Venkatesh & Davis, 2000).

A subjective standard refers to a personal belief about one's superior's opinion on the individual's ability to conduct the task. The concept also explains the fundamental belief that a given behaviour will result in a certain consequence based on Fishbein and Ajzen, 1967; Venkatesh and Davis, 2000. Users' opinions of voluntariness—the freedom to choose how to use technology—have an impact on its adoption. Moore and Benbasat (1991) claim that users are drawn to technological applications that fulfill their desire for recognition and social standing. This then influences the uptake of technology. Output quality refers to the perceived "ability to perform specific tasks," while work relevance looks at whether the intended technology is appropriate for the task at hand (Venkatesh & Davis, 2000).

The Technology Acceptance Model has been criticized because it oversimplifies the complex nature of technology adoption by placing heavy emphasis on perceived value and ease of use to the detriment of other important factors such as social impact and enabling environments and human differences Bagozzi, 2007. Further, TAM does not allow for contextual factors that may impact technology adoption, such as task requirements, corporate culture, and external constraints, which limits its generalizability to a wide range of settings and technologies (Venkatesh et al., 2003). The dynamic nature of technology adoption—that is, the fact that users can keep interacting with the technology so as to iteratively change attitudes and perceptions—is not captured by the model since it is relatively static (Benbasat & Barki, 2007).

Moreover, TAM, by its nature, may not have the ability to predict long-term adoption because it ignores post-adoption behaviour and the on-going relationship.

2.3.2. Diffusion of Innovation Theory (DIT)

Within the categories of innovation itself (technology), adopters, communication channels, time, and social systems, DIT examines a comprehensive analysis of technology adoption (Rogers & Everett, 1962). Through an assortment of communication channels, the theory promotes the spread of technology by examining its causes, applications, and justifications.

Innovation is a broad term in relation to the current level of knowledge in the analyzed unit. An innovation that is the focus of research could be anything that a person or another adoption unit considers to be new. In this way, by offering new ways to do tasks, these innovations upend the operational status quo. Adopters are the early users of the technology (innovation) who are the forgers of the conception of the usefulness of the innovation. If the technology is deemed useful enough, the adopters share the discovery through various and appropriate communication channels with the rest of their social network. Time involves the period between the introduction and realisation of the new technology and the period when the innovation has been widely adopted. The process requires time for the innovation to be properly appreciated while the social system explores internal aspects such as mass media, surfactants, and governmental mandates; as well as external influences such as strength of relationships and distance from opinion leaders (Rogers, 1962).

Research has synthesized and validated Rodger's perspective, presenting a decision-flow process that outlines how a product is adopted within a social system. This process includes the elements of knowledge and awareness, persuasion, decision, implementation, and confirmation (Greenhalgh, Robert, Macfarlane, Bate, & Kyriakidou, 2004). Knowledge and awareness function on the premise that, even after being exposed to the innovation, the user lacks sufficient information (knowledge) and understanding of the innovation's capabilities. This later transitions into persuasion, where, through exposure to the functionality of the innovation, the potential user commences to collect additional information about the innovation. This then facilitates an internal assessment of individual potential use of the innovation, where the potential

user weighs through comparing the potential benefits and drawbacks of using the innovation (Rodgers, 1962). The implementation phase of the innovation outlines the first attempts to engage with the provider in varying degrees, where a decision on the innovation's usefulness is determined. Finally, based on the interaction with the product, the user concludes the usefulness of the innovation and immediately seeks validation of the innovation's usefulness (Rodgers, 1962).

Individual adoption is the main focus of DOI, which may cause it to ignore more extensive organizational and systemic elements that affect the diffusion process. As a result, it might not be evident how innovations will be adopted in complicated environments (Greenhalgh et al., 2004). A comprehensive evaluation of an innovation's possible disadvantages and true worth may be impeded by the theory's pro-innovation bias, which usually implies that all inventions are advantageous and ought to be implemented (Rogers, 2003). Furthermore, DOI might not adequately account for the social, cultural, and economic elements that have a big impact on how innovations are adopted and disseminated, which would restrict its usefulness in non-Western or varied situations (Sahin, 2006).

According to Lyytinen and Damsgaard (2001), classifying adopters into groups such as innovators, early adopters, early majority, late majority, and laggards may be unduly simplistic and fail to adequately represent the complexity and heterogeneity of individual adoption behaviours. According to Jeyaraj, Rottman, and Lacity (2006), DOI, like the Technology Acceptance Model, usually overemphasizes the early phases of adoption while neglecting post-adoption behaviours and the innovation's long-term incorporation into the adopting community. Furthermore, although this process is crucial to how inventions are used and altered over time, adopters' capacity to reinvent or modify an innovation to better suit their needs is sometimes disregarded in theory development (Rice & Rogers, 1980).

2.3.3. Digital Divide Theory (DDT)

The advent of digital technologies has transformed society and opened up new possibilities for communication, education, and economic development globally. However, uneven usability of these technologies has caused some people to struggle more in making use of them; this has been coined the "digital divide." The central issue

that Digital Divide Theory tries to answer is how inequalities in access, use, and capabilities concerning ICTs differentiate demographic and socioeconomic groups.

According to Hoffman and Novak (1998), the term "digital divide" signifies the gap between the haves and the have-nots in access to digital technology. It is also feasible for the gaps regarding digital access, capabilities, and usage to be divided into groups of more than two; an "access divide" denotes physical differences regarding ICT infrastructure: computers, Internet and mobile. It is common to find differences in access between developed and developing countries, as well as between urban and rural areas (Norris, 2001). The skills gap looks at the differences in abilities needed for effective use of modern technology, including both the basic digital literacy and the more complex technical skills needed for advanced ICT use (van Dijk, 2005).

The digital divide is a factor that determines the course of social, political, and economic progress in diverse areas, such as political participation, social inequality, educational disparities, and economic impacts. Access to digital technologies greatly determines the potential of economies. Individuals and groups denied access to ICTs become less competitive both in the labour market and in starting up their own firms, exacerbating wider economic divides (DiMaggio & Hargittai, 2001).

By facilitating communication and expression among underrepresented groups, ICTs can help to promote social inclusion. But unequal access holds individuals in the margin of society and widens the existing gaps (Hargittai, 2003). Digital technology can advance political participation by providing means of resources, discussion venues, and mobilization platforms. But those who are less opportune may be precluded from taking part in politics due to the digital divide (Mossberger, Tolbert, & McNeal, 2007).

A holistic approach, in designing, will therefore include policy interventions, digital literacy programs, community-based approaches, and infrastructure development in bridging the gap. It calls for investment in ICT infrastructure, particularly for developing regions: this refers to the expansion of broadband networks and to making technology accessible (Qiang, Rossotto, & Kimura, 2009).

Strengthening digital literacy with education and training programs is, therefore, essential for individuals to be able to use the technology effectively. They may range

from highly technical to basic computer literacy training. Hargittai, 2010. Such ICT inclusion and access policies that governments adopt are very important and can greatly help reduce the digital gap.

Examples of such programs include public access points, subsidies for low-income families, and incentives for private sector investment in underserved areas (Servon, 2002). Well-integrated programs with neighbourhood associations can eliminate many of the requirements and barriers. Such initiatives are usually accompanied by personalized training programs and support networks (Gurstein, 2003).

The Role of ICT in Economic Development

ICT has taken on growing significance in the development of the modern economy. Through the creation of better connections, nurturing innovation, and increasing productivity, ICT has completely revamped economies worldwide. Other fields have also had their gaps filled with opportunities.

A fundamental way in which ICT acts as a spur to economic growth is through increasing productivity. Innovations in ICT reduce business operation costs, increase productivity levels, and accelerate organizational processes. For instance, ERP systems consolidate various business functions in an enhanced manner for better management of the resources and to provide decision-making with knowledge (Dedrick, Gurbaxani, & Kraemer, 2003). In addition, cloud computing assists companies in accessing and storing data remotely, thus doing away with the need for costly on-premises IT infrastructure (Armbrust et al., 2010).

In addition, ICT has significantly improved data analysis and automation. Automation technologies, which perform better than human labor in doing repetitive tasks, include AI and robotics, which have improved productivity while reducing errors (Brynjolfsson & McAfee, 2014). The organization can also use data analytics to derive knowledge on consumer behavior, market trends, and operational efficiency, enabling data-driven decision-making (McAfee & Brynjolfsson, 2012).

By allowing for the development of new products, services, and business models, ICT fosters innovation. For example, the Internet of Things makes everyday objects connected to the internet, hence acquiring new capabilities and increasing efficiency.

With the ability to track patients' health in real time and even notice doctors of any anomalies, IoT connectivity encourages innovation in many sectors, including healthcare (Atzori, Iera, & Morabito, 2010).

ICT also supports the development of the digital economy, characterized by the centrality of digital platforms and services to economic operations. Digital platforms, on which companies like Uber and Airbnb base their offer of more efficient and consumer-oriented services, have helped these companies disrupt traditional industries in a big way (Kenney & Zysman, 2016). More than disrupting the existing markets, such innovations open whole new market possibilities, hence facilitating growth and development.

While automation and ICT developments raise the specter of job loss, they also create new career opportunities. Many workers are employed by ICT firms in different types of jobs, from network administration to software development. Further, the "gig economy" is one of the outcomes of the pervasiveness of ICT, where digital platforms facilitate flexible time of work and interaction between independent contractors and their clients. De Stefano, 2016.

Information and Communication Technology (ICT) allows people to do remote work from almost anywhere in the world. According to Gajendran and Harrison, 2007, such flexibility can foster the integration of excluded groups – for instance, people with disabilities or residents of rural areas – into the labor market. The technological strides increase the ease of accessing work thus, increasing the economic base of the economy.

Technology is very central to socioeconomic inclusion because it eliminates the digital gap and expands the access to information and services. For example, e-government projects use ICT in the delivery of public services more effectively and transparently with better governance of citizens' involvement (United Nations, 2018). Similarly, e-health services provide accessibility to health for the most vulnerable communities by employing ICT in availing health service remotely (Eysenbach, 2001).

Another area where ICT is making a big difference is in education. Digital resources and e-learning platforms make it possible to access education, especially in places where the infrastructure for education is lacking. ICT makes high-quality education

accessible, allowing people to gain the skills and knowledge required to engage in the contemporary economy (Anderson, 2008).

The numerous benefits of using ICT in economic development are not without challenges. Since the availability of ICT varies by location and socioeconomic group, the digital gap remains a big problem (Norris, 2001). It is important that governments, corporations, and international organizations collaborate in closing this gap to ensure equal access to digital technology for all.

The other important concern is cybersecurity. With increased dependence on ICT, the frequency of cyberattacks is increasing. Strong measures in cybersecurity must be adopted to ensure that personal information is kept secure and public trust in digital platforms is maintained. Von Solms and Van Niekerk, 2013.

Impact on Digitization, Employment, and Entrepreneurship

The world of work and entrepreneurship has changed thoroughly in view of digitization. It refers to the use of digital technology for enhancing output, fostering innovation, and improving business practices. In this way, many new job opportunities have been provided by the digitization process. With the current digitalization of the world and its integration in day-to-day business operations, there is an increased call for specialists in diverse ICT fields. Such areas include software development, cybersecurity, data analysis, and digital marketing amongst others (Manyika et al., 2013). The rise of big data analytics has created a demand for analysts and data scientists with the ability to interpret complex databases and use their expertise to drive business decision-making processes (McAfee & Brynjolfsson, 2012).

Moreover, e-commerce proliferation has led to increased employment opportunities in supply chain management, customer service, and logistics. Companies like Amazon have created thousands of jobs globally to support their online marketplaces (Fleischer, 2017). Additionally, the gig economy, with its flexible work arrangements and allowance for freelance and part-time work, was made possible through digital platforms (De Stefano, 2016; Shukla, 2021).

The competences required in the labour market changed drastically with shifting to a digital economy. Considering that traditional manual skills are going to be partly

substituted or complemented by digital ones, there appears to be increasing demand for labor force fluently using digital tools and technologies in their operation—OECD 2016; advanced technical skills are presently in high demand, and a prerequisite in most businesses is that of digital literacy.

Programs for training and those of educational establishments are changing towards the incorporation of digital competences in their pedagogical systems. The boom in coding boot camps and the rise of learning platforms like Coursera, Udacity—all of which, according to Muro et al. (2017), represent specialized instruction of digital skills to prepare individuals to be competent and successful in digital labor.

The rise of digitization has significantly made it easier to develop digital entrepreneurship, as entrepreneurs can now use digital technologies to enable innovation and challenge the status quo of business models. Digital platforms, such as social media, e-commerce websites, and online marketplaces, allow entrepreneurs to reach a global audience with relatively low upfront financial investments (Nambisan, 2017).

For instance, Etsy and Shopify helped small business owners and artisans sell their wares online instead of relying on traditional retailing channels. Because of the invention of mobile apps—much like on-demand ride-hailing services by Uber and delivery of food and drinks by DoorDash became ubiquitous—now entrepreneurship could create such products and services that identified a specific marketplace need (Kenney & Zysman, 2016).

Furthermore, crowdfunding platforms such as Indiegogo and Kickstarter have opened up the avenues of capital acquisition, allowing entrepreneurs to raise funds directly from the general public rather than relying on traditional financial institutions (Agrawal et al., 2015). The resulting greater accessibility of financial resources has substantially lowered barriers to entry for potential entrepreneurs, engendering a more productive entrepreneurial ecosystem.

While digitalization offers several benefits, it also has some disadvantages. One of the major concerns is what is referred to as the "digital divide," which denotes the gap between those who have access to digital technologies and those who do not. This can further widen already existing socioeconomic disparities, as those without access

to digital technologies are less competitive both in the job market and in entrepreneurial activities (Norris, 2001).

A fifth problem relates to work displacement due to automation. While digitalization turns routine jobs into automated ones, it also creates new jobs in the process. This, therefore, means there is a likelihood of worker displacement in some fields. This, however, needs to be upskilled and reskilled through programs put in place for workers to shift into new jobs in the digital era. In 2014, Brynjolfsson, McAfee.

Digitalization provides numerous opportunities despite the challenges in its wake. People can discover new job opportunities, organizations are able to become more operationally effective, and entrepreneurs can bring innovative products and services into the market with an unprecedented level of ease. In light of the foregoing, there is a need for lawmakers and educators to take the lead in ensuring wider access to the opportunities availed by digitalization. They also help in ensuring the increase in levels of digital literacy as well as infrastructure (Qiang, Rossotto, & Kimura, 2009)...

Conclusion

The Wholesale and Retail Sector Education and Training Authority, in partnership with the present government, initiated an important intervention called the ICT Skills Capacity Building Program, which seeks to address some of the major challenges facing South Africa's youth at the time when the country is faced with an economic crisis. Over the past decade, growth in South Africa has been very slow, driven by the COVID-19 pandemic, issues of corruption, and poor service delivery with regard to ESKOM power outages in the country (BloombergNews, 2024; News24, 2024). This has, in turn, triggered cuts in spending and low productivity, greatly impacting job creation and economic stability.

Presently, there is a generation gap in job opportunities, therefore making the competition for those few available jobs among the youth and the already employed people high, hence amplifying unemployment among the youths. Socio-economic challenges also impede entry into the labour market as represented by barriers like poverty, inadequate infrastructure, access constraints to information, and education inputs (Arbeláez-Rendón, Giraldo & Lotero, 2023; Alao & Brink, 2022).

The W&R SETA ICT Skills Capacity Building Program seeks to address these challenges by endowing the youth with critical digital competencies that will make them more employable and provide them with the skills necessary to start their own businesses. This program will also help address the current ICT skills shortage, promote enterprise development, and increase market participation through the development of ICT skills among the unemployed (W&RSeta, 2024). Various theoretical frameworks explain how the program may yield intended benefits in youth employment and self-employment opportunities. The most relevant of these are the Diffusion of Innovation Theory (DIT), the Digital Divide Theory (DDT), and the Technology Acceptance Model (TAM).

Notwithstanding the challenges identified above, this project holds great potential for socioeconomic development and the alleviation of unemployment among youth. The project can also go a long way in helping to fast-track economic development in South Africa by bridging the digital divide, enhancing digital literacy, and fostering an inclusive digital economy that ensures equal access to the benefits of digitalization for everyone. Folea & Folcut, 2024; Gomes & Lopes, 2022; Alao & Brink, 2023.

Chapter 3: This Methodology

Introduction

This research methodology is presented in the format subscribed in Saunders research onion which provided a relatable and coherent structure to the methodology process applied in this research. Each stage of the research onion will be explored, providing insight into the rationale of the application of the various facets of research.

Research Objective Recap

This study seeks to establish how the W&R SETA's ICT Skills Capacity Building Programme affects young people's access to digitization, employment, and entrepreneurship in South Africa.

Research Philosophy

The pragmatist philosophy of this research acknowledges that no one philosophical viewpoint that can adequately express the complexity of real-world situations. Pragmatism allows for flexibility in study design and methodology to ensure that the optimal tools are selected to address the research issues.

By combining surveys and interviews, the study sought to quantify particular patterns (positivism) and explore more in-depth subjective insights (interpretivism) in order to strike a balance between the need for objectivity and an awareness of individual experiences. Using a mixed-method approach made sure that the findings were supported by participants' contextual knowledge and based on measurable data (Morgan, 2014).

Research Approach

The study used a deductive methodology, which accepts ideas and a body of literature to generate assumptions or hypotheses. To test these theories, surveys were used to gather information on certain factors. In addition, interviews provided qualitative information that validated the survey results. Although the primary focus is on verifying established ideas, there was an opportunity to advance theory to some regard due to

the integration of quantitative and qualitative data if new patterns or insights from the interviews were discovered (Saunders, Lewis, & Thornhill, 2019).

Research Strategy

The mixed methods research process brings in both the qualitative and quantitative methodologies. The major quantitative instrument used is the survey, which gives a broad-based overview of trends and behaviours from a large number of participants. The findings from the survey were validated through in-depth interviews, while structured interviews were used to further explore individual perspectives. Integration of both quantitative data and qualitative narratives gives the findings reliability and depth in their mixed-method approach. This will allow for triangulation—using different methods to compare and confirm findings, therefore adding to the overall credibility of the study (Creswell & Plano Clark, 2017)..

Time Horizon

The study uses a cross-sectional horizon, meaning that participant data will be gathered all at once. This methodology is suitable for research endeavours that seek to document prevailing views, behaviours, or circumstances within a particular community or setting. Through the simultaneous use of surveys and interviews, the study offered a moment-in-time view of the phenomenon on the current setting of the participants situation. This information, therefore, confirmed the impact of the programme on the selected candidates and highlights possible areas of improvement (Bryman, 2016).

Data Collection Techniques

Surveys and semi-structured interviews continue to be the main methods of gathering data, and both can be done using the cross-sectional methodology. Using a structured set of questions given to a sizable sample at a predetermined time, surveys will collect quantitative data. Any correlations or patterns in the data will be statistically interpreted as a result. Surveys and semi-structured interviews were the main methods used to collect data. Closed-ended questions intended to measure variables and spot trends within the sample group will make up the surveys. These were made publicly available, guaranteeing a sufficient volume of data for statistical examination. Semi-structured

interviews were performed after the surveys to collect qualitative information that might shed further light on the survey answers. Open-ended questions were the main emphasis of the interviews since they gave participants the opportunity to elaborate on their viewpoints. This combination of techniques balances the breadth and depth of data collection to ensure a comprehensive understanding of the study problem (Robson & McCartan, 2016).

Please see Appendices for sample survey.

Sampling

In the context of this study, the stratified random sampling method is recommended. When dealing with a diverse population dispersed throughout the whole country, stratified sampling guarantees that the sample truly represents meaningful subgroups within the larger population.

The study used stratified sampling to obtain representative samples that included participants from different geographical areas and diverse age ranges and working demographics. The study lacked clear guidelines for stratification and lacked descriptions about the methods of determining and balancing subgroups. Researchers attempted to include participants across provinces along with retail companies, but the study narrowed down to only 31 respondents from the 901 initially targeted participants. A high rate of participant withdrawal threatens the validity of the research results because of participant sample unrepresentativeness. No complete discussion exists regarding how the sample attrition affects the reliability together with generalisability of study findings. Readers need to approach the study findings with caution because this small sample affects the research strength.

Stratified sampling was instrumental in ensuring an equitable representation of respondents, albeit a smaller sample size, as it involved first categorizing the population according to relevant characteristics—say, the educational institution or training facility attended—and then randomly choosing participants from each stratum. This helped to consider the differences between the ICT support and resources provided by the W&R Seta across the different institutions and facilitated a substantive comparison of performance within these different educational settings (Etikan & Bala, 2017; Taherdoost, 2016).

A 95% confidence level with a margin of error of 5% meant that the sample size would be 277 students when the Yamane formula was initially applied to calculate the sample size from a population of 901 students (Yamane, 1967). However, the final sample size of 31 respondents, although smaller, was sufficient for exploratory purposes and provided meaningful data about the impact of the programme.

Data Analysis

The data obtained from the questionnaires and interviews will be analyzed using SPSS, which stands for the statistical package for the social sciences. It is a common tool for organizing and manipulating quantitative data. First, the survey results will be coded and entered into SPSS to make sure that every variable is properly identified and labeled. Descriptive statistical measures, such as means, frequencies, and standard deviations, will be calculated to provide an overall view of the sample demographics and the prevailing trends within the data (Field, 2018; Pallant, 2020). Also, t-tests, ANOVA, and chi-square tests for categorical variables will be performed with the aim to further look into inequalities between different groups, including those identified by gender, geographical location, or age. Regression analysis may also be relevant to test the predictive power of certain factors over outcomes of interest. Correlation analysis will be performed in order to test the relationships between continuous variables (Pallant, 2020; Field, 2018).

Ethical Considerations

This study requires due concern for ethical issues that are indispensable in preserving the equity and integrity of the research process. Informed consent shall be sought from each participant before agreeing to participate, which means they should understand fully what the study is about, its methods, and the potential risks involved (Babbie, 2015). The respondents will be provided with confidentiality and anonymity by de-identifying the data by removing personal information to protect the privacy of participants and minimize all potential risks (Wiles et al., 2008). Additionally, the study adhered to the voluntary participation principle which meant that respondents would not suffer any consequences from pulling out of the research whenever they felt like so (Cohen, Manion, & Morrison, 2018). Data collected would be stored safely and only accessed by authorized persons to avoid misuse or any form of breach in privacy (Denscombe, 2014). From the discussion of these ethical issues, the study attempted to ensure the best practices of ethical behaviour and also attempted to protect the

Overview

This chapter offers a detailed analysis of the survey data from participants in the W&R SETA ICT Skills Capacity Building Program. The analysis explores the effects of the program on employment, confidence in their ICT skills, and levels of community engagement using theoretical frameworks for interpretation of the data. Diffusion of Innovation Theory (Rogers, 2003) is used to explore the stages of ICT adoption and its diffusion among the participants. While the Digital Divide Theory (van Dijk, 2005) highlights systemic inequalities in resource accessibility and results, the Technology Acceptance Model (TAM) (Davis, 1989) provides a framework for understanding participants' acceptance of the training and its perceived usefulness and ease of use.

Current Employment Status

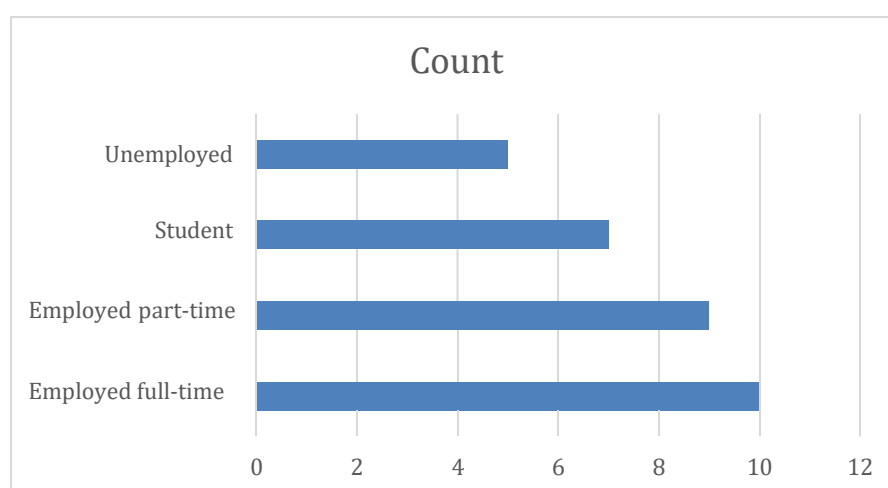


Fig 1: Current Employment Status

The survey data revealed some inequalities in employment outcomes across the group. Specifically, out of thirty-one participants interviewed, ten gained full-time work, nine acquired part-time, five had no job, while seven continued pursuing their studies. These figures are a good proof of the inconsistencies in the employability-enhancing capability of the programme. According to TAM—Technology Acceptance Model—proposed by Davis in 1989, one of the factors that considerably influenced respondents' capability of translating ICT skills into jobs was linked to respondents' perception of the program's usefulness. The ones for whom ICT training seemed relevant to their particular type of job profiles were more disposed toward finding work.

The theory of the Digital Divide identifies why a few trained individuals end up remaining unemployed van Dijk, 2005. Regional inequalities, economic slowdown and the inability to access the leading sources to seek a job post-training may all combine to render them ineffective. For example, those living in geographically isolated areas or economically deprived areas will find it even harder to get a job after training. Those who found work can be classified as "early adopters," utilizing their ICT skills to generate visible benefits, based on the Diffusion of Innovation Theory. The findings suggest that to have a greater program impact, specific support for the "late adopters" is necessary, particularly for those who have yet to find work or are pursuing further education.

Expectations for the Program

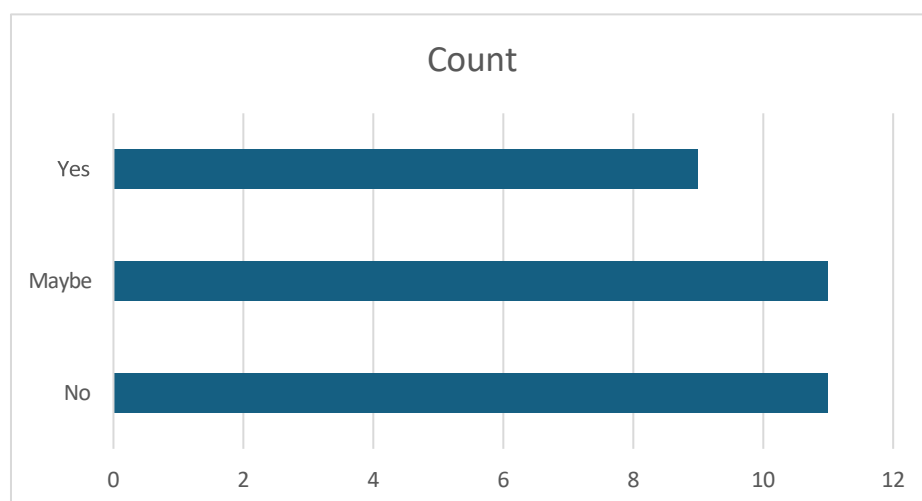


Fig 2: Programme Expectations

Most of the respondents were satisfied with the program: 70% reported that the program had largely met their expectations. Another 20% reported partial fulfillment of expectations, and 10% said that it was below their expectations. The findings of the current research indicate certain aspects of program design and implementation that require enhancement. TAM (Davis, 1989) suggests that discrepancies between participants' a priori perceptions of the usability and ease of use of the program and their actual experience would result in disappointed expectations. For example, if participants had anticipated more thorough training in ICT skills, they may have perceived the program as lacking in this area.

The theory of innovation diffusion posits that to more rapidly diffuse a program and achieve member satisfaction, the "early majority" needs to be satisfied by bringing

offerings up to their expectations. Tailoring content distribution and providing regular feedback mechanisms may encourage greater acceptance and satisfaction across a multi-socio-demographic participant base.

Issues with Training Materials or Instructors

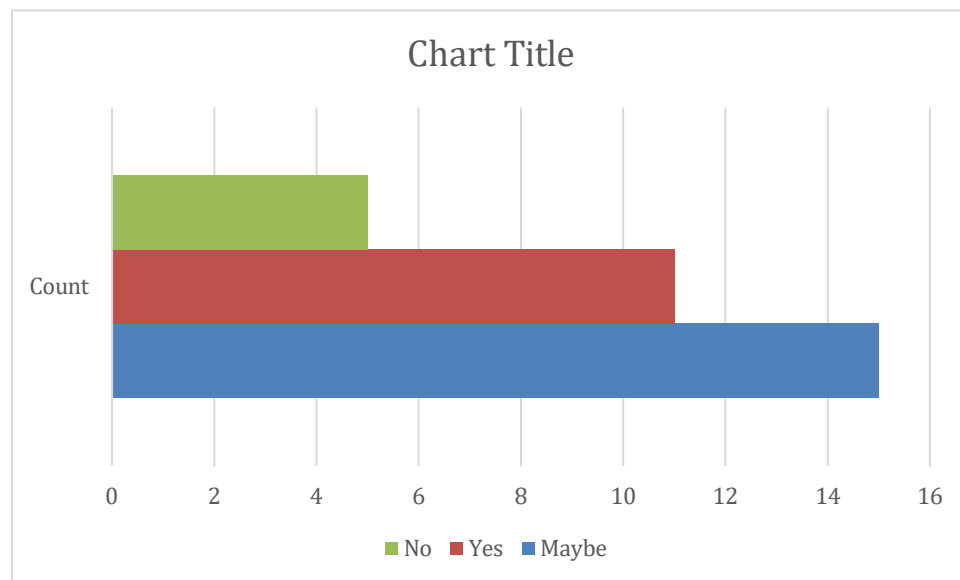


Fig 3: Training Material/ Instructor issues

Although 85% of respondents claimed that they did not have significant issues with either the training content or instructors, 15% of respondents did report barriers that ranged from having outdated training to a lack of interaction with instructors. The Digital Divide Theory (van Dijk, 2005) suggests that differential access to better resources and quality support from instructors can exacerbate inequalities, especially for those from underserved populations.

The diffusion of Innovation Theory would suggest that these barriers can limit wider adoption, particularly for those individuals who are characterized as "early majority" or "late majority" in the process of diffusion. These problems can be overcome by improving training materials and preparing trainers, which will have the added benefit of increasing program effectiveness and improving participation rates.

Community Impact

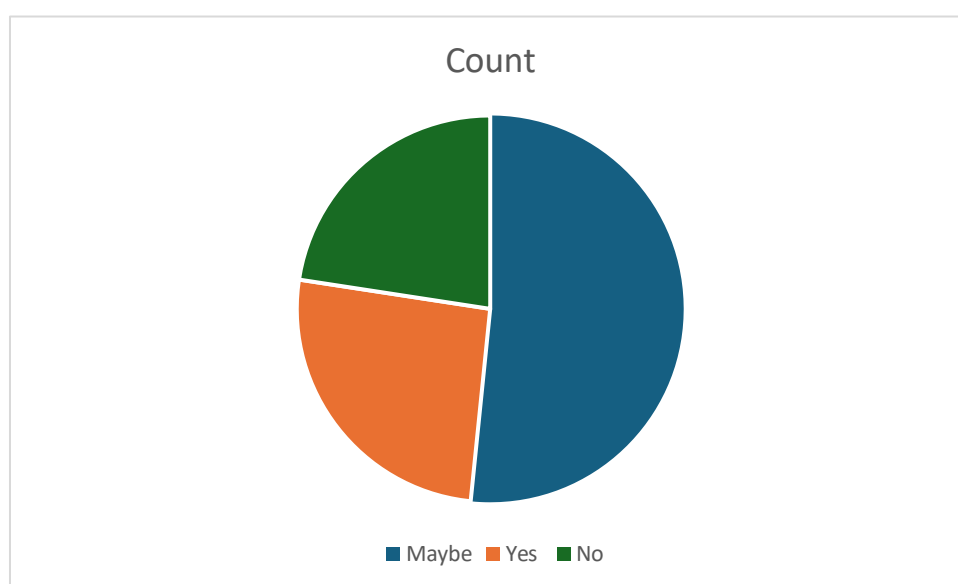


Fig 4: Community Impact

More than 70 percent of respondents said the program helped their community by empowering them to support neighbourhood projects and increasing digital literacy. However, 15% thought the program had little to no impact. This is an example of "innovation reinvention," when individuals adapt their ICT skills to meet local needs, according to the Diffusion of Innovation Theory.

However, Digital Divide Theory explains that systemic inequities such as lack of infrastructure or a lack of community resources would limit the extent of the programme's impact within disadvantaged areas—van Dijk, 2005. It is, therefore, essential to address these divides for the enhancement of community engagement by the use of resources of the programme toward the local ICT infrastructure and building relationship with community agencies.

Self-assurance in ICT Proficiency

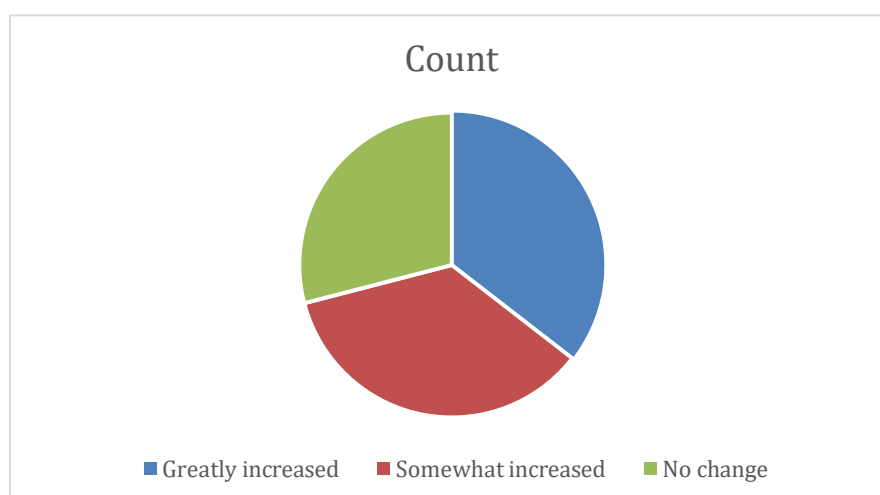


Fig 5: Self Assurance

Eighty percent of respondents reported a major or vast improvement in their confidence levels related to their ICT competencies, while twenty percent reported that their confidence had improved only slightly or not at all. The Technology Acceptance Model (Davis, 1989) would argue that this increase in confidence is an antecedent to the positive attitudes that respondents have towards both the ease of use and simplicity of the program. This sense of confidence is one of the leading determinants of continued use and adoption of technology in both personal and professional contexts.

The application of the Innovation Theory postulates that as "early adopters" demonstrate to their peers and communities the dividends of a program, their increasing confidence will clear the path to wider adoption. Special training may be needed for lower-confidence persons to achieve parity of outcomes.

Availability of Resources

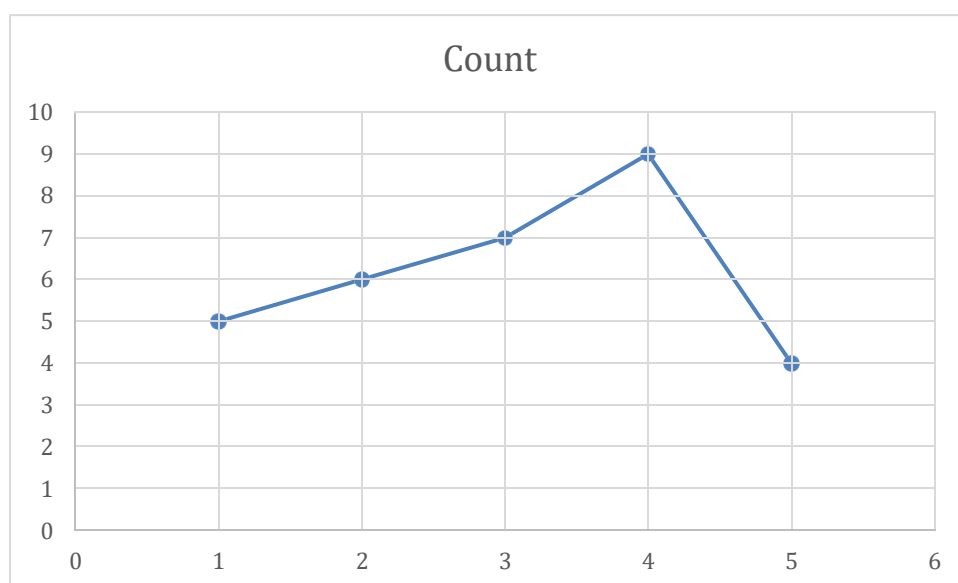


Fig 6: Availability of Resources

Although 65% of interviewees felt that resource accessibility was good, 20% highlighted serious issues, such as poor infrastructure or limited access to digital tools. According to the Digital Divide Theory (van Dijk, 2005), unequal access to resources touches especially the underprivileged, hence their chances of gaining from the program are quite limited.

A lack of resources could discourage future participation by negatively impacting TAM views of ease of use and satisfaction. In order for the reach and effectiveness of the program to be enhanced, these deficits have to be filled by focused investment in ICT

infrastructure and resource distribution.

Total Quality of Training

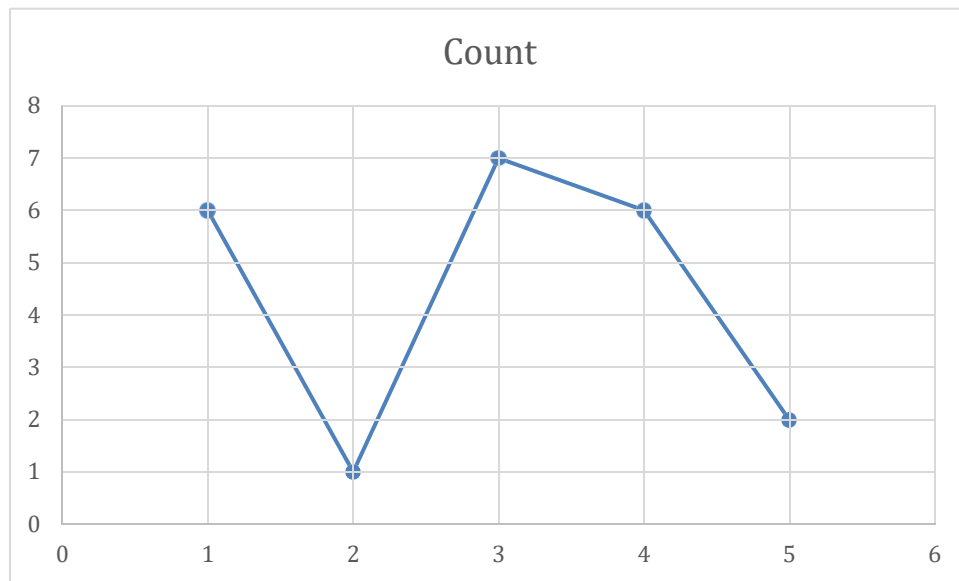


Fig 7: Total Quality of Training

10% of respondents pointed out areas for improvement, while seventy-five percent gave the program a high rating. High-quality training is consistent with TAM since participants are more likely to adopt and deploy ICT skills when they feel the training is applicable and efficient.

According to Innovation Theory, high training standards are essential to maintaining the program's growth, particularly among "early majority" participants who rely on positive testimonials and visible success stories.

Economic Outlook

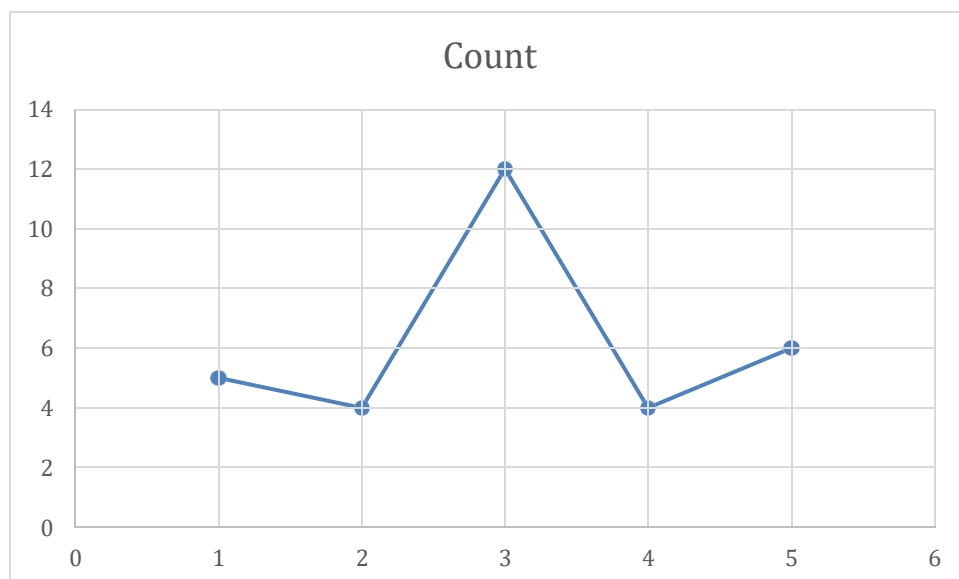


Fig 8: Economic outlook

25% of respondents reported little to no change in their economic outlook, while 60% reported moderate to major improvements. The Digital Divide Theory attributes these disparities to systemic injustices that limit people's ability to use ICT skills for economic benefit. For example, those living in areas with poor job opportunities would have faced some challenges in achieving the maximum economic return on the program.

The Diffusion of Innovation Theory posits that much of the economic benefits are only realized at the latter stages in the adoption curve and hence an argument to continue support to maximize long-term outcomes.

Summary

The report also illustrates how the W&R SETA ICT Skills Capacity Building Program has performed in the promotion of the use of ICTs and in enhancing employability, apart from pointing out areas that need improvement. The findings of TAM, Diffusion of Innovation Theory, and Digital Divide Theory have indicated the need for focused interventions in closing inequalities related to economic outcomes, training quality, and accessibility of resources.

Chapter 5: Discussion

Overview

This chapter presents the linkages among the major data elements and synthesizes theoretical models to understand the overall impacts of the W&R SETA ICT Skills Capacity Building Program. The Diffusion of Innovation Theory (Rogers, 2003) provides a useful framework through which to assess participants' uptake of ICT skills, while the Digital Divide Theory (van Dijk, 2005) points to structural inequalities, which influence both accessibility and results. The Technology Acceptance Model, proposed by Davis (1989), was used to assess participants' beliefs about the program concerning its ease of use and usefulness, which in turn resulted in acceptance by the ICT skill learners.

Employment Results and ICT Skill Confidence Correlation

The research data linked strong positive changes in participant employment results to their increased self-confidence about their ICT skills usage. Among those reporting notable increases in ICT confidence, 75% secured full- or part-time employment. A more refined approach toward employment impact assessment

would improve the research study. The assessment fails to report which type of jobs the participants obtained since the data does not indicate if they secured ICT-specific work or positions outside the digital sector because of market demands. This knowledge gap prevents researchers from determining how the program matches sector standards while understanding the market adoption of its digitally qualified candidates. The analytical approach fails to consider external elements which can affect employment readiness including employer views along with labor market condition and industry capacity to integrate newly qualified candidates. Research should investigate how external elements affect digital skills transformation into long-term employment opportunities because these variables seem to impact sustainability. Conversely, individuals who stayed unemployed were more inclined to express diminished confidence in ICT.

The Technology Acceptance Model, theorized by Davis in 1989, explained the mediating effect of perceived usefulness on people's behavioural intentions. People who perceived that the acquisition of ICT skills would make them more employable were more likely to use these skills in their job-seeking activities. Moreover, increased self-efficacy due to increased confidence in ICT is consistent with the Diffusion of Innovation Theory, as "early adopters" typically have high levels of confidence in using new technology innovations.

The Digital Divide Theory (van Dijk, 2005) explains the difficulties of those living in economically disadvantaged regions in accessing local job opportunities and job placement services and thus, it flags the inequalities in employment outcomes. In this way, it is important that systemic disparities are taken into consideration so that all the participants, regardless of their backgrounds, may fully benefit from the program.

Quality of Training and Resource Accessibility

A moderately favourable association existed between participants' perceptions of resource accessibility and their assessments of training quality. Alongside assessing resource accessibility as "satisfactory" or superior, 80% of participants rated the quality of training positively. This discovery underscores the importance of fair resource distribution in influencing the overall efficacy of training programs.

TAM posits that adequate resources improve participants' perceptions of usability, hence increasing satisfaction and acceptance of training (Davis, 1989). Access to modern technology and high-quality instructional materials enhanced the probability that participants perceived the training as successful.

According to the Digital Divide Theory (van Dijk, 2005), resource discrepancies may hinder participants' capacity to fully engage in the program, especially in rural or impoverished areas. According to the Diffusion of Innovation Theory, these disparities may impede the dissemination of innovation by restricting the shift from "early adopters" to "early majority" participants due to insufficient infrastructure.

Obstacles to Program Access and Economic Opportunities

Respondents reported only modestly positive changes in their financial well-being if there were strong logistical or time constraint impediments to joining the program. Of those who actually had access problems, sixty percent reported little to no improvement in their financial situation, while thirty percent of those who had no access problems admitted to better economic gains.

The Digital Divide Theory provides a conceptual framework to understand how systemic inequalities, such as geographical isolation and lack of mobility, deepen barriers to participation. Such barriers affect the marginalized through the elusiveness of their ability to use ICT skills for economic gains, as has been illustrated.

Reducing these barriers to entry is crucial, according to Diffusion of Innovation Theory, to increase adoption rates among the "early majority" and "late majority." The program seeks to ensure equitable benefit among people from all walks of life by increasing outreach and assisting with logistical aspects.

According to Diffusion of Innovation Theory, mitigating these hurdles to entry is essential for enhancing adoption rates among the "early majority" and "late majority."

The initiative aims to guarantee equitable advantages for individuals from diverse backgrounds by enhancing outreach and providing logistical support.

Ideas for Enhancement and Social Impact

Also, respondents who favoured strengthening the program with either better training facilities or increased funding were more likely to believe that the program was helping the community. They said the training in ICT skills enabled them to contribute to local efforts in activities such as digital literacy training and support for small businesses. Diffusion of Innovation Theoretical models emphasize "reinvention," where participants modify training outcomes to fit community needs. The social impact of the training can be maximized by increasing the interaction between the program and local stakeholders. TAM posits that on-going adoption and participant satisfaction are increased when program attributes match user expectations. Others might include more advanced training opportunities, or content adjusted for relevance to specific community needs. The Digital Divide Theory stresses the requirement for addressing gaps in infrastructure and resources as a means of improving social outcomes across disadvantaged communities.

Reasons for Taking Part and the ICT Skills Learned

A notable discovery was the correlation between the participants' motivations for enrolling in the program and the ICT competencies they acquired. Individuals with a more professional orientation demonstrated superior competency in advanced ICT abilities related to digital communication and information analysis.

The Technology Acceptance Model (Davis, 1989) suggests that this alignment arises from individuals' evaluations of the program's efficacy in achieving their professional objectives. Participants who view the training content as pertinent to their job goals are more likely to engage actively and develop new skills.

Professionally motivated individuals might act as "change agents," illustrating the significance of ICT skills to their peers and consequently improving acceptance, as suggested by the Diffusion of Innovation Theory. This discrepancy can be alleviated, and overall outcomes improved, with appropriate support and incentives for the less motivated.

Verification Through Literature

The connections identified in this study are strongly supported by the existing body of

literature. The program's focus on improving confidence in information and communication technology (ICT) is consistent with Davis's (1989) claim about the significance of perceived usefulness and usability in promoting the adoption of technology. Moreover, Van Dijk (2005) emphasizes the necessity of eliminating institutional barriers to provide fair access, a sentiment echoed in participants' feedback about resource availability and practical challenges. Rogers' (2003) analysis of innovation diffusion underscores the necessity of bridging these gaps to promote adoption and augment societal and economic advantages.

Conclusion

This chapter underscores the interrelatedness of economic opportunities, availability of programs, quality of training, access to resources, and employment outcomes with ICT skill confidence. The views emanating from the Technology Acceptance Model, Digital Divide Theory, and Diffusion of Innovation Theory combine to offer a framework that is holistic in nature for analysing these relationships and determining areas that need improvement. Barriers to access should be removed, resource allocation enhanced, and training materials aligned with participant needs in order to maintain the inclusivity, efficacy, and global standard adherence of the programme.

Chapter 6: Obstacles, Suggestions, and Upcoming Studies

Overview

The major challenges in implementing the W&R SETA ICT Skills Capacity Building Program included inadequate funding, a lack of support after the program, and problems in recruiting. These challenges notwithstanding, it was a very promising intervention to improve the use of ICTs, increase employment opportunities, and reduce socio-economic disparities. Further building on this foundation and ensuring long-term success will require addressing these challenges, making targeted changes, and further researching the impacts of the program to improve understanding.

Challenges

Recruitment difficulties

The exercise of recruiting people has been one of the most challenging tasks, especially in economically disadvantaged areas and rural areas. Lack of information about the program, access issues like transport, and other commitments like work or school hindered participation. In explaining this, Van Dijk's (2005) Digital Divide Theory says that structural inequalities always hinder marginalized groups from accessing opportunities like information and communication technology training. The program faced a problem in recruiting volunteers, as potential participants from rural areas usually lacked the resources or knowledge required to participate in the study. To overcome this issue and close the gap, more effective promotions and focused outreach programs are necessary.

Temporal Constraints

The time limitation of the program hindered teachers from providing individualized attention or comprehensive training to all students. The effectiveness of teaching quality and the ability for participants to learn have possibly decreased due to the sense of urgency conveyed by both the instructors and the participants. According to Mukherjee and Tandon (2023), time constraints can sometimes weaken the impact of vocational training, specifically those programs targeted at a diverse group of participants. This can be improved by making the program duration longer and providing flexible timing options, thus improving the overall training experience.

Limited Resources

A multitude of respondents expressed frustration with their inadequate access to modern training facilities, reliable internet connectivity, and information and communication technology gadgets. The limitations of these resources align with the Digital Divide Theory, which emphasizes how unequal access to technology intensifies socio-economic inequities (van Dijk, 2005). As a result of the disparate effects, individuals from marginalized groups were unable to fully benefit from the program. Investments in innovative training methods and robust infrastructure are essential for establishing a more equitable educational environment.

Limited Post-Program Assistance

Numerous responders indicate that there is no organized post-program support available to participants, including job placement, mentorship, or entrepreneurial assistance. In the absence of sustained assistance, newly acquired skills may lack appropriate opportunities for application. Rogers (2003) asserts that with sustained support, the adoption curve will ultimately stabilize, particularly for "late majority" adopters; subsequent mechanisms must be established to address this gap and maintain ongoing advantages.

Suggestions

Targeted marketing strategies should be adopted to increase the visibility of the program, especially in disadvantaged areas, to address recruitment challenges. Partnering with local stakeholders—community-based organizations, civic leaders, and educational institutions—would increase access and trust. Smith and Kumar (2022) noted that this is of particular importance for grassroots outreach efforts in engaging people from underserved populations.

Extended Duration and Adaptable Scheduling

The extension of the program's duration, along with the introduction of flexible scheduling options, including evening or weekend classes, may help participants who have conflicting obligations. Mukherjee and Tandon (2023) argue that flexible training approaches encourage deeper engagement with the program content by a diverse

participant pool. An extended timeframe allows for more comprehensive training and targeted assistance.

Greater Allocation of Resources

Any choice to extend the duration and boost resources in the programme needs a thorough evaluation of associated expenses. Future extensions of the programme must account for operational costs alongside availability of expert trainers and suitable infrastructure as well as policy compliance requirements. An assessment of feasibility needs to take place before implementation while the program investigates potential funding from both private sector partners and donor organizations.. Zhang and Li (2022) assert that equitable resource allocation significantly enhances the efficacy of job training programs. Collaborating with technology providers and obtaining supplementary financing could significantly improve resource availability.

Mechanisms for Post-Program Support

The programs do not feature an organized system to assist graduates after training in finding employment or launching entrepreneurial ventures. The limitations in real-world usage of ICT skills acquired during training become a challenge. Post-program support can be achieved through strategic alliances between the program and industry organizations which would provide mentorship together with job shadowing and internship opportunities. A digital alumni platform should be created alongside supportive job readiness boot camps to help sustainability between training and professional employment demands(Rogers, 2003).

Constant Observation and Input

Efficient mechanisms for input could enable the program to rapidly adjust to participants' evolving needs. Davis (1989) contends that continual feedback improves participants' judgments of practicality and usability, which are two key elements of the Technology Acceptance Model. A digital platform for ongoing assistance and communication may facilitate the achievement of the objective.

Future studies

Longitudinal Impact Studies

Future studies should be conducted to find out the long-term impacts of information and communication technology (ICT) training on the economic gains, job opportunities, and social development of participants. Alhassan and Ahmed (2022) pointed to the need for longitudinal studies that examine the long-term impacts of ICT.

The research must monitor precise measurable outcomes through duration from 6 months to 24 months which include:

- Sustained employment over 6–24 months post-training
- Economic empowerment through salary adjustments should be included in the progression plan.
- Entrepreneurs need to show continuous business operation together with official registration and successful business revenue generation.

A person's digital skills retain their operational value according to changes in job market requirements skills on economically marginalized countries. This would provide an opportunity to gain insight into the progress achieved by the initiative.

Barriers to Participation

Addressing the unique challenges that are inherent within specific marginalized communities, particularly those in remote and disadvantaged areas, may provide effective means of intervention to increase and enhance participation and inclusion. As stressed by Van Dijk (2005), addressing systemic barriers is important for closing the digital divide.

Effectiveness of Delivery Formats

Comparative research investigating online, hybrid, and in-person training methods may reveal the most effective approaches for an assortment of participant demographics. According to Zhang and Li (2022), adaptable delivery approaches increase programme success by meeting the needs of diverse groups.

Employer Engagement

Examining the ability of industrial collaborations to enhance employment rates and align training resources with market needs would lend greater relevance to the training programs. As Mukherjee and Tandon (2023) observe, there is a need for organizations

and training institutions to work together to address the deficiencies in skills development and workforce integration.

Technology Integration in Training

Consideration of the potentialities offered by modern technologies, such as artificial intelligence (AI) and virtual reality (VR), may drastically modify the pedagogical approaches used by students in the context of information and communication technology (ICT) education. Technology, according to Rogers (2003), is one of the main determinants in the diffusion of innovation, and integration of new resources in educational designs can also lead to increased effectiveness and interest on behalf of the students.

In conclusion

The W&R SETA ICT Skills Capacity Building Program has demonstrated considerable potential in advancing ICT adoption and alleviating socioeconomic disparities. Nevertheless, the program has encountered obstacles related to participant recruiting, budget constraints, and issues with scheduling and post-program assistance. Proposed improvements to promote accessibility, efficiency, and sustainability include improved outreach, flexible scheduling, increased resources, and comprehensive post-program support. These findings necessitate additional research in the specified domains for the comprehensive evaluation of the program's advantages and the direction of its continuous advancement. These programs are based on the ideas of the Technology Acceptance Model, Diffusion of Innovation Theory, and Digital Divide Theory to ensure the program meets participants' requirements while fostering broader socioeconomic growth.

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Appendices

Appendix A: Samples of Questionnaire

Title: The Impact of the Wholesale and Retail SETA's Information and Communication Technology Skills Capacity Building Programme on South African's Youth Access to Digitisation, Employment and Entrepreneurship Opportunities in the Wholesale and Retail Sector

I am writing to invite you to participate in a research study titled "Evaluating the Impact of the W&R SETA's ICT Skills Capacity Building Programme on South African Youth." This study is being conducted as part of an effort to assess the effectiveness of the ICT skills training provided by the Wholesale and Retail SETA (W&R SETA) and its impact on employment, entrepreneurship, and economic empowerment among youth in South Africa.

Purpose of the Research:

The primary goal of this study is to obtain information about the ways in which your employment chances, entrepreneurial endeavours, and overall financial prospects have been impacted by the ICT skills you have gained through the W&R SETA program. Your input will be crucial in assisting us in identifying the program's strong points and areas for development, as well as informing our recommendations for improving next training initiatives.

Participation and Your Rights:

You are free to choose whether to participate in this survey, and you are not obligated to respond to any questions that make you uncomfortable. Refusing to participate or omitting a particular question carries no punishment. You can also stop participating in the survey at any moment without facing any repercussions.

Completing the survey will take about fifteen to twenty minutes, and all answers will be kept completely private. No personal details will be shared with parties outside the research team; the data obtained will be utilised exclusively for research purposes. Your identity will be kept private even if the study's findings are discussed at conferences or published in scholarly journals.

Confidentiality: We are committed to maintaining the confidentiality of your responses. All data will be stored securely, and only the research team will have access to it. In any reports or publications resulting from this research, your anonymity will be preserved.

Contact Information: If you have any questions about this research or your participation, please feel free to contact me at shngie.paradza@gmail.com or 0788245596. You may also contact Mr Aspelling, who is overseeing this research, at ASPELINGJ@cput.ac.za.

We greatly appreciate your time and input in helping us better understand the impact of the W&R SETA's ICT Skills Capacity Building Programme. Your participation will contribute to valuable improvements in future training efforts and support the ongoing development of youth in South Africa.

Thank you for your consideration.

Sincerely,

A handwritten signature in black ink, appearing to read 'Dignity Paradza', is written over a horizontal line.

Dr Dignity Paradza

Shingie.paradza@gmail.com

CPUT post-Doc Fellow

Section 1: Demographics

Age:

- 15-20
- 21-25
- 26-30
- 31-35

Gender:

- Male
- Female
- Other (please specify)

Location:

- **Urban** (An urban area is a region characterized by high population density, extensive infrastructure, and significant economic activity, typically centered around cities or large towns. E.g. Cape Town and Johannesburg, East London etc)
- **Suburban** (Suburban areas are residential regions situated on the outskirts of a city or urban area. (E.g. Soweto, Sandton etc)
- **Rural** (Rural areas typically have smaller communities, less infrastructure, and fewer services compared to urban areas, and the economy is often based on agriculture, forestry, mining, or other resource-based activities. E.g. Vhembe District in Limpopo, OR Tambo District in EC etc)

Residential Province:

- Eastern Cape
- Free State
- Gauteng
- KwaZulu-Natal
- Limpopo
- Mpumalanga
- North West
- Northern Cape
- Western Cape

Educational Background:

- ☐ High School
- ☐ College/University
- ☐ Technical/Vocational Training
- ☐ Other (please specify)

2. Which qualification did you attain from the W&R Seta sponsorship?

.....
Current Employment Status:

- ☐ Employed full-time
- ☐ Employed part-time
- ☐ Self-employed
- ☐ Unemployed
- ☐ Student

3. What is your current work arrangement? Please select one of the following options:

- ☐ I work entirely from home (remote work).
- ☐ I go into the workplace every day (on-site work).
- ☐ I have a hybrid work arrangement (combination of remote and on-site work).
- ☐ Does not apply to me.

Section 2: Participation in the ICT Skills Capacity Building Programme

How did you learn about the W&R SETA's ICT Skills Capacity Building Programme?

- ☐ Online Advertisement
- ☐ Word of Mouth
- ☐ School/University
- ☐ Community Center
- ☐ Other (please specify)

7. What motivated you to participate in the programme? (Select all that apply)

- Improve job prospects
- Start a business
- Gain ICT skills
- Networking opportunities
- Other (please specify)

Which specific ICT skills did you acquire during the programme? (Select all that apply)

- Software knowledge
- Data analytics
- Digital literacy
- Web development
- Other (please specify)

8. If other, please specify

How would you rate the overall quality of the training provided in the programme?

- Excellent
- Good
- Fair
- Poor

Did the programme meet your expectations?

- Yes
- No
- Partially (please specify)

9. If partially, could you please specify:

.....

.....

.....

.....

Section 3: Impact on Employment and Entrepreneurship

10. Have you found employment or started a business since completing the programme?

- ☐ Yes, found employment
- ☐ Yes, started a business
- ☐ No

If employed, is your job related to the ICT skills you acquired?

- ☐ Yes
- ☐ No
- ☐ Partially

12. If you started a business, how much did the ICT skills acquired through the programme contribute to your business success?

- ☐ Provide a Linkert scale(Rating 1-7) to determine the degree to which the ICT skills assisted.

11. What challenges did you face in finding employment or starting a business after completing the programme? (Select all that apply)

- ☐ Lack of job opportunities
- ☐ Lack of funding
- ☐ Insufficient skills
- ☐ Economic factors
- ☐ Other (please specify)

Section 4: Programme Implementation Challenges

14 Were there any challenges in accessing the programme?

- ☐ Yes (please specify)
- ☐ No

13. If yes, please specify below:

.....

.....

.....

.....

.....

How would you rate the accessibility of resources (e.g., computers, internet) during the training?

- ☐ Excellent
- ☐ Good
- ☐ Fair
- ☐ Poor

Did you encounter any difficulties with the instructors or the training materials?

- ☐ Yes (please specify)
- ☐ No

14. If yes, please specify below:

.....

.....

.....

.....

.....

What improvements would you suggest for the programme to better meet the needs of participants?

.....

.....

.....

Section 5: Broader Implications and Recommendations

How has the programme impacted your overall confidence in using ICT skills?

- ☐ Greatly increased
- ☐ Somewhat increased
- ☐ No change
- ☐ Decreased

Do you believe the programme has improved your economic prospects?

- ☐ Yes, significantly
- ☐ Yes, somewhat

- No

What are the broader implications of the programme for youth development in your community?
(Open-ended)

What additional support or resources would you need to further develop your ICT skills or business? (Open-ended)

Would you recommend the W&R SETA ICT Skills Capacity Building Programme to others?

- Yes
- No (please specify why)

End! Thank you for participating.