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Building Resilient Models for TVET Trainers Beyond COVID 19: A Trainers' Perspective

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Abstract

Due to the on-set of COVID 19 in China in 2019 and later in Kenya in March 2020 online training was introduced in TVET institutions so that learning could take place when physical classes were suspended in order to contain the spread of the virus. Trainers in TVET were tasked with the responsibility of developing training material, planning methods to approach students, providing guidance to students as well as assessing the competencies of their students. The shift to online training resulted in trainers spending more time on planning and increased amount of written individual feedback. The net result was increased teacher's workload. The current study reviewed the existing regulatory framework relating to TVET in Kenya and made proposals towards building resilient models of TVET beyond COVID 19. A descriptive survey method was used and 200 members drawn from Kabete National Polytechnic took part in this study. Random sampling was used to select trainers while purposive sampling was used to select administrative staff. Data was collected using questionnaires and interview schedules. Through quantitative and qualitative analyses, the need for emphasis on digital skills for trainers as well as a policy for distance and online training beyond the COVID 19 crisis was demonstrated. There is need for deliberate efforts towards the professional development of TVET trainers especially in regards to digital skills. Successful online training requires synergy from the government, managers of TVET institutions, trainers and even trainees.

Key words: ***TVET, COVID 19, e-learning, impact, education, challenges***

Introduction

Distance education is a method of teaching and learning where the student and teacher are physically separated. Methods used include correspondence, audio, video, computer and the internet (Roffe, 2004). With advanced communication technology, online education provides affordable access to education and has changed the landscape of education. Besides increased access, quality distance education affords learners and trainers flexibility (Kolowich, 2014)

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Statement of the Problem

Amid the global wave of pandemic lock-downs, there was unprecedented rise in e-learning. In 173 countries 1.5 billion learners were affected by school closures. The pandemic highlighted a pressing need to improve digital literacy of trainees, trainers and parents (Shahzad et al, 2020). Most trainers lack competence on how to develop distance and online educational tools (https://www.internetsociety.org/education/pandemic). In July 2018, the Ministry of Education in Kenya launched it's Disaster Management Policy. It reinforces other policies such as the education sector policy for education for sustainable development, The education sector policy on peace education (2014) and Health and safety Standard Guidelines for institutions. However, the above policies do not envisage global pandemics, disruption of regular school routines and learning from home through digital platforms (Ngwacho, 2020). The current study discussed the role of trainers in promoting resilient TVET Models beyond COVID 19 and reviewed the existing regulatory framework relating to TVET in Kenya. It also makes proposals towards building resilient models of TVET beyond COVID 19.

Objectives of the Study

The study had the following objectives: -

1. To discuss the role of trainers in promoting resilient TVET Model beyond COVID 19.
2. To review the existing regulatory framework relating to TVET training during COVID 19.
3. To make proposals towards greater resilience and effective regulation of online TVET training during and beyond the COVID 19 pandemic.

Hypothesis

The study will test the following hypothesis:

Ho : Shift to online training has resulted in increased workload for trainers.

Literature Review

Launched in July 2018 by the Ministry of Education the Disaster Management Policy provides an institutional framework for coordination, communication, information management, implementation, monitoring and evaluation of Education in emergencies interventions in Kenya. It also seeks to guide inter sectoral collaboration and partnership building with other stakeholders to promote disaster risk reduction and interventions in Kenya through learning institutions.

This policy is aimed at building a safe, resilient and sustainable learning environment in the Kenyan Education sector for enhanced access, equity, retention, transition and completion in the provision of quality education in emergency settings.

The objectives of this policy include:

i. Establishment of an inclusive institutional framework for disaster and risk management in education institutions in Kenya;

ii. Building capacity for preparedness, timely response and recovery in the education sector in Kenya.

iii. Establishment of mechanisms for effective coordination and strong collaboration and partnerships even with private sector.

iv. Mobilization of resources for sustainable development, management and implementation of disaster management programmes in Kenya.

v. Strengthen monitoring and evaluation (Monitoring & Evaluation Accountability Learning) of disaster management programmes in Kenya.

The following principles guide the Disaster Management Policy:

i. The right to education for every child is enshrined in the Bill of Rights in the Constitution of Kenya 2010. Therefore, disasters should not deny any child the right to quality education as is guaranteed in the constitution.

ii. The principle of Inclusion and Participation acknowledges the importance of inclusion and participation of all learners and other stakeholders as well as consultation in promoting Education in emergencies interventions in all areas prone to disasters. Again, all stakeholders will constantly be engaged in decision making regarding the implementation of disaster management programs. The Ministry will strive to reduce the 'gender gap' in educational and training opportunities for both girls and boys and ensure equity for all including persons with Disabilities.

iii. The policy strives to ensure that all girls and boys have access to education and training opportunities their situations notwithstanding and that interventions will be coordinated and implemented to ensure that no child is left behind in the education sector due to disasters.

iv. In parts where interventions are as a result of conflict, the Ministry of Education will develop, plan, implement, monitor and evaluate interventions in a conflict-sensitive and inclusive manner applying the do no harm principle and guided by the principles of transparency, accountability, timeliness,impartiality, complementarity and coherence through partnership and coordination.

v. The education sector endeavors to promote appreciation and care for the environment and for sustainable development. The interventions will integrate activities that foster environmental conservation awareness and encourage actions for wise use and conservation of life-sustaining natural resources. This will be achieved through creating linkages with Education for Sustainable Development (ESD), aimed at reversing the loss of environmental resources.

vi. The programs will put in place disaster risk management and reduction mechanisms aimed at equipping education officials at all levels, members of learning institutions and the community at large with knowledge, skills, attitudes and values for preventing disasters, being prepared to respond when disasters occur as well as enhancing their resilience. This will be achieved by enhancing their capacities to discern early warning signs and take proactive and preventive measures.

vii. The policy also recognizes that Kenya is made up of diverse populations which are a resource for socioeconomic development and a part of the country's heritage and that diverse types of disasters hit the country from time to time. Thus, interventions will be designed to respond to the diverse and unique needs of the affected communities.

viii. Responses to disasters will be coordinated and implemented as needed without discrimination and child protection principles will be mainstreamed into disaster management interventions to ensure that children are provided with quality education as well as with physical, psycho-social and cognitive protection that can be both life-sustaining and life-saving.

In addition, appropriate and adaptable technologies will be embraced to accelerate the implementation of the policy. This policy provides for the establishment of inclusive Disaster Management Committees in all learning institutions. The committees shall be mandated to oversee the implementation of disaster management initiatives at the learning institutions level.

The Disaster Management Committee in an educational institution will ensure that each learning institution has a contingency plan in place and the committee will comprise:

- The Board of Management Chair
- The Principal/Deputy
- Teacher in Charge of Guidance and Counseling
- Class Teachers
- Representative of the Sub-county Director of Education
- Student Government Representative
- Parent Representation (Republic of Kenya, 2017)

Though comprehensive the above policy does not take into account global pandemics, disruption of regular school routines and learning from home through digital platforms. Little is said about building the capacity for digital skills for trainers. There is need for emphasis on digital skills and staff training for trainers as well as a clear policy on online training in order to shore up online learning solutions. It also falls short when it comes to implementation strategy.

Theoretical Framework

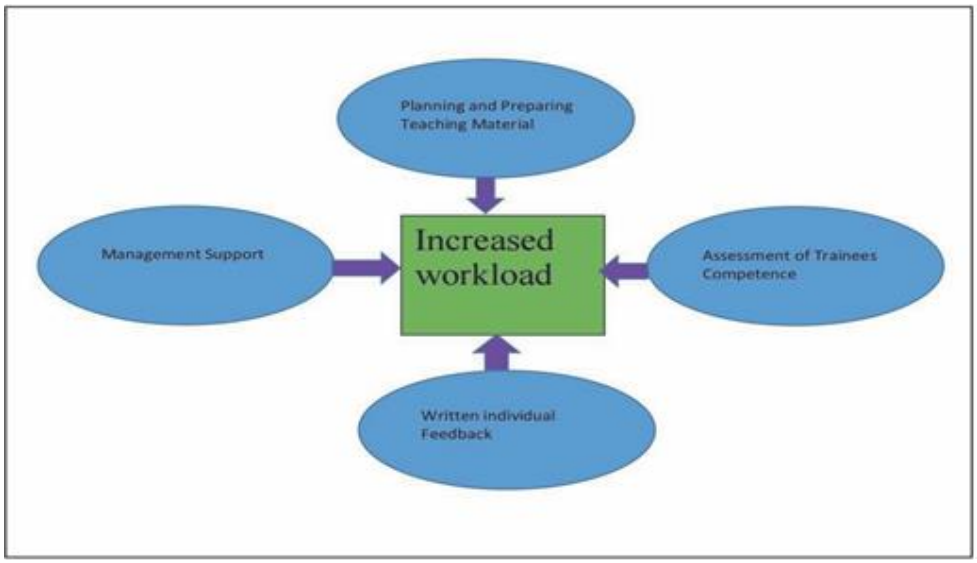
The following theories underpin this study:

Activity Theory as argued by Vygotsky (1978, 1981) and Wertch, (1981) who opine that trainees learn by doing but only by presenting what we have learnt to peers and trainers can the knowledge be reinforced and mistakes corrected.

Constructivism Theory by Greeno, Collins & Resnicket (1996), Hirsch (1996) and Phillips (2000), who argue that students build understanding of content based on prior knowledge and experience. They interpret content and just do not absorb it. While teachers create opportunities to learn, they cannot control students' interpretation (Wilson & Peterson, 2006). It is therefore incumbent upon the trainer to help learners alter, edit and enrich their interpretations. Therefore, trainers need to draw from both Activity Theory and Constructivism Theory when building and adapting their methodologies.

Social-cultural Theory as argued by Lave and Wenger (1991), students also learn as a result of interaction with the classroom community. They start by watching others and then by fully participating in classroom activities. Again, norms of testing are determined by groups. This reinforces the notion that ideas should be open to public debate. Learning needs to be collaborative and participatory all the while taking the context into account. In order for learners to gain insight into their learning frequent feedback is critical. Trainers need to monitor their learners and actively evaluate their strategies (Bransford, Brown & Cocking, 2000).The implications of these theories is that trainers spend more time planning online classes. They also develop training material, plan the methodology to approach students and assess the competencies of their students. Again there is increased amount of written individual feedback. The net result is increased trainers' workload.

Conceptual Framework



Munyi, Okinda & Wambua, (2021) propose a model for the adoption of e-learning in institutions.The current study adopted a similar model to test the contribution of each variable to the likelihood of increased workload.

Y Increased workload = $\alpha + \beta 1x1 + \beta 2x2 + \beta 3x3 + \beta 4x4 + \varepsilon$ i The linear forms follows:

$p = \alpha + \beta 1x1 + \beta 2x2 + \beta 3x3 + \beta 4x4 + \varepsilon$ i 1-p

Where:

p = Increased workload

I- p = Probability of workload not increasing

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α = Constant of the equation

$\beta 1$ to $\beta 4$ = The parameters to be estimated

$\beta 1$ – planning and preparation, $\beta 2$- assessment of trainees competence, $\beta 3$- Written Individual feedback to trainees, $\beta 4$- Management support

Methodology

A case study approach was adopted for this study and a survey instrument was developed which was reworded in the form of E- learning. All items used a 5 point Likert scale ranging from 1 to 5 from "strongly disagree" to "strongly agree." The questionnaire items of planning and preparation, student assessment, time management, communication and user support was adopted from (McGill, Hobbs & Klobas, 2003; Rai, Lang & Welker, 2002) A descriptive survey method was used and 200 members drawn from Kabete National Polytechnic took part in this study. Random sampling was used to select trainers while purposive sampling was used to select administrative staff. Data was collected using questionnaires and interview schedules. Through quantitative and qualitative anal- yses the need for emphasis on digital skills for trainers as well as a policy for distance and online training beyond the COVID 19 crisis was demonstrated.

Findings

The overall fit of the model was tested using Chi-square statistics following Field's (2005) method. The contribution of each predictor variable was tested using multicol- linearity analysis to establish the possibility of a collinearity problem of the predictor variables having some explanatory power over each other. Menard (1995) has suggested that a tolerance value of less than 0.1 almost certainly indicates a serious collinearity problem. Furthermore, Field (2005) has suggested that if the variance inflation factors (VIFs) are more than 10 then there is cause for concern about multicollinearity (Munyi, Okinda & Wambua, 2021)

Table 1
Model Specification

	β	SE	Wald	Df	Sig
Planning & Preparation of teaching materials	-114	.113	1.012	1	.003
Assessment of Trainees	-124	.072	2.977	1	.081
Written Individual Feedback to Trainees	-024	.097	.061	1	.021
Management Support	-218	.115	3.564	1	.050
Constant	1.139	2.457	.215	1	.640

Table 1shows the contribution of each independent variable to the model and its statistical significance. From the results, planning and preparation of teaching materiasl(p=.003) and written individual feedbacl to traineesadded significantly to the workload but the assessment of trainees(p=.081) did not add significantly to the model description

Table 2
Chi- Square

	Chi Square	Df	Sig
Step	11.568	4	0.21
Block	11.568	4	0.21
Model	11.568	4	0.21

Table 2 provides the overall statistical significance of the model used. The model is statistically significant since p<0.05, from the Sig column.

What Changed During the Pandemic?

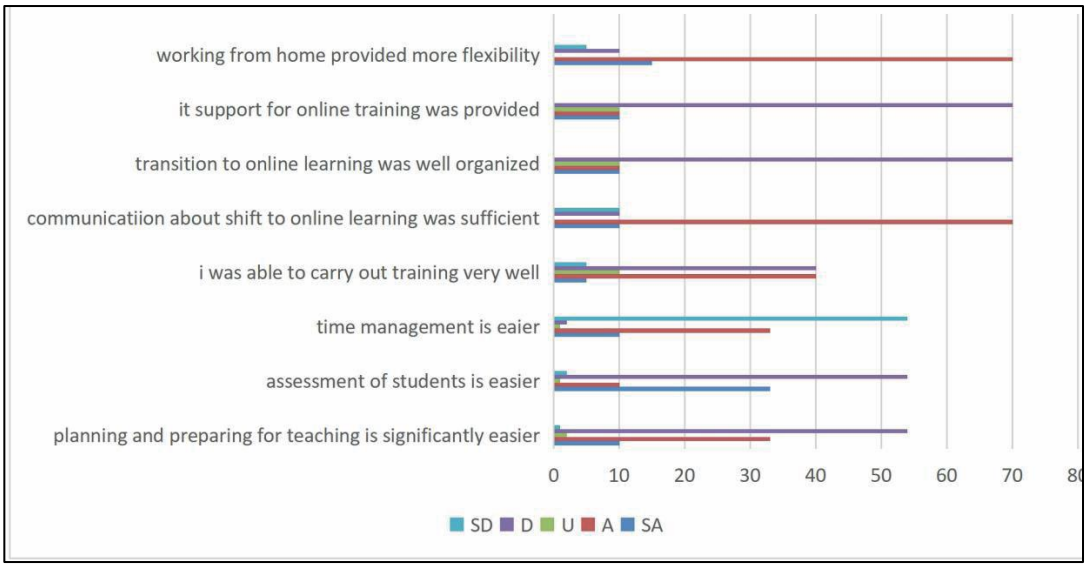

Figure 1: Changes during the Pandemic

The successful implementation of distance learning seems to have taken a toll on trainers. More time spent on planning, adopting new digital tools, increased amount of written individual feedback for each student and continuous communication have all increased the trainers' workload: 54% of TVET teachers have reported a significant increase, and 33% a slight increase in their workload.

Conclusions

The model prediction in this study suggested that the model can be used as a predictor that the workload of trainers' in TVET institutions in Kenya has indeed increased. How- ever, given the diversity of the education sector, the application of the model in different contexts can produce diverse results with significant implications for TVET institution managers as well as policy makers in the technical education sector.

Recommendations

Interviews with administrators revealed the following mitigating measures had been taken:

i. Most communications to trainees and trainers are now E-communications.

ii. Trainers are offered flexibility on submission deadlines.

iii. A COVID 19 Response Committee has been set up to address stakeholder concerns.

However there is need for infrastructure of online and distance education to be strengthened. Again, In-service training should be provided for trainers so that they can improve their digital skills.

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