# Covid 19 and Teacher Preparedness Perception; Challenges and Opportunities, Among Teachers of Secondary Schools in Baringo County, Kenya

### Wilson Kiptala, John Kipruto

Abstract— The COVID-19 crisis has left more than 1.5 billion children out of school with the length of school closures uncertain. The purpose of the study was to investigate COVID-19 and teacher preparedness perception; challenges and opportunities, among secondary school teachers in Baringo County, Kenya. The objectives of the study were to: Explore the perceptions of teachers on their preparedness for immediate response, examine the perceptions of teachers on their preparedness on mid-term response and investigate the perceptions of teachers on their preparedness on the long term response to challenges and opportunities posed by COVID 19 in Baringo County, Kenya. The study was guided by the perception theory of Kurt Lewin as espoused by smith. The research method was qualitative. The research design was phenomenology. Teacherswere interviewed and Focus group discussions conducted. The data was thematically analyzed. The study findings indicated that there is overburden of learning new tools (online) and teaching at the same time, repositioning of flexible home-based learning and curriculum review to integrate technology education in teaching and learning. The study recommends that there is need to invest in mental health, preparation of hybrid models to enhance curriculum delivery and provision of online guidance and counseling.

Index Terms— COVID 19, Teacher Preparedness, Education, Mental Health, County Government, Perception, teaching, learning.

#### I. INTRODUCTION

COVID-19, the global health pandemic, has disrupted our lives in ways we could have never imagined! It has interrupted learning and training programs all over the world (Majumdar, 2020). Kenya confirmed its first case of Corona Virus Disease of 2019 (COVID -19) on 13th March, 2020 and the cases have continued to steadily rise and spread across the country (Government of Kenya (GOK), 2020). COVID-19 is a disease caused by a new strain of coronavirus which is linked to the same family of viruses as Severe Acute Respiratory Syndrome (SARS) and some types of common cold. To curb the spread of the virus in learning institutions, the Government of the Republic of Kenya (GOK) closed all learning institutions between 16th March and 20th March, 2020 (GOK, 2020).

Institutions closure coupled with restricted movements with acute challenges around space exacerbated cases of exposure to pornographic materials, child labor, child marriages and pregnancies, drug and substance abuse,

Wilson Kiptala, Moi University (Educational Psychology Department) John Kipruto, Moi University (Educational Psychology Department) increased rape, Gender Based Violence (GBV) including defilement of children (GOK, 2020). These circumstances may contribute to drop outs. For example, during the Asian flu of 1998/1999, secondary school enrollment rates in Philippines fell by nearly 7 percent for boys and 8 percent for girls. Increases in dropout rates could also lead to social unrest and instability, if there are large cohorts of unemployed youth with poor economic and social prospects (GOK, 2020). In addition, institutions closure present an unprecedented risk to learners education, protection and wellbeing particularly, for the most vulnerable learners who rely on learning institutions for their education, health, safety and nutrition (GOK, 2020). Missing out on teaching and learning for long is likely to widen inequality gap, inequity, poor health outcomes, reduced social cohesion, as well as access to quality education.

Education and training has been a major development platform of the United Nations Sustainable Development Goals, Kenya's Vision 2030, the Big Four Agenda and Africa's Agenda 2063 (TVETA, 2020). According to TVET news, Published By TVETA Newsletter in Kenya; titled'Coronavirus Pandemic Wrecks Education Across the World' p7, the author posits that; on 15 March 2020, President Uhuru Kenyatta ordered immediate closure of schools and colleges to stem the spread of Coronavirus (TVETA, 2020). The message caused panic across the country as learning institutions prepared to send millions of students home to stay indefinitely. All academic and non-academic activities were disrupted. The main response to school closures is to turn to distance and online learning (TVETA, 2020). According to the World Economic Forum, the Coronavirus is going to change the architecture of education in three main ways: Education, nudged and pushed to change, could lead to surprising innovations leading to concepts like 'learning anywhere, anything' - digital education, public-private educational partnerships will grow in importance and the digital divide will widen. In addition, affluent countries and families will find solutions while less affluent societies and digital savvy families will be left behind...even further economically! (TVETA, 2020). According to the ILO (2020), training of trainers to develop online training environments is limited and supporting manuals are not available. Besides, very few respondents (Technical Note - Survey with TVET providers, policy-makers and social partners on addressing the COVID-19 pandemic in West Africa) mentioned that their TVET institutions provided training to trainers on the use of collaborative platforms, the creation and management of



### Covid 19 and Teacher Preparedness Perception; Challenges and Opportunities, Among Teachers of Secondary Schools in Baringo County, Kenya

online forums, and on recording instructional videos. In addition, there is recognition of the importance of exploring new solutions for distance training delivery. Besides, the creation of online learning environments and encouraging the use of videoconference among students and trainers are the main envisaged options to promote the expansion of online training (ILO, 2020).

The educational institutions in affected areas are seeking stop-gap solutions to continue teaching, but it is important to note that the learning quality depends on the level of digital access and efficiency (Muthuprasad, et al. 2020). The online learning environment varies profoundly from the traditional classroom situation when it comes to learner's motivation, satisfaction and interaction (Bignoux and Sund, 2018). The Community of Inquiry (COI) framework offers a convenient baseline for intervening in online teaching and learning (Garrison et al., 2001). According to COI framework, success of web-based instruction is determined by creating a learners' group. In this group (analogous to the traditional classroom situation), learning happens through three interdependent elements: (1) social presence, (2) cognitive presence, and (3) teaching presence. Study by Adam et.al. (2012) argued that there was no significant difference between online learning and face to face class with regard to their satisfaction and also, they supported the fact that online class will be as effective as traditional class if it is designed appropriately. These facts clearly show us that online learning is a perfect substitute for the traditional classroom learning if they are designed suitably.

The health, safety and wellbeing of learners and teachers is a priority in the provision of quality education and training (GOK, 2020). Broadly speaking, the current and potential response of education and training systems can be set up according to their time-relevance. Consequently, three perspectives emerge; namely, immediate response; medium-term response and long-term response. Besides, in the context of varied developmental structure with specific economic, social and cultural characteristics, the degree of response of institutions is a reflection of the capacity, the readiness of systems and institutional actors, and availability of resources that suit emergency situations (Majumdar, 2020). The immediate responses by schools would revolve around initiatives that make use of technology for continuance of learning, use of schools as production units, and make provision for supporting public information and awareness in the community fall in this category.

Muthuprasad, et al. (2020) posits that, educational institutes across the world have closed due to the COVID-19 pandemic jeopardizing the academic calendars. Educational institutions in India have also made a transition to online teaching environment soon after Union Government's decision to impose nation-wide lock-down for 21 days from 25th March, 2020 which was later extended for 19 more days. To ensure continuity of learning during the COVID-19 containment period, the Government of Kenya instituted several remote learning interventions. These include: provision of lessons and digital content through radio, television, Zoom, Webinars and the Kenya Education Cloud

(GOK, 2020). Most educational institutes have shifted to online learning platforms to keep the academic activities going. The ministry of education in Kenya and international organisations as a matter of immediate response should make efforts to reach out to teachers and students through online delivery of education and training. Warner et al. (1998) proposed the concept of readiness for online learning in the Australian vocational education and training sector. They described readiness for online learning mainly in terms of three aspects:(1) the preference of student's for the way of delivery opposed to face-to-face classroom instruction; (2) student's confidence in the utilising the electronic communication for learning which includes competence and trust in the use of the Internet and computer-based communication; and (3) capability to engage in autonomous learning. The concept was further refined by several researchers like McVay, (2000, 2001) who developed a 13-item instrument which measured student behaviour and attitude as predictors. Subsequently, Smith et al. (2003) conducted an exploratory study to validate the McVay's, (2000) questionnaire for online readiness and came up with a two-factor structure, "Comfort with e-learning" and "Self-management of learning". Later, several studies were taken up for operationalizing the concept of readiness for online learning (Evans, (2000); Smith, (2005)). The factors that influenced the readiness for online learning as put forth by researchers were self-directed learning (Guglielmino, (1977); Garrison, (1997); Lin and Hsieh, (2001); McVay, (2000, 2001)), motivation for learning (Deci& Ryan, (1985); Ryan &Deci, (2000); Fairchild et al. (2005), learner control (Hannafin, (1984); Shyu& Brown, (1992); Reeves, (1993)), computer and internet self-efficacy ((Bandura, (1977,1986 1997); Compeau and Higgins, (1995); Eastin and LaRose, (2000); Tsai and Tsai, (2003); Tsai and Lin, (2004); Hung et al. (2010), online communication self-efficacy (Palloff& Pratt, (1999); McVay, (2000); Roper, (2007)).

Any efforts to strengthen the effectiveness of online learning need to understand the perception of the users; Studies have documented both favourable and unfavourable perceptions by teachers and students on online learning. Several studies indicate that the teacher's interaction with students has considerable impact on the student's perceptions of online learning. Consistency in course design (Swan et al. 2000), the capability of the interaction with course instructors to promote critical thinking ability and information processing (Duffy et al. (1998); Picciano, (2002); Hay et al.(2004)) rate of interactivity in the online setting (Arbaugh, (2000); Hay et al. (2004)), the extent of instructional emphasis on learning through interaction, the flexibility of online learning (Chizmar and Walbert, (1999); McCall, (2002); National Centre for Vocational Education Research, (2002); Petrides, (2002); Schrum, (2002); Klingner, (2003); Kim et al. (2005)), chances of engaging with teachers and peers in online learning settings (Soo& Bonk, (1998); Wise et al. (2004); Kim et al. (2005)), social presence (Barab& Duffy (2000); Kim et al. (2005); Jonassen, (2002)),academic self-concept (Trautwein et al. (2006); Lim et al. (2007)), competencies required to use the technology (Wagner et al. (2000) were identified as the perceived strengths of online learning. Hence an effective online class depends upon



well-structured course content (Sun & Chen, (2016)), well-prepared instructors (Sun & Chen, (2016)), advanced technologies (Sun & Chen, (2016)), and feedback and clear instructions (Brittany, (2015)).

However, several weaknesses related to online learning have been reported; delay in responses (Hara and Kling, (1999); Petrides, (2002); Vonderwell, (2003), scepticism of their peers' supposed expertise (Petrides, (2002)); lack of a sense of community and/or feelings of isolation (Woods', (2002); Vonderwell, (2003); Lin & Zane, (2005); Vladimir, (2015)); , problems in collaborating with the co-learners (Vladimir, (2015), technical problems (Kling, (2000); Piccoli et al.(2001); Song et al.(2004),), issues related to instructor (Lin & Zane, (2005)), higher student attrition rates (Frankola, (2001); Ryan, (2001); Laine, (2003)), the need for greater discipline, writing skills, and self-motivation; and the need for online users to make a time commitment to learning (Golladay et al. (2000); Serwatka, (2003); Lin & Zane, (2005)) are considered to be barriers or weakness of online learning.

Determinants of learners' intention to adopt the online classes were proposed using TPB (Theory of Planned Behaviour) model/TAM (Technology Acceptance Model). Perceived usefulness (Davis, (1989); Davis et al. (1992); Igbaria et al. (1997); Gefen& Straub, (1997, 2000); Venkatesh, (2000); Venkatesh& Davis, (2000) ;Gefen, (2003); Hsu & Lu, (2004); Ong et al. (2004)), perceived ease of use (Davis,(1989); Igbaria et al.(1995); Igbaria et al. (1997); Venkatesh, (2000); Venkatesh& Davis, (2000)), perceived resources (Taylor & Todd, (1995); Mathieson & Chin, (2001); Oh et al. (2003)), intra organisational factors (Amoroso & Cheney, (1991); Igbaria et al. (1995) ;Guimaraes et al. (1999); such as internal computing support, internal computing training, internal equipment accessibility and extra organisational factors (Guimaraes&Ramanujam, (1986); Amoroso & Cheney, (1991); Thong, (1996); Igbaria et al. (1997); Guimaraes et al. (1999)) such as external computing support, external computing training, external equipment accessibility were identified as the determinants.

By mid-term response, the focus is on measures that could be taken in institutions to be effectively prepared for any future similar situation and to gradually prepare for any post-pandemic disturbances or opportunities that arise. Many students and teachers are forced out of job, whether it is temporary or full-term, in economies that are unable to buffer the cost of the pandemic to business. Some of these students/trainees/workers are under reduced work hours, with less pay, disrupted learning opportunities and some, with uncertain immigration status in the case of international students or migrant workers.

In the long term, COVID-19 has raised fundamental concern regarding the way people live, work, consume and enable development (Majumdar, 2020). It has raised serious questions about the understanding of developmental models and basic beliefs about people's relation with nature. In addition, the way these challenges and their implications to society are eventually addressed is a reflection of the

society's vision of the world it seeks to live in.

#### Objectives of the study

The purpose of the study was to investigate COVID-19 and teacher preparedness perception; challenges and opportunities, among secondary school teachers in Baringo County, Kenya. The objectives of the study are to:

- Explore the perceptions of teachers on their preparedness for immediate response to challenges and opportunities posed by COVID.
- Examine the perceptions of teachers on their preparedness on mid-term response to challenges and opportunities posed by COVID 19.
- Investigate the perceptions of teachers on their preparedness on the long term response to challenges and opportunities posed by COVID 19.

#### II. METHOD

### **Participants**

To answer the research questions, the author sought views from teachers. A total of 50 respondents participated in the study as illustrated below in Table 1, Interviews were used to collect data from the teachers and three focus groups discussions (FDGs) were held in the sampled secondary schools in Baringo County.

Table 1 Sample Size

Sample Group	Sample Size
Teachers	50
Total	50

#### Measures and procedure(s).

Data was generated using semi-structured interviews from the teachers and FDGs for the students. Although semi-structured interviews rely on pre-formulated questions for guidance, they also allow respondents to talk freely about those things that are of interest and importance to them (Baker & Foy, 2008). Data was analyzed thematically. According to Sargent (2012) thematic analysis is a data reduction and analysis approach whereby data is segmented, categorized, summarized, and constructed in a way that captures the important concepts within the data set. Braun and Clarke (2013 p.67) describe thematic analysis as "a method for identifying, analyzing and reporting patterns within data", and they prescribed the following six steps: familiarization with data, generating initial codes, searching for themes, defining and naming themes and producing the report.

### III. RESULTS

## Teacher preparedness perceptions of immediate response in Baringo County

The teachers from the six sub-counties in Baringo County participated in the study through focus group discussions and interviews where they were asked questions about their



preparedness for online learning at their respective schools, stocking and storage of Personal Protective Equipment (PPEs) for immediate and emergency us at the schools, using technology to address disruption of training at the schools. The teachers were asked questions about their immediate response to mitigating the Virus through awareness campaigns; whether they had the capacity and used technology. In addition, they were asked about their innovativeness. The findings were summarized into three themes and presented in Figure 1 below.

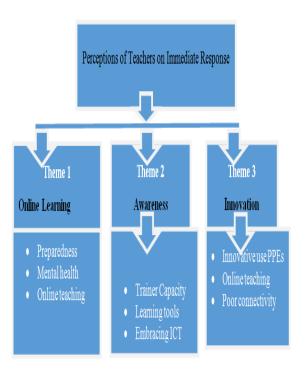


Figure 1: Teacher perceptions on immediate response in BaringoCounty

## Teacher preparedness perceptions on mid-term response in Baringo County

The study also sought to analyze the perceptions of the teachers on their preparedness towards the mid-term responses in Baringo County. Interviews were used to gather the different perceptions, in the areas of post-pandemic disturbances, multi-skill vocational programs and community based solutions. The finding were summarized and presented in themes in Figure 2 below.

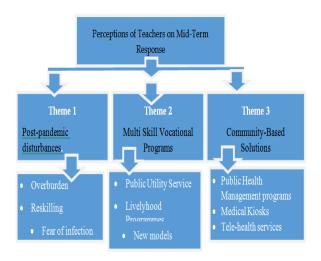


Figure 2: Teacher perceptions on Mid-Term Response in Baringo County

## Teacher preparedness perceptions on Long-Term responses in Baringo County

The study also sought to analyze the perceptions of the teachers towards the long-term responses in Baringo County. Interviews were used to gather the different perceptions in the areas of structure of teaching, attitudes and perceptions, and professional development and innovations. The finding were summarized and presented in themes in Figure 3 below.

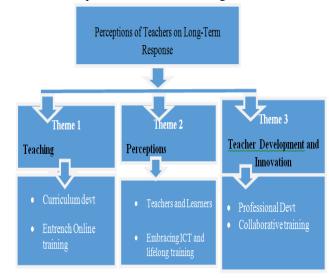


Figure 3: Teacher perceptions on Long-Term response in Baringo County

#### IV. DISCUSSION AND CONCLUSION

## Trainer's perceptions on immediate response in Baringo County

From the findings, as summarized in Figure 1, the following can be reported;

According to the findings, respondents admitted that everyone was got flat footed and there were massive disruption and confusion on where and how to start online teaching, as a matter of continued engagement with students. COVID-19 in schools was connected with health crisis that must deal with psychological or mental health. The schools were ill prepared for an emerging situation that would trigger



www.wjir.org

156

alternative strategies to curriculum implementation. To ensure continuity of learning during the COVID-19 containment period, the Government instituted several remote learning interventions through the Kenya Institute of Curriculum development (KICD). These include: provision of lessons and digital content through radio, television, Zoom, Webinars and the Kenya Education Cloud for primary and secondary schools.

According to the findings on provision of PPEs, respondents observed that PPEs were not available and the government intends to procure and create awareness in all public schools. Several institutions were engaged to manufacture and fabricate PPEs; RIVATEX (Musks) Rift Valley Techinical Institute (Special Hospital Beds, footpress sanitizer, hand washing stands, school desks, chairs, tables and seats for schools), Lessos Technical (sanitizers and Musks) and Eldoret Polytechnic (Special Hospital Beds, school desks and seats) were involved among other in the manufacturing and fabrication of PPEs. These will eventually be distributed to learners and teachers in various schools.

According to the findings, respondents observed that COVID-19 had changed the world of work and the sphere of learning and development in ways not imagined. It has challenged individuals, employers and workers to adapt online modalities in all spheres of life. There is an urgent need for capacity building of all teachers in developing online learning and blended learning. The committees proposed the urgency with which teachers need to be trained for online learning. Most of the teachers admitted that they had no training and that schools are on their own, without government support and participation.

According to the findings, respondents observed that schools had no choice other than to turn to ICT, develop appropriate infrastructure and invest in empowerment of the stakeholders. There were modules being developed for online training by Kenya Institute of Curriculum Development (KICD), for uniformity in training of teaching subjects. In addition, need to adapt the correct ICT gadgets and equipment for all secondary schools.

The findings are similar to findings cited by, Anindo, Mugambi and Matula (2016) that reported that important physical facilities like classrooms, ICT equipment, workshops, libraries and furniture were inadequate in all institutions that were registered by the Ministry of Education. But COVID 19 has provided the "wake up call" that we need to digitize our education system (Daily Nation, 2020, p5). The factors that influenced the readiness for online learning as put forth by researchers were self-directed learning (Guglielmino, (1977); Garrison, (1997); Lin and Hsieh, (2001); McVay, (2000, 2001)), motivation for learning (Deci& Ryan, (1985); Ryan &Deci, (2000); Fairchild et al. (2005), learner control (Hannafin, (1984); Shyu& Brown, (1992); Reeves, (1993)), computer and internet self-efficacy ((Bandura, (1977, 1986 1997); Compeau and Higgins, (1995); Eastin and LaRose, (2000); Tsai and Tsai, (2003); Tsai and Lin, (2004); Hung et al. (2010) ), online communication self-efficacy (Palloff& Pratt, (1999)); McVay, (2000); Roper, (2007)).

Similar findings indicate that a surge in global demand for supplies such as Personal Protective Equipment (PPE) has revealed limited capacity to expand its production (WHO, 2020). One consequence of it is that the risk of infection for medical workers and for hospital patients increases. To augment the needs, schools and institutions including in TVET have been engaged to produce and utilize their training facilities in the production of needed medical equipment such as protective gears, sanitizers, masks and repair of ventilators, in some localities (David, 2020).

Similar findings were reported by ILO (2020), that it is clear that the crisis also provides an opportunity for the development of more flexible learning solutions that make better use of distance learning and digital tools. However, the shift to online or distance learning in TVET and skills development during the pandemic should be seen first and foremost as an emergency response and not a rapid and permanent migration of programs. Short term solutions can be and have been found but we must seize this opportunity to create long-term positive impacts and develop greater resilience. KNQA is racing against time to develop and implement new policies, standards and guidelines to regulate online teaching and examination of students in line with international best practice (Standard Newspaper, 2020) p5.

## Teacher perceptions on Mid-Term Response in Baringo County

From the findings, as summarized in Figure 2, the following can be reported;

According to the findings, respondents observed that schools had no choice but to close informed by the directives from the Kenyan Government and WHO; learners of all age groups had their in person connections cut off, losing physical access to their peers, senior students across the county had their national exams cancelled, this caused massive disturbance in the labor market in Baringo County,most of the employee in Board of Management (BOM) and private schools had to send teachers home without pay and some lost their jobs. The respondents believe there is urgent need for more training, reskilling and upskilling of staff as majority lack basic knowledge in ICT. Private institutions are currently very fearful of losing thousands of students to Public schools informed by their responsiveness to COVID-19.

According to the findings, the respondents observed that with the new normal, where access to very scarce medical services, equipment and facilities to help fight against the virus in a relatively controlled mobility, limited service environment, schools had to step out and think of supporting in public health management and awareness, establishing telemedicine (Mobile numbers for supply of basic requirements like sanitizers, face masks, PPEs; that were accessible to the public), being prepared for use as quarantine zones if not hospital, engagement of business community to fabricate desks, beds and other equipment to ensure public requirements are met.

Similar findings were reported by Majumdar (2020) that some of these students/trainees/workers are under reduced work hours, with less pay, disrupted learning opportunities and some, with uncertain immigration status in the case of international students or migrant workers. For example, in Australia, the TAFE Directors Australia has advanced measures to mobilize assistance for students including those in TVET. It has called upon the federal government to safeguard student fees under the Tuition Protection Scheme.



### Covid 19 and Teacher Preparedness Perception; Challenges and Opportunities, Among Teachers of Secondary Schools in Baringo County, Kenya

Many migrant workforce sending countries are also bracing for mass return of migrant skilled workers. Looming job displacements will see huge numbers of workforce that need to be absorbed in other jobs or requiring to be re-skilled or re-trained. ILO data (2018) shows that 32% of the world's current 164M migrant workforce are in Europe, followed by North America and Arab States. In Kenya KNQA proposes the need to develop The Open University of Kenya (OUK) with a fresh curriculum to develop, review and disseminate new online content for training at all other Universities and TVETs; aimed at taming the labor market, reskilling and upskilling. This will compare with the Open University of Tanzania, UNISA in South Africa that are already existing; there is need for similar institutions to serve the TVET sector in Kenya, (Standard Newspaper, 2020, P5).

Similar findings were reported by Majumdar et al. (2020) that institutions can be very helpful in expansion of this concept in different localities, in tandem with local community health service providers, to collect community-oriented data and information that can be analysed as a basis for local policy actions and developmental project priorities. Science teacher can use their expertise to deploy technology-enabled applications for managing and maintaining community health databases that are lacking in local health units. Institutions can support the development of specific competencies of the local youth to meet the needs of local jobs around the setting up and running, and the delivery of basic medical and non-medical services such as early diagnostics, sample analysis, database recording, equipment repair, maintenance and community government-business coordination. These kiosks have the potential to be managed either as a small-scale income-generating enterprise by the community or a philanthropic/civic/public initiative co-managed with private individuals and local government units.

## **Teacher perceptions on Long-Term Response in Baringo County**

From the findings, as summarized in Figure 3, the following can be reported;

According to the findings, the respondents observed that with the new normal, many students had poor connectivity or no networks at all, these presented real losses situations and put a burden on their mental health, emotional health and can set them up back from success, teachers had anxiety disorders, had challenges developing unbiased assessment and evaluation system, copying with fear of being infected, challenges of virtual learning management, there is need to entrench online learning; ensure that adequate policies supporting online learning are developed and a hybrid curriculum is developed that entrenches the social and environmental dimensions. According to the findings, the respondents observed that there is need for attitude change amongst teachers and students in the wake of the new normal. Teachers and learners must embrace online learning and curriculum delivery online. Most of the teachers in private institutions were very demotivated and dissatisfied because of poor communication and uncoordinated management during COVID-19. According to the findings, the respondents observed that there is need for capacity building for teachers for personal professional development,

collaboration between the Ministry of Education, vision 2030, agenda four and KNQA; to ensure innovative training in schools.

Similar studies reported that COVID-19 crisis has raised a very fundamental concept regarding the way we work, live, consume, and enable development. In the last century, we have done tremendous progress, but it was primarily in terms of economic dimension. We largely ignored the social and environmental dimensions of these developments and we are paying the price for it. Henceforth, there is an urgency to integrate biodiversity, climatic change, social justice, development, peace education, sustainable inclusive development, and global citizenship principles in the TVET curriculum. These are the key issues we have not given enough thought. We all know the mission of sustainable development goals, but how much have we worked towards it? Knowledge, skill, and attitude to implement SDGs will play a very important role. To facilitate this transformation, we need a smooth implementation of Greening TVET principles (Majumdar et al. (2020), Standard Newspaper, (2020), ILO, (2020)). To address this, education and training will need to reinforce training approaches and contents that do not only focus on the technological future, but also help embrace the fundamentals of living in an environment with respect for biodiversity, social justice and cohesion and inclusive development. In this approach, communities and small units of society are enabled to be strong and resilient in any given crisis. Embarking into the path of sustainable development will require a profound transformation in the ways we think, we work, we live and we act; it requires adequate knowledge, skills and attitudes to contribute successfully in the long term. Education and Skills will be the most crucial for transforming the changes to promote the kind of development that people want to see around them (Majumdar et al. (2020), Standard Newspaper, (2020), ILO, (2020)).

Similar findings were reported by (Majumdar et al. (2020), Sun & Chen, (2016), Brittany, (2015), Daily Nation, (2020); ILO, (2020); UNESCO-UNEVOC (2017)) that Global Citizenship Education (GCED) is UNESCO's response to these challenges. It works by empowering learners of all ages to understand the global impact of today's issues and that everyone must be on the path to become active promoters of more peaceful, tolerant, inclusive, secure and sustainable societies. Similarly, it is built on the principle of Peace and Human Rights Education. It aims to instil in learners the values, attitudes and behaviours that support responsible global citizenship: creativity, innovation, and commitment to peace, human rights and sustainable development.

#### REFERENCES

- Anindo, I., Mugambi, M., &Matula, D. (2016). Training Equipment and Acquisition of Employable Skills by Trainees in Public Technical and Vocational Education and Training Institutions in Nairobi County, Kenya. *Training*, 3(4), 103-110.
- [2] Arbaugh, J. B. (2000). How classroom environment and student engagement affect learning in internet-based MBA courses. *Business Communication Quarterly*, 63(4), 9–26.
- [3] Baker, M. J. & Foy, A. (2008). Business and management research: how to complete your research (2nd ed.). Westburn: Scotland.



- [4] Barab, S. A., & Duffy, T. (2000). From practice fields to communities of practice. Theoretical foundations of learning environments, 1(1), 25-55.
- [5] Braun, V., & Clarke, V. (2013). Successful qualitative research: A practical guide for beginners. Sage.
- [6] Bandura, A. (1977). Self-efficacy: toward a unifying theory of behavioral change. *Psychological Review*, 84, 191–215.
- [7] Bandura, A. (1986). Social foundations of thought and action: A social cognitive theory. Englewood Cliffs. NJ: Prentice-Hall.
- [8] Bandura, A. (1997). Self-efficacy: The exercise of control. New York: W.H. Freeman.
- [9] Brittany, G. (2015). "Online Learning Revealing the Benefits and Challenges". Education Masters. Paper 303.
- [10] Guglielmino, L. M. (1977). Development of the self-directed learning readiness scale. Unpublished doctoral dissertation. Athens, GA: The University of Georgia.
- [11] Chizmar, J. F., &Walbert, M. S. (1999). Web-based learning environments guided by principles of good teaching practice. *The Journal of Economic Education*, 30(3), 248-259.
- [12] Compeau, D. R., & Higgins, C. A. (1995). Computer self-efficacy: development of a measure and initial test. MIS Quarterly, 19(2), 189–211.
- [13] Davis, F. D., Bagozzi, R. P., &Warshaw, P. R. (1992). Extrinsic and intrinsic motivation to use computers in the workplace. *Journal of Applied Social Psychology*, 22, 1111–1132.
- [14] Davis, F. D., Bagozzi, R. P., &Warshaw, P. R. (1989). User acceptance of computer technology: A comparison of two theoretical models. *Management Science*, 35(8), 982–1003.
- [15] Davis, F.D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of informationtechnology. MISQuarterly,13(3), 318–340
- [16] Deci, E., & Ryan, R. (1985).Intrinsic motivation and self-determination in human behavior. New York: Plenum Press
- [17] Deci, E., & Ryan, R. (2000). Intrinsic motivation and self-determination in human behavior. New York: Plenum Press
- [18] Evans, T. (2000). Flexible delivery and flexible learning: developing flexible learners? In V. Jakupec, & J. Garrick (Eds.), Flexible learning, human resource and organizational development (pp. 211–224). London: Routledge.
- [19] Eastin, M. A., &LaRose, R. (2000). Internet self-efficacy and the psychology of the digital divide. *Journal of Computer Mediated Communication*, 6(1).
- [20] Fairchild, A. J., Jeanne Horst, S., Finney, S. J., & Barron, K. E. (2005). Evaluating existing and new validity evidence for the academic motivation scale. *Contemporary Educational Psychology*, 30(3), 331–358.
- [21] Frankola, K. (2001). Why online learners drop out. WORKFORCE-COSTA MESA-, 80(10), 52-61.
- [22] Garrison, D. R. (1997). Self-directed learning: toward a comprehensive model. Adult Education Quarterly, 48(1), 18–33.
- [23] Gefen, D. (2003). TAM or just plain habit: A look at experienced online shoppers. *Journal of End User Computing*, 15(3), 1–13.
- [24] Gefen, D., & Straub, D. W. (1997). Gender difference in the perception and use of email: An extension to the technology acceptance model. MIS Quarterly, 21(4), 389–401.
- [25] Gefen, D., & Straub, D. W. (2000). The relative importance of perceived ease of use in IS adoption: A study of e-commerce adoption. Journal of the Association for Information Systems, 1(8), 1–28.
- [26] Government of Kenya, (RoK), (2020). Guidelines on health and safety protocols for reopening of basic education institutions amid covid-19 pandemic. Nairobi: Government Printers.
- [27] Guglielmino, L. M. (1977). Development of the self-directed learning readiness scale. Unpublished doctoral dissertation. Athens, GA: The University of Georgia.
- [28] Hannafin, M. J. (1984). Guidelines for using locus of instructional control in the design of computer-assisted instruction. *Journal of Instructional Development*, 7(3), 6–10.
- [29] Hara, N., & Kling, R. (1999). Students' frustrations with a web-based distance education course. First Monday, 4(12).
- [30] Hay, A., Hodgkinson, M., Peltier, J. W., &Drago, W. A. (2004).Interaction and virtual learning. Strategic change, 13(4), 193.
- [31] Igbaria, M., Guimaraes, T., Davis, G., Zinatelli, N., Cragg, P., &Cavaye, L. M. (1997). Computing acceptance factors in small firms: A structural equation model. MIS Quarterly, 21(3), 279–305.
- [32] ILO, (2020). Technical Note Survey with TVET providers, policy-makers and social partners on addressing the COVID-19 pandemic in West Africa. UNESCO and World Bank Survey May/June, 2020.
- [33] Jonassen, D. H. (2002). Engaging and supporting problem solving in online learning. Quarterly *Review of Distance Education*, 3(1), 1-13.

- [34] Kim, K. J., Liu, S., & Bonk, C. J. (2005). Online MBA students' perceptions of online learning: Benefits, challenges, and suggestions. *The Internet and Higher Education*, 8(4), 335-344
- [35] Klingner, B. G. (2003). The relationship between learning styles of adult learners enrolled in online courses at Pace University and success and satisfaction with online learning (Doctoral dissertation, Walden University).
- [36] Laine, L. (2003). *Is e-learning effective for IT training? T +D*, 57(6), 55-60.
- [37] Lim, D. H., Morris, M. L., &Kupritz, V. W. (2007). Online vs blended learning: differences in instructional outcomes and learner satisfaction. *Journal of Asynchronous Learning Networks*, 11(2), 27–42.
- [38] Lin, B., & Hsieh, C. T. (2001). Web-based teaching and learner control: a research review. *Computers & Education*, 37(4), 377–386.
- [39] ILO, (2020).Technical Note Survey with TVET providers, policy-makers and social partners on addressing the COVID-19 pandemic in West Africa. UNESCO and World Bank Survey May/June, 2020.
- [40] McCall, D. E. (2002). Factors influencing participation and perseverance in online distance learning courses: A case study in continuing professional education. Unpublished doctoral dissertation, Florida State University, Tallahassee.
- [41] McVay, M. (2000). Developing a web-based distance student orientation to enhance student success in an online bachelor's degree completion program. Unpublished practicum report presented to the Ed.D. Program. Florida: Nova Southeastern University.
- [42] McVay, M. (2001). How to be a successful distance learning student: Learning on the Internet. New York: Prentice Hall.
- [43] Majumdar, S. (2020).TVET in the time of COVID-19: Challenges and opportunities.https://www.nationalskillsnetwork.in/wp-content/upload s/2020/05/FINAL-COVID19\_Shymal-Majumdar.pdf
- [44] Majumdar et al. (2020). Technical Vocational Education & Training reflections on the issues facing TVET and its potential in the time of COVID-19. Retrieved on 10 April 2020 via www.linkedIn.com/in/shyamalmajumdar
- [45] National Centre for Vocational Education Research. (2002). Flexibility through online learning: At a glance. Australia National Centre for Vocational Education Research.
- [46] Petrides, L.A. (2002). Web-based technologies for distributed (or distance) learning: Creating learning-centered educational experiences in the higher education classroom. *International Journal of Instructional Media*, 29(1), 69–77.
- [47] Picciano, A. G. (2002). Beyond student perceptions: Issues of interaction, presence, and performance in an online course. *Journal of Asynchronous Learning Networks*, 6(1), 21–40.
- [48] Roper, A. R. (2007). How students develop online learning skills. *Educause Quarterly*, 30(1), 62–64.
- [49] Ryan, R. M., &Deci, E. L. (2000). Intrinsic and extrinsic motivations: classic definitions and new directions. *Contemporary Educational Psychology*, 25(1), 5
- [50] Ryan, S. (2001). Is online learning right for you? American Agent & Broker, 73(6), 54-58.
- [51] Sargeant J. (2012). Qualitative Research Part II: Participants, Analysis, and Quality Assurance.
- [52] Journal of Graduate Medical Education, 4(1): 1–3.
- [53] Smith, P. J. (2005). Learning preferences and readiness for online learning. *Educational psychology*, 25(1), 3-12.
- [54] Smith, P. J., Murphy, K. L., & Mahoney, S. E. (2003). Towards identifying factors underlying readiness for online learning: an exploratory study. *Distance Education*, 24(1), 57–67.
- [55] Schrum, L. (2002). Oh, What Wonders You Will See--Distance Education Past, Present, and Future. Learning & Leading with Technology. http://www.iste.org/L&L/30/3/
- [56] Shyu, H. Y., & Brown, S. W. (1992). Learner control versus program control in interactive videodisc instruction: what are the effects in procedural learning? *International Journal of Instructional Media*, 19(2), 85–95.
- [57] Standard Newspaper, (2020p5). COVID 19: The wakeup call that we were all waiting for; published on 24th, september. Nairobi: Standard group
- [58] Sun, A., & Chen, X. (2016). Online education and its effective practice: A research review. *Journal of Information Technology Education*, 15.
- [59] Song, L., Singleton, E. S., Hill, J. R., &Koh, M. H. (2004).Improving online learning: Student perceptions of useful and challenging characteristics. The internet and higher education, 7(1), 59-70.
- [60] Soo, K. S., & Bonk, C. J. (1998). Interaction: What Does It Mean in Online Distance Education?.8p.; In: ED-MEDIA/ED-TELECOM 98 World Conference on Educational Multimedia and Hypermedia & World Conference on Educational Telecommunications. Proceedings (10th, Freiburg, Germany, June 20-25, 1998); see IR 019 307



159

### Covid 19 and Teacher Preparedness Perception; Challenges and Opportunities, Among Teachers of Secondary Schools in Baringo County, Kenya

- [61] TVETA, (2020). 'Coronavirus Pandemic Wrecks Education Across the World' p7, Issue 1. Nairobi: TVETA Press.
- [62] The Constitution of Kenya, (2010). Chapter Eleven of the Devolved Government Act. Nairobi: Government Printers.
- [63] TDA, TAFE. (2020). Measures to mobilize assistance for students including those in TVET.Retrieved from https://tda.edu.au/wp-content/uploads/2020/04/Urgent-assistance-nee ded-forinternational-students-1-April-2020.pdf.
- [64] Trautwein, U., Lüdtke, O., Kastens, C., &Köller, O. (2006). Effort on homework in grades 5–9: Development, motivational antecedents, and the association with effort on classwork. *Child development*, 77(4), 1094-1111.
- [65] Tsai, C.-C., & Lin, C.-C. (2004). Taiwanese adolescents' perceptions and attitudes regarding the Internet: exploring gender differences. *Adolescence*, 39, 725–734.
- [66] Tsai, M. J., & Tsai, C. C. (2003). Information searching strategies in web-based science learning: the role of Internet self-efficacy. *Innovations in Education and Teaching International*, 40(1), 43–50.
- [67] UNESCO.(2020). COVID-19 Educational disruption and response. https://en.unesco.org/themes/educationemergencies/coronavirus-scho ol-closures
- [68] UNESCO, (2002). Technical and Vocational Training for the 21<sup>st</sup> Century. UNESCO and ILO Recommendations. New York: USA.
- [69] UNESCO (2015a). Enhancing institutionalized partnerships between TVETs. New York: USA.
- [70] UNESCO-UNEVOC (2017).Greening Technical and Vocational Education and Training.A practical guide for institutions. https://unevoc.unesco.org/up/gtg.pdf
- [71] Venkatesh, V. (2000). Determinants of perceived ease of use: Integrating control intrinsic motivation and emotion into the technology. *Information System Research*, 11(4), 342–365.
- [72] Venkatesh, V., & Davis, F. D. (2000). A model of the antecedents of perceived ease of use: development and text. *Decision Sciences*, 27(3), 41–481.
- [73] Vonderwell, S. (2003). An examination of asynchronous communication experiences and perspectives of students in an online course: A case study. *The Internet and higher education*, 6(1), 77-90.
- [74] Warner, D., Christie, G., & Choy, S. (1998). Readiness of VET clients for flexible delivery including on-line learning. Brisbane: Australian National Training Authority
- [75] Wagner, R., Werner, J., & Schramm, R. (2002, August). An evaluation of student satisfaction with distance learning courses. In Annual Conference on Distance Learning, University of Wisconsin, Whitewater, WI
- [76] Wise, A., Chang, J., Duffy, T., & Del Valle, R. (2004). The effects of teacher social presence on student satisfaction, engagement, and learning. *Journal of Educational computing research*, 31(3), 247-271.
- [77] WHO (2020).Interim Guidance (March 19,2020). World Health Organization. https://www.who.int/westernpacific/news/multimedia/infographics/covid-19
- [78] Woods, R. H. (2002). How much communication is enough in online courses?-- exploring the relationship between frequency of instructor-initiated personal email and learners' perceptions of and participation in online learning. *International Journal of Instructional* Media, 29(4), 377.

