Education, ICT, Teleconferencing, Networking and E-Learning

The Case of Zimbabwe

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Abstract

This paper seeks to examine Education, ICT, Teleconferencing, Networking And E-Learning with a specific focus on of Zimbabwe. The paper was based on qualitative research techniques. Challenges faced by women in their business in Zimbabwe were closure of business, exposure to rape, violence and robbery, financial losses, drop in their revenue, reduced remittances, reduced demand of goods and services, obstacles in logistics and shipping of products, challenges of acquiring raw materials, reduced worker productivity as well as technological challenges in the form of (limited e-banking and teleconferencing opportunities, huge data costs and lack of required technology. In terms of the effects of e-learning to women and girls in accessing education in Zimbabwe it was realised that, girls and women enjoyed benefits such as to exposure to online learning, reduced walking distances, exposure to educational opportunities such as scholarships. However, there were also adverse effects and these were limited access to online learning, lack of smartphones, lack of data, non- inclusive education, reduced long distance – learning via WhatsApp exposure to uncensored online material which exposed girls to online sexual predators. Policy recommendation wise, it was suggested that there is need for increased government funding towards ICT at all levels as well as prioritisation of all marginalised women.

Keywords: coronavirus; pedagogical; education; information and communication technology; e-learning, development; networking; poverty

1. Context and Statement of the Problem

The Zimbabwean economy has a high literacy rate of 88% (World Bank, 2022). However, there is a disconnect on the high educational literacy rates at national level versus the illiteracy rates at regional or community level in Zimbabwe (Phiri et al., 2020). It is pellucid that some communities in Zimbabwe still struggle to get high quality educational services due to a number of challenges (Garira, 2020).

In terms of information and communication technology usage which is measured using three proxies which are mobile phone usage, internet usage and fixed telephone usage, the Zimbabwean economy is still lagging behind (Makiwa and Steyn, 2016): (David andGrobler, 2020)frontier economy that is gradually becoming a gold miner of the fourth industrial revolution (industry 4.0. A World Bank (2022) report showed that only 29% of the total population in Zimbabwe have access to the internet. This indicates that the bulk of the citizens lack access to the internet and as such they do not enjoy the benefit that come from internet usage, such as online advertising, as well as other e-commerce activities.

The convergence and complementarity of the emerging technology disciplines such as nanotechnology, biotechnology, novel materials, and advanced digital production (ADP) technologies characterize the fourth industrial revolution (Enzmann and Moesli, 2022): (Rampersad, Quester, and Troshani, 2010). 3D printing, human-machine interfaces (HMIs), and artificial intelligence are among the technologies that are already reshaping the global industrial scene (Rampersad et al., 2010). However, in this fourth industrial revolution era, access to the internet and modern ICT devices is of paramount importance in so far as the attainment of economic development is concerned (Adedoyin, Bekun, Driha, and Balsalobre-Lorente, 2020). Lack of access to ICT, quality education as well as exposure to modern digital platforms in Zimbabwe affects all the citizens and this also limits the capacity of the nation to attain the sustainable development goals (SDGs). To be precise, the sustainable development goal number four (4) and nine (9) which aim to ensure that all economies achieve good quality education, as well as the building of resilient infrastructure, promoting inclusive and sustainable industrialization and fostering innovation, may be achieved after a long time due to the challenges faced by Zimbabwe, as explained earlier, (Masuda, Kawakubo, Okitasari, and Morita, 2022). Thus, there is need for a solution to ensure that there are improved opportunities for all Zimbabwean citizens to use ICT, networking opportunities, teleconferencing facilities, compounded with e-learning for accessing high quality education.

However, in terms of mobile phone subscription, 89 in 100 people have access to mobile phones in Zimbabwe (World Bank, 2022). This shows a large number of people have mobile phones, but if such a population lacks access to the internet, then the chances of networking, using teleconference facilities and e-learning are very slim and next to nothing.

E-learning, also known as online learning or electronic learning, is defined as the process of acquiring knowledge via electronic technology and media (Bossman and Agyei, 2022). In terms of ICT usage in the educational sector, some higher learning institutions have developed e-learning platforms, though some are still lagging behind. Midlands State University, for example, uses an e-learning system, whereas the National University of Science and Technology posted student results on notice boards due to a lack of e-learning technology (Mabuwa, 2014). E-learning has emerged to be a powerful tool in the education sector especially when the coronavirus affected the global village at large (Al-smadi, Abugabah, & Al, 2022). From the time Zimbabwe was affected by the coronavirus, the use of online academic libraries increased, but this was only for those with ICT gadgets and those with some level of technology to use the facilities (Chisita, Chiparausha, Tsabetse, Olugbara, and Letseka, 2022).

The coronavirus has acted as a catalyst for advancement in the use of modern technology in diverse spheres of life, such as education and the corporate world, to mention just but a few (Bohak Adam and Metljak, 2022). In 2020, Zimbabwe had a total of 7.7 million women and they account for 51% of the total population (O' Neil, 2022). Women in Zimbabwe have been greatly affected due to lack of access to modern technology, key to note is the aspect of digital illiteracy. The bulk of the women in Zimbabwe are running small to medium enterprises. The

coronavirus pandemic presented torrid times in as far as access to education for women and girls are concerned. In the business sector, lack of access to information and communication technology, teleconferencing opportunities and networking affects women at large. This paper seeks to examine education, ICT, teleconferencing, networking and e-learning with a specific focus on Zimbabwean women and girls, given the chronicled background.

2. Objectives

To achieve the central aim of this study, the following objectives were formulated for this paper:

- To unearth the challenges faced by women in conducting business during the coronavirus in Zimbabwe.
- To determine the place of e-learning to women and girls in accessing education in Zimbabwe.
- To offer policy recommendations on ways of improving education, ICT, teleconferencing, networking and e-learning opportunities for women and girls in Zimbabwe.

3. Research Questions

- The following research questions are going to be answered in this paper.
- What are the challenges faced by women and girls in conducting business during the COVID 19 era in Zimbabwe?
- What are the effects of e-learning to women and girls in accessing education in Zimbabwe?
- What policy recommendations, emanating from the study, can be suggested for improving education, ICT, teleconferencing, networking and e-learning opportunities for women and girls in Zimbabwe?

4. Theoretical Literature Review

This section seeks to present the various theories that support the topic under study. This will be divided into education and ICT related theories.

4.1 Educational Theories

The discussion below is going to be based on three key educational theories and these are: Self-Determination Theory, Transformative Learning Theory and Experiential Learning Theory.

Self-Determination Theory (SLD)

The notion of self-determination is a psychological framework for analysing human motivation (M. Liu and Oga-Baldwin, 2022a). Autonomy, competence, and relatedness are three core requirements identified by self-determination theory as essential to psychological health and well-being (Coumans, Bolman, Oenema, and Lechner, 2022). Thus, in the context of this

paper, the use of e-learning or modern technology requires technological competence. Hence women or girls who do not possess such skills cannot use such technology. As such, since in Zimbabwe there is digital illiteracy and limited usage of ICT there is need for a panacea to that.

Apart from that, intrinsic and extrinsic drives represent opposite extremes of a spectrum. The Self-Determination Theory was created by Deci and Ryan to better comprehend the intrinsic end of the motivational spectrum (M. Liu and Oga-Baldwin, 2022b). The theory highlights the advantages of acting on internal motivations. It is assumed that the individual is capable of acting on their own ideals and goals (Tungaraza and Joho, 2022). Therefore, in as much as one can act on own ideas and goals, in the Zimbabwean context there is need to ascertain if the Zimbabwean women and girls are internally motivated and have the access to use ICT, teleconferencing, networking and e-learning both in the educational or business set up.

To add more, basic psychological needs are the foundation for personality growth and integration, well-being, and positive social development, according to the Self-Determination Theory (Chiu, 2021). Autonomy, competence, and relatedness are the three unique demands identified by the theory. In the context of this paper, this theory is very germane to the study because this paper seeks to unpack the challenges faced by women in doing business during the COVID 19 era in Zimbabwe, within the context of the ICT or fourth industrial revolution perspective.

Autonomy

Autonomy is the ability to feel self-sufficient and act in the world according to one's desires (C. K. J. Wang, Liu, Kee, and Chian, 2019). When a person lacks autonomy, he or she feels governed by factors that aren't in line with who they are, whether internal or external influences. Autonomy is the least regarded as a core psychological need among the three requirements of the Self-Determination Theory (Sheikholeslami & Arab-Moghaddam, 2010).

Competence

Competence is defined as the ability to feel effective in one's work (Sheikholeslami and Arab-Moghaddam, 2010). When someone feels competent, they have control over their surroundings and are confident in their talents. When people are given opportunities to practice their skills in tasks that are well-suited to their abilities, their competence grows (Wang et al., 2019). When jobs are too difficult or too simple, emotions of competence suffer. In terms of this paper, the competence of women and girls to use ICT, teleconferencing and e-learning determine their success in the educational or business set up. Lack of sufficient competence to use the aforementioned ICT tools can have adverse effects too.

Relatedness

The ability to feel linked to people and a sense of belonging is known as relatedness (Wang et al., 2019). This particular paper seeks to examine education, ICT, teleconferencing, networking and e-learning with a specific focus on Zimbabwean women and girls. For networking to be

successful there has to be a medium of communication, as such ICT has emerged as a tool that can be used for networking, especially in the use of online platforms such as LinkedIn, Facebook, Instagram to mention just but a few (Nedeljko, Bogataj, and Kaucic, 2021).

To have one's relatedness requirements met, one must feel significant to the other people in their orbit. This can be accomplished by one individual showing concern for another. For optimal psychological functioning, all three demands must be addressed, according to self-determination theory (Wang et al., 2019). So, even if one's environment fits some demands but not others, one's well-being is bound to suffer. Furthermore, even if people are unaware of these demands or they do not respect their culture, this has an impact on their well-being and relatedness (Banerjee and Halder, 2021).

Transformative Learning Theory

Jack Mezirow initially proposed the Transformative Learning Theory, which is based on the idea that anecdotal observation is an important aspect of the learning process (Thangrattana, Pathumcharoenwattana, and Ninlamot, 2014). It implies that a learner's interpretation of an event gives rise to meaning, which leads to a shift in Behavior, mentality, and beliefs (Von Buettner and Donaldson, 2021). A student may experience a "paradigm shift" as a result of transformational learning, which has a direct impact on future experiences. In the context of this paper, the COVID 19 pandemic resulted in educational institutions, globally, shifting to on line or e-learning. In the Zimbabwean context, the benefits of using such mode of learning needs to be explored focusing on women and girls.

Giving critical thinking chances - Teachers can provide critical thinking opportunities by providing information that exposes new ideas (V. X. Wang, 2018). Students must then be given the opportunity to interact with new material by writing, conversing with other students, and critically examining their own assumptions and ideas. However, for the Zimbabwean economy which is still lagging behind in as far as technological advancement us concerned it is unknown if these benefits accrued to women and girls especially from the time physical gatherings were restricted and bulk of educational and no –educational activities shifted into online mode. This paper will explore more on that.

Providing opportunities to connect with others who are going through similar transformations - Students typically transform 'in community' as they bounce off ideas one to another and are encouraged by the changes their friends and acquaintances go through (Von Buettner and Donaldson, 2021). This theory stresses an important point of networking, and in this paper the same aspect will be explored with regards to women and girls in Zimbabwe's educational and business set up.

Finally, research indicates that it is vital for teachers to create opportunities for students to act on their newly acquired beliefs (Thangrattana et al., 2014). It appears that meaningful transformation will not occur until students are able to actively take efforts to accept their new belief. However, if the majority of remote schools, especially in Zimbabwe, lack access to ICT, the chances of teachers creating meaningful opportunities for students to network and apply newly acquired concepts may be limited.

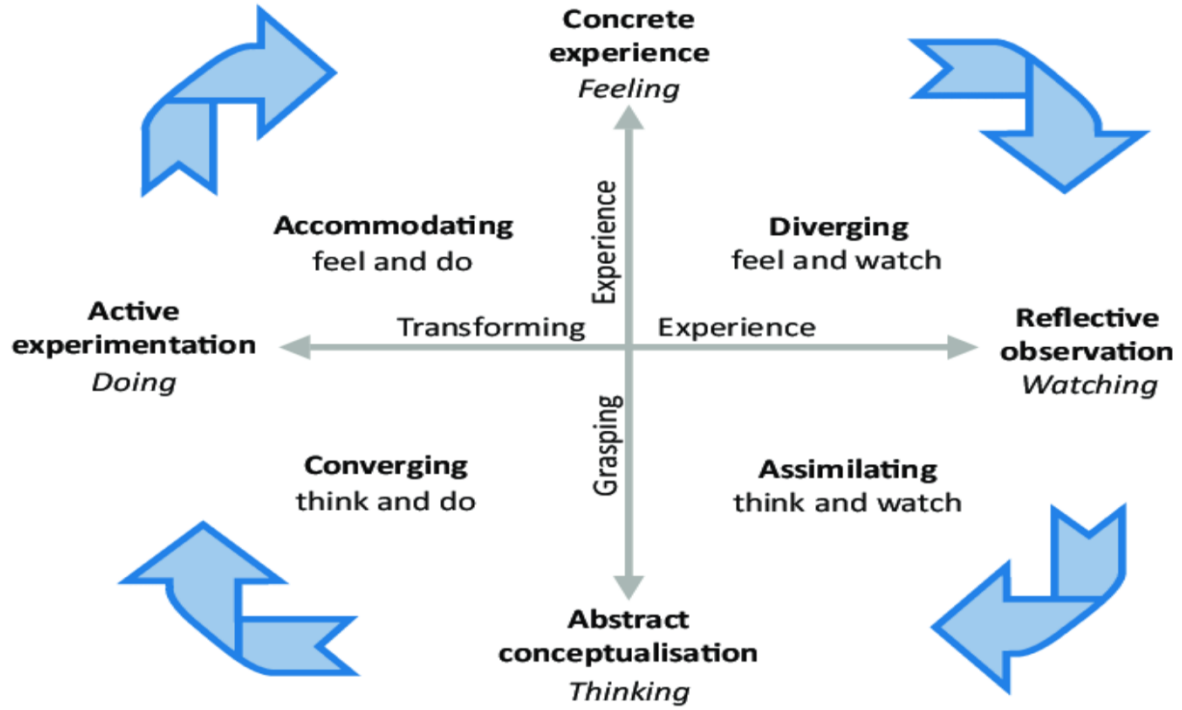
Experiential Learning Theory (ELT)

This type of learning, according to Kolb, is "the process by which knowledge is formed through the transformation of experience (Kolb, 2012)educational psychologists and researchers have posited many theories to explain how individuals learn, i.e. how they acquire, organize and deploy knowledge and skills.The 20th century can be considered the century of psychology on learning and related fields of interest (such as motivation, cognition, metacognition etc.. "The process of grasping and transforming an experience yields knowledge. The relevance of experience and its function in the learning process is emphasized in Experiential Learning Theory (ELT) (Kolb, 1984).

The theory's four basic concepts are having an experience, reflecting on it, thinking about it, and acting on it (Parahakaran, 2017). These ideas cover the stages of ELT, which begin with learners experiencing something new. After having a "genuine" experience, learners can reflect on it before moving on to the next step, which involves brainstorming methods to accommodate the experience (Kolb & Kolb, 2009).

Learners can transform their thoughts into activities that result in the construct of learning and/or generate new experiences after having the opportunity to reflect and think, prompting them to repeat the process (Kolb, 2012). In Zimbabwe, the outbreak of coronavirus led to bulk of activities to be carried out virtually with minimum or zero physical interaction. Thus, it can be assumed that the experience gained of using teleconferencing and e-learning facilities impacted women and girls in diverse ways. Thus, in this paper more on that will be explored with a specific focus on Zimbabwean women and girls. The figure below shows the Experiential Learning Theory.

Figure 1: Experiential Learning Theory



Source: Researcher's Construct (2022)

Figure 1 shows that when one makes observation through watching and thinking, he or she conceptualises some ideas and apply them (active experimentation) and this ultimately builds a certain level of experience. This suggests that, in line with this paper, there is a high likelihood that more women and girls adopted use of e-learning, teleconferencing and networking after they observed some who benefited on it. As such, the usage of such resulted in women and girls gaining experience in the business and educational sector especially in Zimbabwe. However, during that process, some women and girls could have faced challenges and maximised on some benefits, this will be explored further in this paper.

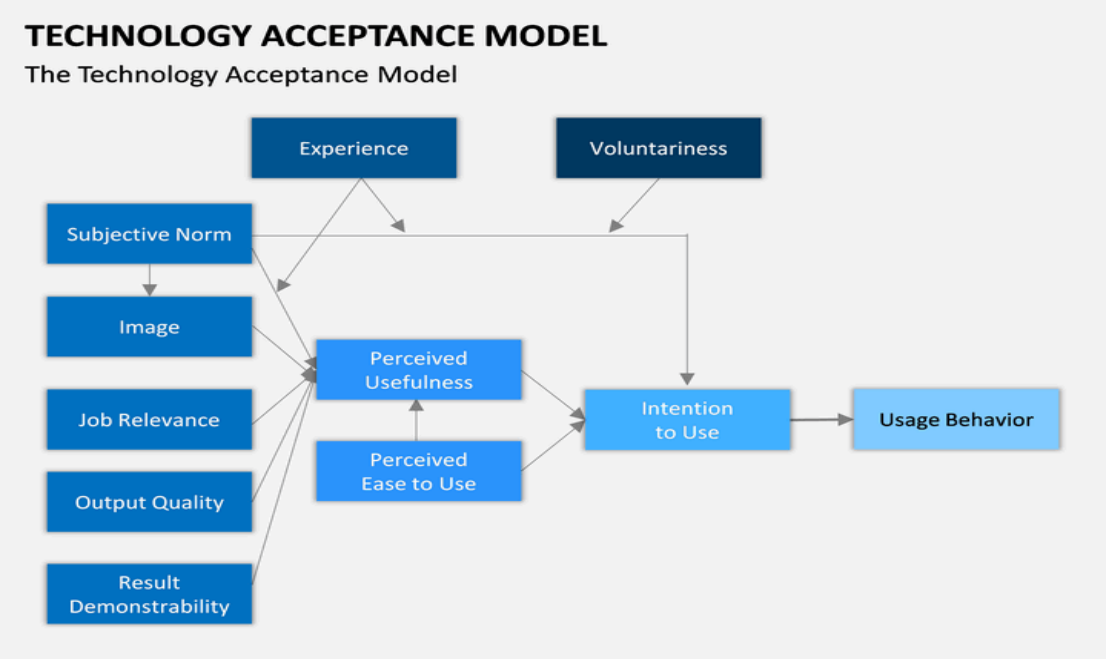
4.2 ICT Theories

Under this segment, the main thrust will be in discussing ICT related theories that support the topic under study. These theories are the Technology Acceptance Model and the Unified Theory of Acceptance and Use of Technology.

Technology Acceptance Model (TAM)

One of the most influential models of technology acceptance is the Technology Acceptance Model (TAM; Davis, 1989), which states that two key elements influence an intention of an individual to utilize new technology: perceived ease of use and perceived usefulness (Shanmugavel and Micheal, 2022). For example, an older person who believes that digital games are too difficult to play or a waste of time will be less likely to adopt this technology, whereas an older adult who believes that digital games provide needed mental stimulation and are simple to learn will be more likely to want to learn how to use them (Kabir et al., 2022)a google form was used to collect data from 131 sub-district level extension officers covering 48 (out of 64. Figure 2 below shows the Technology Acceptance Model.

Figure 2: Technology Acceptance Model



Source: Researcher's Construct (2022)

To add more, in terms of perceived usefulness, Davis (1989) defines perceived usefulness as "the extent to which a person believes that utilizing a certain system will improve their job performance. "It refers to whether or not a person considers a piece of technology to be appropriate for their needs (Natasia, Wiranti & Parastika, 2021). This theory is very important in this study on women and girls to use ICT, teleconferencing, networking and e-learning platforms. The primary assumption being that these facilities will be deemed useful, and as such the benefits that accrue to women and girls due to the use of the aforementioned platforms will be explored.

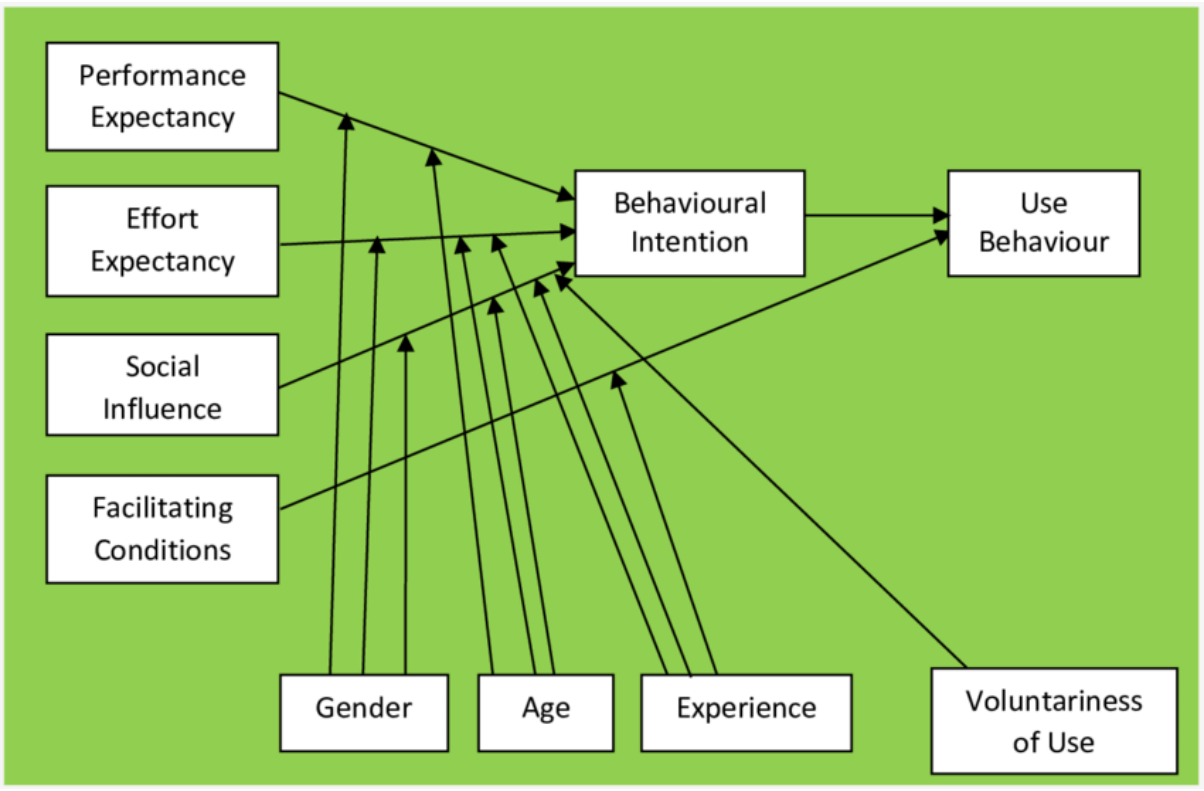
Apart from that, Davis (1989) defines perceived ease-of-use (PEOU) as "the degree to which a person believes that utilizing a given system would be effort-free" (Davis 1989). The hurdles will be overcome if the technology is simple to use. No one likes it if it's difficult to use and the UI is confusing (Appiah, Kretchy, Yoshikawa, Asamoah-Akuoko, and France, 2021). To add more, social influence, for example, is a significant component in determining attitude. Individuals will have the mindset and intention to use technology once these items (TAM) are in place. Everybody is distinct, perceptions may vary by age and gender (Lew, Tan, Loh, Hew, & Ooi, 2020). Digital illiteracy is one key stumbling block that affects the ease of use of technology (Abraham, Ali, Andangsari, and Hartanti, 2020). In this paper, it is yet to be examined how Zimbabwean women and girls managed to cope in using ICT, teleconferencing, networking and e-learning.

Unified Theory of Acceptance and Use of Technology (UTAUT)

The Unified Theory of Acceptance and Use of Technology (UTAUT) seeks to explain how users intend to use an information system and how they actually utilize it. There are four major constructs according to the theory: 1) performance expectancy, 2) effort expectancy, 3) social influence, and 4) enabling conditions (Philippi et al., 2021). The first three are direct predictors of usage intent and behaviour, whereas the fourth is a predictor of user behaviour (Nordhoff, Malmsten, van Arem, Liu, and Happee, 2021). The figure below summarises or shows the UTAUT.

The impact of the four major constructs on usage intention and behaviour is thought to be moderated by gender, age, experience, and voluntariness of use (Ayaz and Yanartaş, 2020). The theory was created by reviewing and combining the constructs of eight models that havex previously been used to explain information system usage behaviour (Gunawan, Sinaga, and Sigit Purnomo, 2019) . This theory is very important to this paper. This is so since the three major aspects of the theory which are performance expectancy, effort expectancy, social and influence have a bearing in as far as the use of ICT, teleconferencing, networking and e-learning by Zimbabwean women and girls are concerned.

Figure 3: Unified Theory of Acceptance and Use of Technology



Source: Researcher's Construct (2022)

4.3 Review of Related Literature

This section seeks to present the review of recent research articles. (Arceo-Gómez et al., 2020) carried out research on the impact of COVID 19 on women. The research findings proved that women suffered more financial losses as they had to divert their resources to take care of their loved ones and families. This implies that, some of the financial savings meant for the business were eroded due to the burden of COVID 19 and some women ended up closing their business and they were exposed to the vicious jaws of poverty (Arceo-Gómez et al., 2020). Apart from that, it was also realised that women and girls ended up devoting more work on unpaid care work, as more and more people were affected by the deadly pandemic (Arceo-Gómez et al., 2020). Research shows that 70% of the informal business in developing economies, such as Zimbabwe, are sustained by women, thus the above explanation depicts the adverse effect that was experienced by women in their businesses.

To add more, in Zimbabwe women vendors experienced a drop in their revenue as some of the second-hand products they were importing from China were banned amid fears that the clothes were contaminated with the deadly Coronavirus (Oosterom and Gukurume, 2020). Apart from that, research has proved that Zimbabwean women in business suffered from poor financial support due to the limited funding provided by the government, for example, the government offered ZWL600 million to small businesses, but the money was too little, and this was further exacerbated by the fact that the Zimbabwean currency is on a nose diving loss of value (Chamunogwa, 2021). Thus, this further worsens the fact that women entrepreneurs are generally viewed as less credit worthy, have less exposure to business practises such as the use of teleconferencing facilities and have limited networking opportunities , thus their

chances of getting loans or lines of credit are between slim and next to nothing (Charuma, Nyoni, and Kapepa, 2021).

Tesemma (2020) examined the impact of the COVID 19 pandemic on girls in Africa, where a total of 120 million girls were adversely affected by the closure of schools. Of note and concern is the fact that Zimbabwe is part of these statistics.

Research findings depicted that due to a lack of ICT facilities and data, many girls have been denied access to online learning, basic healthcare, and protection, and thousands have been subjected to abuse and exploitation (Tesemma, 2020). Aside from that, several students of school going age were malnourished, for example during the outbreak, more than 26 million African girls skipped school meals (Tesemma, 2020). To add more, research findings proved that e-learning was not inclusive to all girls as it was only accessible to learners using limited major languages (Tesemma, 2020).

From the research it was further discovered that, some girls were digitally excluded from ownership of smartphones and related gadgets to use for e-learning (Tesemma, 2020). Thus girls in rural areas from poor economic backgrounds were excluded from accessing e-learning due to poverty and lack of ICT devices. This is also supported by (Chamunogwa, 2021) who posited that in the Zimbabwean rural areas only one quarter of the children were engaged in e-learning. This implies that the majority lacked access to online education. Though the research does not give clear statistics on the gender distribution of those who lacked access to e-learning facilities, it is with no doubt that girls and children living with disabilities were also adversely affected (Chamunogwa, 2021). However, some of the students were saved from walking long distances to school as they could follow some of the educational activities via WhatsApp. Apart from that, access to some sporting activities was affected as most of the sporting activities could not be done online.

Apart from that, due to limited ICT knowledge, girls were exposed to uncensored online material which exposed them to online sexual predators (Tesemma, 2020:15). This also increased access and use of the girls information by other users, since some of the girls were not aware of data privacy and protection measures (Olaitan Anifowoshe, Aborode, Anifowoshe, Ifeoluwapo, Ayodele, Rebecca, Iretiayo, & Oluwafemi, David, 2020).

A study by Liu, Wei and Xu (2021) on women led business during the COVID 19 era on a global scale, realised that women-led enterprises are less likely to obtain bank loans and are more inclined to cut their workforce, particularly female employees. This indicates that lack of funding and labour are crucial factors that affected women during the pandemic. These research findings are at par with the views of Mbunge et al. (2021), who posited that local business people in Zimbabwe experienced increased huge overhead costs and reduced revenue during the Coronavirus period, and some of the business were closed for good.

Similarly, Chirisa et al., (2021) researched on the effects of the COVID 19 pandemic on the Zimbabwean economy. The research findings proved that the informal traders (both men and women), and remittances' contribution to urban and rural livelihoods were affected. Apart from that, it was also discovered that the use of internet banking increased during the pandemic time, but this was only advantageous to those with the technological know-how (Chirisa et al., 2021).

To add more, the use of e-banking and teleconferencing among business players (women and men) was greatly affected due to high data costs as well as lack of smartphones and laptops

(Chirisa et al., 2021). This also affected the chances of women in networking as some had no IT compliant gadgets to use.

In terms of access to education, it was realised that private schools had better access to online learning platforms as compared to rural schools. This implies that educational access was biased towards those with access and know-how of e-learning. Apart from that, students were excluded from online examinations due to lack of technology, this affected female learners as well. Well-developed private schools progressed further educationally because all their educational activities were done online. Thus, the gap between the rich and poor female students widened due to technological issues. In some areas in Zimbabwe, especially primary school pupils never attended any class during the COVID 19 period, thus the pedagogical status for such students was adversely affected. The long –term effects were prolonged educational periods, as well as pressure on students to complete their syllabus.

Matose, Maviza and Nunu (2022) researched on irregular migration of female migrants from Zimbabwe. These migrants usually buy and sell goods from Botswana. From the research it was realised that some of these women suffered loss of goods or money due to harsh conditions they faced while they travelled to Botswana (Matose et al., 2022). Due to the increased hardships of COVID 19 lockdowns, some of these women continued in their business of cross boarder trading but were exposed to rape, violence, robbery and pyscho-emotional harassment (Matose et al., 2022).

Zeidy (2020) did a study on 'The Economic Impact of COVID 19 on African Enterprises,' The findings proved that African business suffered major challenges such as closure business, lack of cash flows, reduced demand of goods and services, obstacles in logistics and shipping of products, challenges of acquiring raw materials, reduced worker productivity as well reduced chances to meet new clients. These challenges also affected Zimbabwean women since Zimbabwe is part of the African continent.

Relatedly, Makurumidze (2021) researched on 'The financial impacts of COVID 19 on women entrepreneurs in Harare.' The survey found out that small manufacturing and commerce SMEs managed by women have been among the most hit financially by the crisis (Makurumidze, 2021). Aside from that, the findings revealed that 18 percent of women-owned firms reported a drop in equity as a result of the epidemic. Due to technological issues, 26 percent of women entrepreneurs were unable to receive orders online as a result of the national lockdown's complications (Makurumidze, 2021). It was also discovered that female entrepreneurs were paying more for their goods.

On another dimension, Torres (2021) researched on 'The Impact of the COVID-19 pandemic on women-led businesses. The research findings depicted that suspension of in-person operations and mobility restrictions, supply chain interruptions, diminishing consumer demand, and lack of access to digital technologies have all been problems for women-led businesses (Torres, 2021). Again, it been discovered that female entrepreneurs have less and poorer social network relationships than their male counterparts (Torres, 2021).

Lastly, (Rudhumbu et al., 2021) examined 'Online Teaching Behaviours in Zimbabwean Universities during the COVID 19 era.' The findings proved that the majority of universities lack suitable ICT infrastructure, leadership support and training opportunities are minimal. The ICT regulations regarding online education are unclear (Rudhumbu et al., 2021). Apart from that, it was shown that most university lecturers adopted the lecturer-centred teaching

styles, which has an impact on students' active participation in online learning. (Rudhumbu et al., 2021).

5. Research Methodology

The Qualitative Approach was used in this paper and Documentary Analysis was the main data generation procedure. Research articles that focus on Africa, Sub-Saharan Africa and Zimbabwe were used to gather the key answers to the research objectives of this paper.

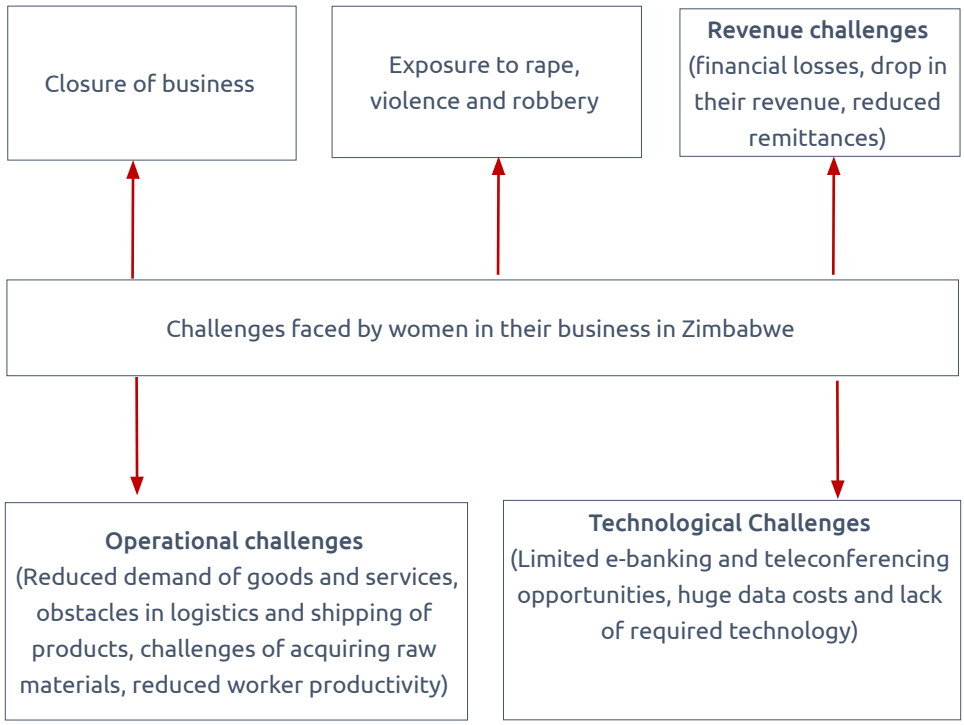
5.1 Data Analysis

This section seeks to present the data analysis. The following themes emerged from the literature review and they will be used to answer the research questions. The first research objective is restated below:

- To unearth challenges faced by women in their business during the Coronavirus era in Zimbabwe.

Figure 4 below shows that the main challenges that were faced by women in their business during the Coronavirus attack in Zimbabwe were many. These were grouped into operational, technological as well as revenue related challenges. The key operational challenges that women faced were reduced demand of goods and services, obstacles in logistics and shipping of products, challenges of acquiring raw materials, reduced worker productivity. Apart from that, in terms of revenue challenges it was realised that Zimbabwean women were exposed to obstacles such as financial losses, a drop in revenue, as well as reduced remittances.

Figure 4: Business challenges faced by women in Zimbabwe



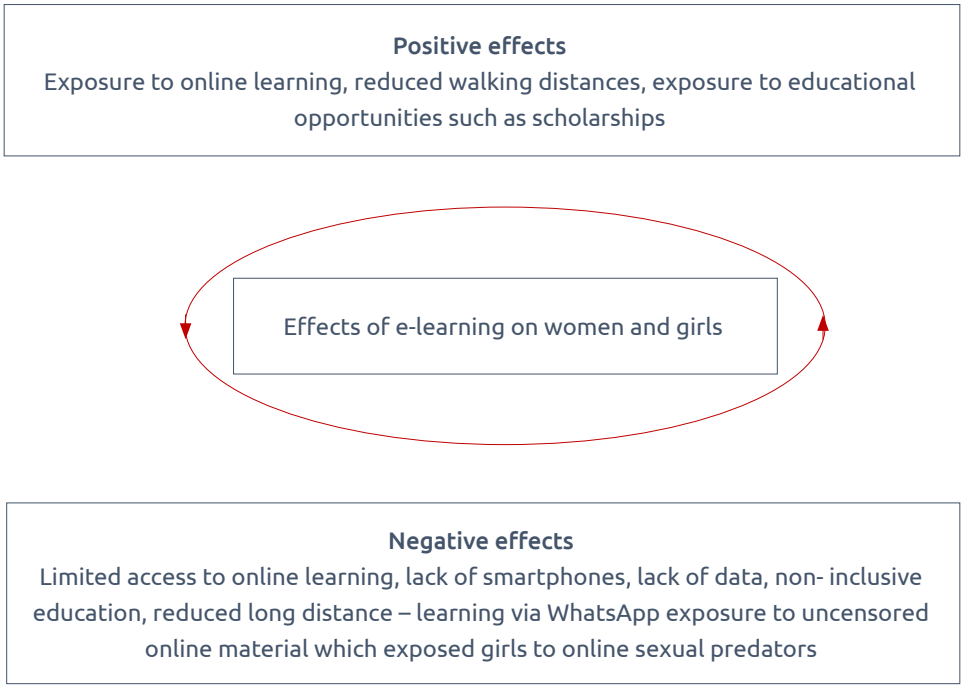
Source: Researcher's Construct (2022)

In terms of technological challenges, it was realised that women in Zimbabwe suffered from limited e-banking and teleconferencing opportunities, huge data costs and lack of required technology during the COVID 19 pandemic. Other challenges that were faced by women, especially cross boarder traders, included exposure to rape, violence and robbery as well as closure of their business. This suffices in meeting the demands of the first research objective of this paper.

The second research objective of this paper is restated below:

- To determine the effects of e-learning to women and girls in accessing education in Zimbabwe.

Figure 5: Effects of e-learning to women and girls



Source: Researcher's Construct (2022)

Figure 5 shows that the key negative effects of e-learning on women and girls in accessing education in Zimbabwe were limited access to online learning, lack of smartphones, lack of data, non- inclusive education, reduced long distance – learning via WhatsApp exposure to uncensored online material which exposed girls to online sexual predators. On the other hand, the positive effects of e-learning were exposure to educational opportunities such as scholarships and increased interaction and access to the global village. However, the costs outweigh the benefits and this has been largely attributed by the poor ICT infrastructure as well as limited ICT technology.

6. Policy Recommendations

This section seeks to present the policy recommendations of this paper. This will help to answer the third research objective of paper:

- To offer policy recommendations on ways of improving education, ICT, teleconferencing, networking and e-learning opportunities for women and girls in Zimbabwe.

This objective was successfully answered with the aid of the research question below:

- What policy recommendations, emanating from the study, can be suggested for improving education, ICT, teleconferencing, networking and e-learning opportunities for women and girls in Zimbabwe?

Going by the study findings presented above, together with the reviewed literature on the researched issue, the following policy recommendations are made:

1. That there be a deliberate step up on the part of Government in financing the programmes to train women and girls on the use of ICT and other online facilities.
2. That the marginalised women and girls be given priority through National programmes that promote ICT use, through Gender related groups and the Government Departments that directly deal with women affairs.
3. That donour agents and other NGOs be seriously engaged to assist with the improvement of women accessibility to ICT compliant gadgets for ease of access.

7. Conclusion

This paper has examined Education, ICT, Teleconferencing, Networking And E-Learning with a specific focus on of Zimbabwean women and girls during the COVID 19 pandemic, through qualitative research techniques. The study findings and policy recommendations have been chronicled above, and the need to step up funding and programmes to enhance the capacitation of women and girls cannot be re-emphasised.

Reference List

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