



CAP YOUTH EMPOWERMENT
INSTITUTE KENYA (YEI)

TITLE

**“Evaluating the Transition
to Jobs and
Entrepreneurship after
Virtual Learning and its
Impact on the Adoption of
Digital Tools in Conducting
Business”**

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EXECUTIVE SUMMARY

The study meant to evaluate the transition to jobs and entrepreneurship after virtual learning and its impact on the adoption of digital tools in conducting business. The scope of the study focused on the case study of CAP YEI's BESTLMS, which is an e-learning platform that was launched to be used by the organization's educational centres as well as partnering public VTCs, which are spread across the country. At the time of preparing the report, at least 1,211 had completed their respective courses on this platform. The findings show that about 43.9% were employed while 29.1% had started businesses, which translates to a transition rate of around 73%. While in employment and entrepreneurship, some of the benefits/value the respondents attributed to having studied through a digital learning platform include extended market reach (28.1%), increased sales (18.0%), increased revenue (13.7%), reduced costs (11.5%), and legal/regulatory compliance (10.4%). What is more, about 95.3% agreed that undergoing virtual learning influenced their decision to adopt digital tools to carry out work and business related tasks. Among the most popular digital tools amongst the respondents is social media/digital marketing (52.9%), website (12.6%), management software/programs (11.9%), data analytics (10.4%), and video conferencing (9.4%). Additionally, issues of digital learning tools and self-learning effectiveness, as well as website usability received positive reviews/ratings from the respondents. Though they found the platform to be largely easy to use, they indicated that issues of internet and network connectivity and access to technological gadgets were the main challenges. Overall, the respondents perceive digital learning as a positive development that have played part in their transition into employment and entrepreneurship as well as in adopting digital tools to carry out business.

1.0 INTRODUCTION

1.1 BACKGROUND

After the onset of COVID-19 pandemic in Kenya, various measures were implemented to halt the spread of the virus. One of the containment measures that was arguably the most impactful is closure of learning institutions. According to a report endorsed by African Population and Health Research Center, 73.8% of learners from 186 countries were affected by this directive, with over 17 million enrolled learners being forced out of school in Kenya alone (APHRC, 2020). Consequently, it was imperative for schools, educationists, government agencies, and non-governmental organizations to find alternative ways to support continuity of learning, despite the various constraints. For instance, the 2020 Economic Survey Report by Kenya National Bureau of Statistics shows that as of 2019, only 40.7% and 56.9% Kenyans owned televisions and radios, which are basic tools of delivering education digitally (KNBS, 2020).

However, though these statistics may indicate that most students lack access to basic digital tools and low-tech solutions, Kenya remains the regional and continental Silicon Savannah, as opined by Miller (2020), who says that it enjoys technological advantages in East Africa, especially considering a report by the Communications Authority of Kenya that shows that mobile phone penetration rate is approximately 116% while data/internet subscriptions (internet penetration) stands at 83%, hence making it an ideal environment for digital learning. Nonetheless, even with the high mobile phone and internet penetration rates, the adoption of digital tools in business is at the infancy stage, mainly when it comes to micro and small businesses. Thus, it would be insightful to assess the impact of digital/virtual on not only adoption of digital tools in conducting business but also in relation to transition to jobs and entrepreneurship.

One of the initiative to support continuity of learning during COVID-19 pandemic in Kenya was by CAP-Youth Empowerment Institute Kenya (YEI) – a non-government organization. CAPYEI’s operational objectives include (a) ensuring disadvantaged youth have acquired life and market-relevant skills, (b) facilitating the beneficiaries to access internship and job opportunities through established partnerships, and (c) ensuring the youthful generation are receiving pre and post job placement services, counselling, and support (“CAP-YEI Brief”, n.d.). With the pandemic ravaging the country and necessitating the closure of schools, it meant that CAP YEI could struggle to achieve its objectives since most of its educational centres and public Vocational Training Centres (VTCs) it empowered through capacity building were mainly reliant on face-to-face learning.

The organization resolved to develop a Learning Management System (LMS) that could make training possible, particularly through blended training that integrates distance learning and structured face to face training. BESTLMS (www.bestlms.org) – CAPYEI’s proprietary LMS – had recorded significant success so far. The government supported and TVET-CDACC-compliant programme, which was launched in mid-2020, has been deployed in majority of the counties across the country, and thousands of students have been enrolled. The “highly flexible and scalable multi-college system ... allow different vocational training centres to access digitised curriculum content, deliver training, assess, track and grade trainees” (Nyaundi, 2020). At the time of writing this report, at least 1,211 have completed various courses through virtual/digital learning supported by CAP YEI’s BESTLMS.

1.2 STATEMENT OF PROBLEM

As noted earlier, CAP YEI’s include not only connecting disadvantaged youth with opportunities to acquire life and market-relevant skills but also facilitating their transition to corporate employment and self-employment. However, with the adoption of virtual learning

through various an e-learning LMS platform, organizational performance metrics related to transition to jobs and entrepreneurship ought to be re-evaluated since the current teaching paradigm (digital learning) is different from the old one that was heavily inclined toward face-to-face learning. Additionally, considering the benefits of the new approach, it would be insightful to understand the impact of digital learning on the adoption of digital tools in conducting business.

1.3 RESEARCH OBJECTIVES

1.3.1 PRIMARY OBJECTIVE

- To evaluate the transition to jobs and entrepreneurship after virtual learning, as well as the impact of digital learning on adoption of business-relevant digital tools.

1.3.2 SPECIFIC OBJECTIVES

- To study where students have transitioned into after undergoing virtual learning.
- To assess the impact of digital learning on individual tendency to adopt digital tools at work/business.
- To assess the overall perception toward digital learning while in entrepreneurship and employment.

1.4 SCOPE

Agreeably, variant forms of digital learning have been embraced across Kenya in recent months. Institutions at various levels and in both public and private sectors have found ways to continue with learning at a time when physical contact amongst students is discouraged due to coronavirus infections. At the TVET level, CAP YEI's BESTLMS is one of the platform that is allowed tertiary institutions, particularly VTCs to use blended learning that have

introduced the digital learning element. In this regard, the scope of this assessment is constrained to the case study of TVET sector and only focuses on students who have completed their courses after undertaking virtual/digital learning on CAP YEI's LMS platform.

2.0 LITERATURE REVIEW

2.1 DIGITAL LEARNING

Digital learning is a wide concept that encompasses various learning technologies and instructional practices that leverage the power of technology, including virtual and blended learning. Some of the digital learning strategies may comprise or combine technologies such as blended learning, adaptive learning, gamification, electronic(e)-textbooks, mobile learning, online learning (e-learning), augmented reality, virtual reality, learning analytics, and so forth (Caduceus International Publishing [CIP], 2020). Notably, Kenya Education Network Trust (KENET) (n.d.), a not-for-profit National Research and Education Network (NREN) that has connected more than 140 member institutions to high-speed global Internet, argues that though the bloated African population is a challenge in some fronts, it is perfect opportunity to implement digital learning, mainly because it is difficult to offer personalized instruction to all students.

When compared to traditional learning, digital learning can be preferred to some extent. Based on their experience that spans across the globe, PanWorld Education (2017) opines that digital learning is more memorable and interactive, and offer better context, sense of perspective, and learner engagement than traditional textbook-lecturer based approach, thereby allowing learners to better understand the educational materials, digest information, track individual progress, and improve motivation and accountability, all which can be reflected by the higher test scores and retention rates recorded in digital learning vis-à-vis traditional learning. Other benefits include increased information sharing, higher engagement of educators and parents, and increasing students' employability (PanWorld Education, 2017). Thus, though traditional learning may continue being used widely, it is important to continue change the modern-day classroom by modernizing the various activities.

2.2 DIGITAL LEARNING AND POST-SCHOOL TRANSITION

In terms of work, after TVET education, students can transition to either corporate employment (job market) or entrepreneurship (self-employment). A research using U.S. census data has found that education has a strong positive impact on entrepreneurship and in becoming self-employed. Particularly, it has confirmed the hypotheses that (a) the self-employed went through more years of formal education than those employed and (b) the more one receives formal education increases the higher the likelihood of becoming self-employed rather than seeking employment (Robinson & Sexton, 1994). In the same light, it would be interesting to determine whether digital learning in particular has an impact on the nature of transition – either self-employment or entrepreneurship. A study based in a Zambia context asserts that the ICT sector is an archetypal entrepreneurial industry since most ICT graduates are choosing self-employment as their career route instead of seeking employment in business, and they are more successful in entrepreneurship (Calitz, Cullen, & Whittaker, 2012). These findings may indicate that that ICT skills, which may also come from being exposed to digital tools used in virtual learning, can increase the propensity to choose entrepreneurship over corporate jobs.

2.3 DIGITAL LEARNING AND JOB PERFORMANCE

Regardless of whether students transition into employment and entrepreneurship, it is essential to study whether digital learning has an impact on their capacity to execute their roles. In an explanatory study that sought to find the structural relationship between effectiveness of e-learning and employee performance, it was found that the two are positively correlated, an indication that an effective e-learning programme is likely to result in productive workers (Altaf & Bagram, 2009). Outside school, digital learning has been extended to offer on-job-training, with research showing that this approach has not only enhanced workers' skills but also reduced costs (Cheng & Chen, 2015). In a similar study on the use of digital learning in

organizations, Kirkpatrick model of measuring effectiveness of e-learning showed that such programs enhance workers with relevant technical competencies, which are increasingly becoming fundamental requirements in modern corporate space (Kramer, 2007). In other words, other than the content delivered through virtual learning, the use of various digital tools is resulting in more competent and motivated workers and entrepreneurs.

3.0 RESEARCH METHODOLOGY

3.1 SAMPLE POPULATION

The research population comprised students who have completed various courses after undergoing a virtual learning program at either CAP YEI's educational centres or VTCs using CAP YEI's LMS platform. As noted earlier, at least 1,211 of such students have already completed studies since the program was launched in 2020, which makes them the actual population that the assessment targeted. However, the questionnaire was sent to about 1,000 individuals, making it the sample population.

3.2 DATA COLLECTION

A mixed-methods survey was used as the instrument to collect data. Considering the constraints of time and geographical dispersion of the target respondents, the questionnaire was distributed electronically since contacts were available. The questionnaire was coded in an online platform and the link to the questions was sent through a USSD messaging platform. Being a mixed-method questionnaire, both numerical and textual responses were recorded. While majority of the questions were closed-ended, few open-ended questions were asked to ensure that all possible answers were captured.

3.3 RESEARCH APPROACH

As suggested in the preceding section, a mixed-method descriptive approach was adopted. The assessment is descriptive because it focuses on observing and measuring the various subjects without any attempt to manipulate them. In other words, the aim was to describe the virtual/digital learning phenomenon and the resultant students' transition to jobs and entrepreneurship. Consequently, the study is neither correlational nor experimental since no hypothesis was being tested. Regarding the research type, it is a mixed-method research as

it sought to systematically integrate both qualitative and quantitative data. The methodology permitted a more complete and synergistic utilization of data from open-ended and close-ended questions.

3.4 DATA ANALYSIS

The collected mixed-methods data was analysed in various ways. The quantitative data was analysed using SPSS and advanced Excel features to derive descriptive and inferential statistics, as well as to produce visualizations. Content analysis was done on the textual qualitative data, where metrics such as counts and summations were used to describe and present certain themes, words, and concepts related to the study subjects.

4.0 STUDY RESULTS AND DISCUSSION

4.1 DEMOGRAPHICS

4.1.1 RESPONSE RATE

The survey targeted about 1,000 respondents who are recent beneficiaries of digital learning from CAP YEI educational centres or partnering public VTCs. Out of this sample population, 278 individuals returned complete responses. This number represents a response rate of about 27.8%, as shown in Table 1.

Table 1. Response Rate

Category	Frequency	Percent	Cumulative Percent
Respondents	278	27.8	27.8
Non-Respondents	722	72.2	100.0
Target Sample	1000	100.0	

4.1.2 GENDER

Students from both genders have graduated from courses offered through digital learning. Out of the total respondents (N=278), female students account for 60.4% (n=168) while male students take the remaining 39.6% (n=110) (see Figure 1). Largely, this breakdown is a result of willingness to participate in the study rather than the gender distribution of the enrolled students.

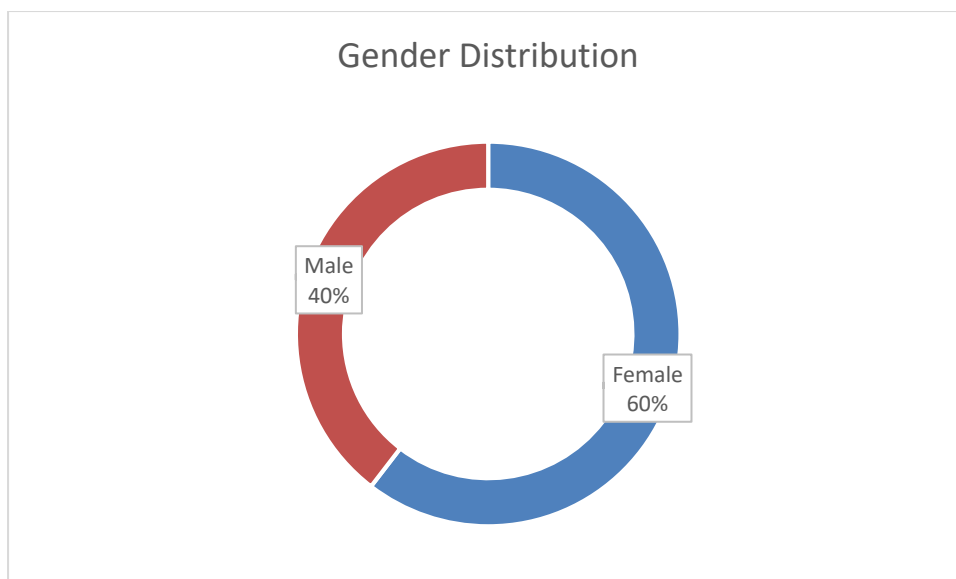


Figure 1. Gender Distribution

4.1.3 AGE

Expectedly, majority of the respondents are youthful. In fact, almost 80% are aged below 26 years, with majority being in the 21 - 25 years bracket (n=172, 61.9%), followed by the 18 - 20 years category at 17.3% (n=48). Those above 25 years accounts for about 20%, with only 4.0% (n=11) and 1.1% (n=3) being in the 30 - 35 years and 'above 35 years' categories, respectively (see Figure 2).

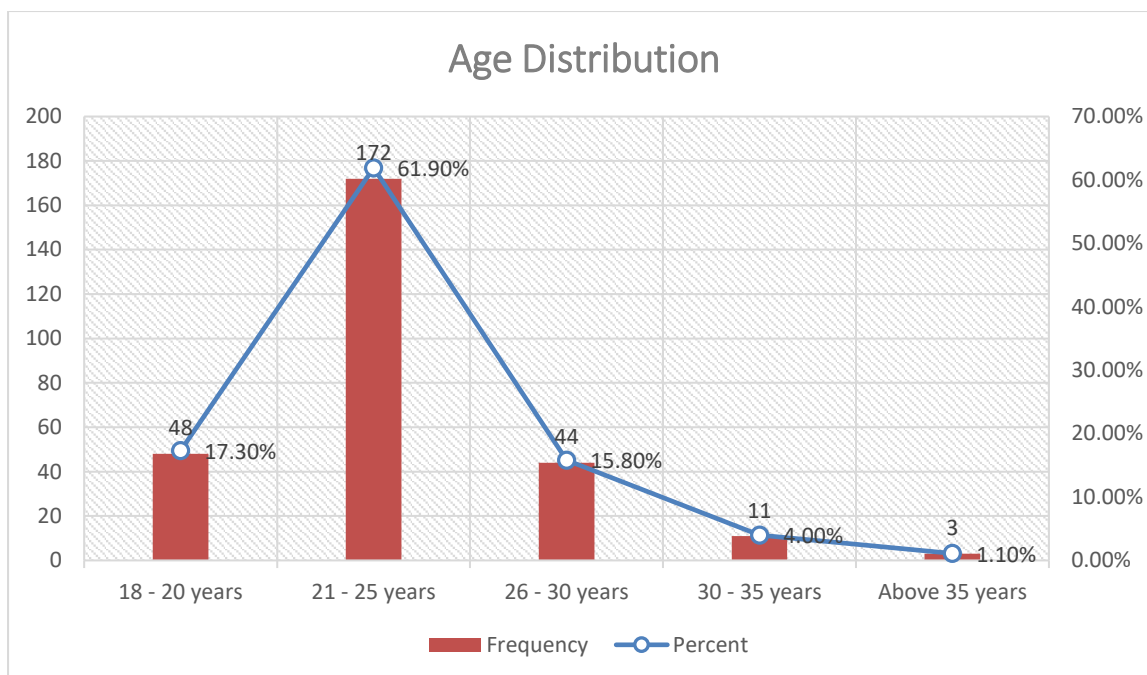


Figure 2. Age Distribution

4.1.4 TRANSITION

The most important performance metric of CAP YEI’s education programme is the percentages of students transitioning into economic-worthy opportunities, whether employment or self-employment. As shown in Figure 3, at least 73% (n=203) secured corporate jobs or immersed themselves in entrepreneurship, with the remaining 27% (n=75) neither being unemployed nor in self-employment. Majority of the respondents are employed (n=122, 43.9%) while 29.1% (n=81) are in business. A detailed look shows that more female respondents are in employment (75/168 [45%]) than male students (47/110[43%]), while more male respondents are in self-employment (37/110 [34%]) than female respondents (44/168 [26%]) (see Table 2). However, when it comes to unemployment, the two genders recorded almost similar figures (female=29% vs male=24%). In terms of age, majority of those in ‘18 - 20 years’ (20/48 [42%]), ‘26 - 30 years’ (16/44 [36%]), and ‘Above 35 years’ (2/3 [67%]) categories are in self-employment while most respondents in ‘21 - 25 years’ (88/172 [51%]) and ‘30 - 35 years’ (8/11 [73%]) age categories are in employment (see Table 2).

Note. Notably, the computation for the cross-tabulation is taking the frequency for each category in every subcategory (e.g. 75 female respondents in self-employment) divided by the total number of respondents in that category (e.g. 168 total female respondents) to get the proportion (e.g. 45%) of that category (female respondents) who chose a certain sub-category (employment) – $75/168 * 100 = 45\%$. The aim is to consider the differences in the number of respondents in each category (e.g. male vs female).

Table 2. Life Transition Cross Tabulation

Cross Tabulation		Employed	Not Employed/Working	Self-Employed	Total
Age Category	18 - 20 years	11	17	20	48
	21 - 25 years	88	42	42	172
	26 - 30 years	14	14	16	44
	30 - 35 years	8	2	1	11
	Above 35 years	1		2	3
Gender	Female	75	49	44	168
	Male	47	26	37	110
	Total	122	75	81	

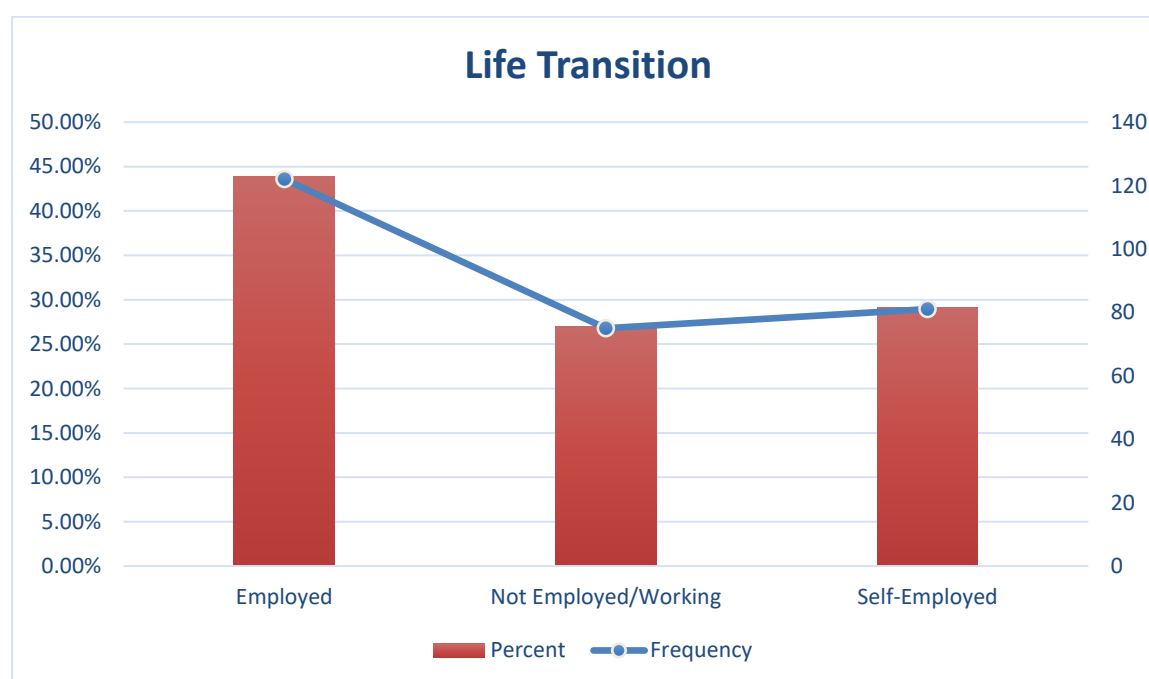


Figure 3. Life Transition

4.2 DIGITAL LEARNING AND TRANSITION

The respondents were asked to state the extent to which digital learning may have boosted their overall engagement at work. Notably, research has shown that employee work engagement increases productivity and job satisfaction, which are critical to the success of the business or organization (Copeland, 2020; Osborne & Hammoud, 2017). In this assessment, only 1.8% (n=5) felt that digital learning have not boosted their overall engagement at work ‘at all’, and none of them were either employed or in self-employment (see Figure 4 and Table 3). At least 77% (n=214) have felt the impact to a moderate (35.6%, n=99) or large extent (41.4%, n=115), with majority of those employed (n=110/122 [90.16%]) and self-employed (n=62/81 [76.5%]) choosing the two options (moderate extent and large extent) (See Table 3).

Table 3. Digital Tools Boosting Employee Work Engagement

	Not at All	Small Extent	Some Extent	Moderate Extent	Large Extent	Total
Employed		1	11	51	59	122
Not Employed/Working	5	2	26	21	21	75
Self-Employed		3	16	27	35	81
Total	5	6	53	99	115	278

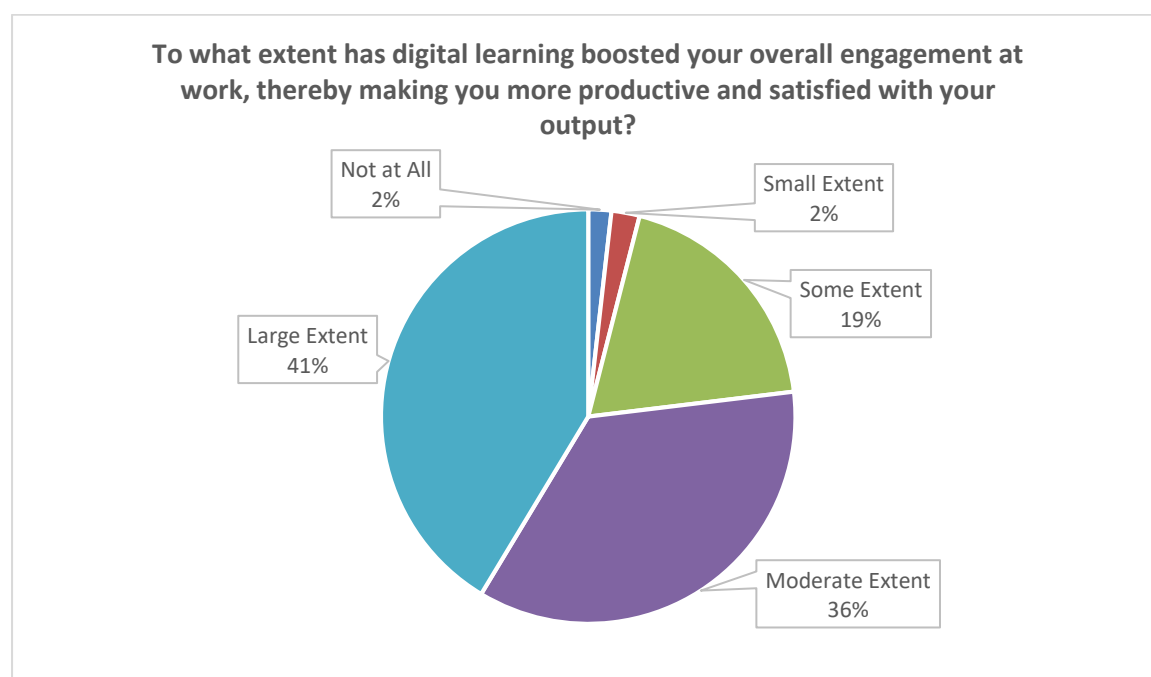


Figure 4. Digital Tools Boosting Employee Work Engagement

When asked about the tangible benefits and value that digital learning has brought to their current occupation – whether employed or in business – about 82.7% (n=230) highlighted various benefits/value, with the top three being extended market reach (n=78, 28.1%), increased sales (n=50, 18.0%), and increased revenue (n=38, 13.7%). Notably, about 17.3% (n=48), majority being unemployed (41/48 [85.42%]) did not provide a response, which is logical since they could only assess such benefits/value after being employed or starting businesses. Those who are in self-employment pointed out increased sales (29/81 [35.8%]) and extended market reach (28/81 [34.6%]) as the main benefits while those in employment said that extended market reach (44/122 [36.1%]) and increased revenue (24/122 [19.67%]) as the topmost notable benefits/value of digital learning (see Table 4).

Table 4. Value and Benefits of Digital Learning on Work and Business

Benefit/Value	Employed	Not Employed/Working	Self-Employed	Total	Percent
Increased Revenue	24	4	10	38	13.7%
Extended Market Reach	44	6	28	78	28.1%
Technical Skills & Expertise	1	1		2	0.8%
Increased Sales	18	3	29	50	18.0%
Legal/Regulatory Compliance	12	9	8	29	10.4%
Enhanced Competency	1			1	0.4%
Reduced Costs	17	11	4	32	11.5%
No Response	5	41	2	48	17.3%
Total	122	75	81	278	100.0%

4.3 ADOPTION OF DIGITAL TOOLS IN BUSINESS

The other specific objective of this assessment was to assess the impact of digital learning on individual tendency to adopt digital tools at work/business. Notably, about 4.7% (n=13), majority not employed (11/13 [84.6%]) said that digital learning has not influenced them to adopt digital tools ‘at all’, which is statistically aligned since they are not in any occupation that calls for their use. However, 100% (n=122) and 97.5% (n=79) of those in employment and self-employment, respectively, have been influenced to adopt digital tools, at

least to a small extent. Additionally, all respondents above the age of 30 years have been significantly influenced by digital learning to adopt digital tools in their work/business activities (see Table 5).

Table 5. The extent digital learning helped in adopting digital tools

Cross Tabulation		Not at All	Small Extent	Some Extent	Moderate Extent	Large Extent	Total
Age Category	18 - 20 years	4	3	19	11	11	48
	21 - 25 years	4	2	38	60	68	172
	26 - 30 years	5	1	1	16	21	44
	30 - 35 years			2	3	6	11
	Above 35 years				1	2	3
Gender	Female	6	4	43	51	64	168
	Male	7	2	17	40	44	110
Transition	Employed			16	42	64	122
	Not Employed	11	4	23	16	21	75
	Self-Employed	2	2	21	33	23	81
	Total	13	6	60	91	108	278

Having established that majority of the respondents, particularly those in employment and entrepreneurship have benefited from virtual learning in choosing relevant digital tools for their work and business activities, the next logical step is to establish the specific tools that they have adopted. With only 2.9% (n=8) not stating at least one item, five (5) digital tools emerged as the most popular from the remaining respondents (n=270, 97.1%): social media/digital marketing (n=147, 52.9%), website (n=35, 12.6%), management software/programs(n=33, 11.9%), data analytics (n=29, 10.4%), and video conferencing (n=26, 9.4%) (See Figure 5).

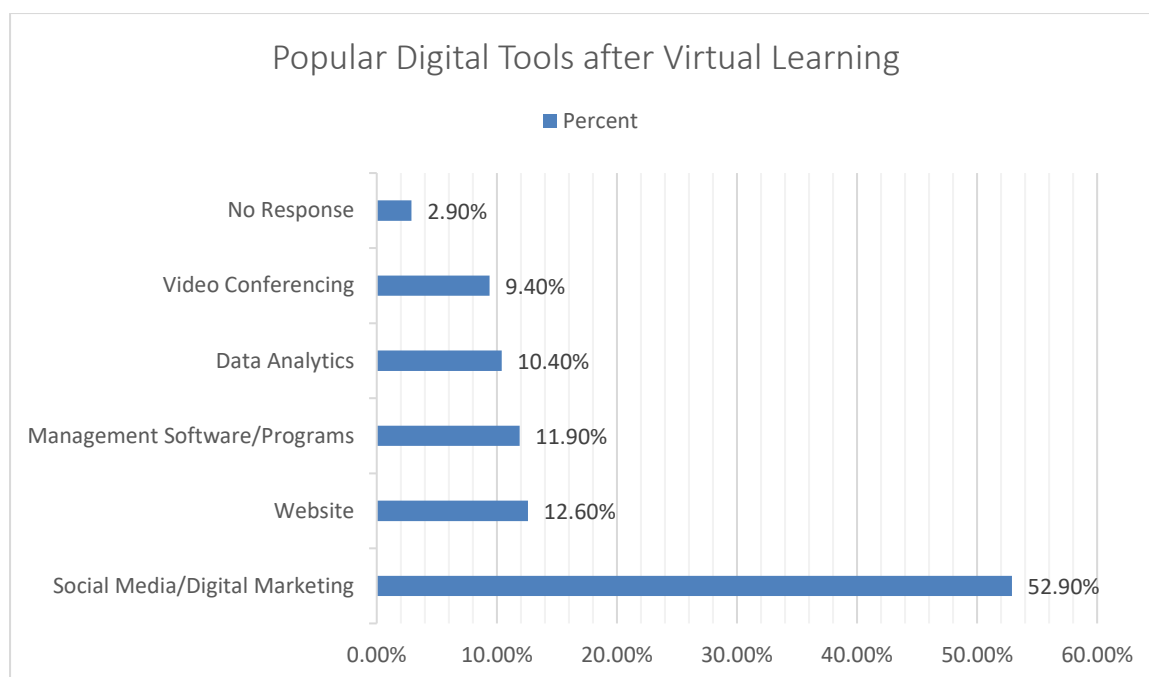


Figure 5. Popular Digital Tools after Virtual Learning

However, different digital tools appeal to different age categories. For instance, as shown in Table 6, though social media/digital marketing is the most adopted digital tool across the five age categories, website is the second most popular amongst 18 to 25 year olds, which is not the case with those aged 26 years and above, where management software/programs comes second. Additionally, it is evident that data analytics and videoconferencing (Zoom, Google Meet, etc.) are quite popular amongst respondents in the 21-25 years age category.

Table 6. Popular Digital Tools after Virtual Learning - Age Cross Tabulation

Digital Tools/Age Category	18-20Yrs	21-25Yrs	26-30Yrs	30-35Yrs	>35Yrs	Total
Data Analytics	5	20	3		1	29
Social Media/Digital Marketing	26	89	26	5	1	147
Management Software/Programs	3	15	9	5	1	33
Video Conferencing	5	19	1	1		26
Website	7	24	4			35
No Response	2	5	1			8
Total	48	172	44	11	3	278

4.4 PERCEPTION TOWARD DIGITAL LEARNING

Overall, majority of the respondents have developed a positive perception toward digital learning. For instance, 87.8% (n=244) said that they would recommend the adoption of digital learning at their workplace/business as an approach in conducting corporate training. Additionally, 70.1% (n=195) opined that based on their experiences with both paradigms and considering their current job occupation or business dealings, they feel that digital learning is a more suitable approach of delivering education than the traditional face-to-face method.

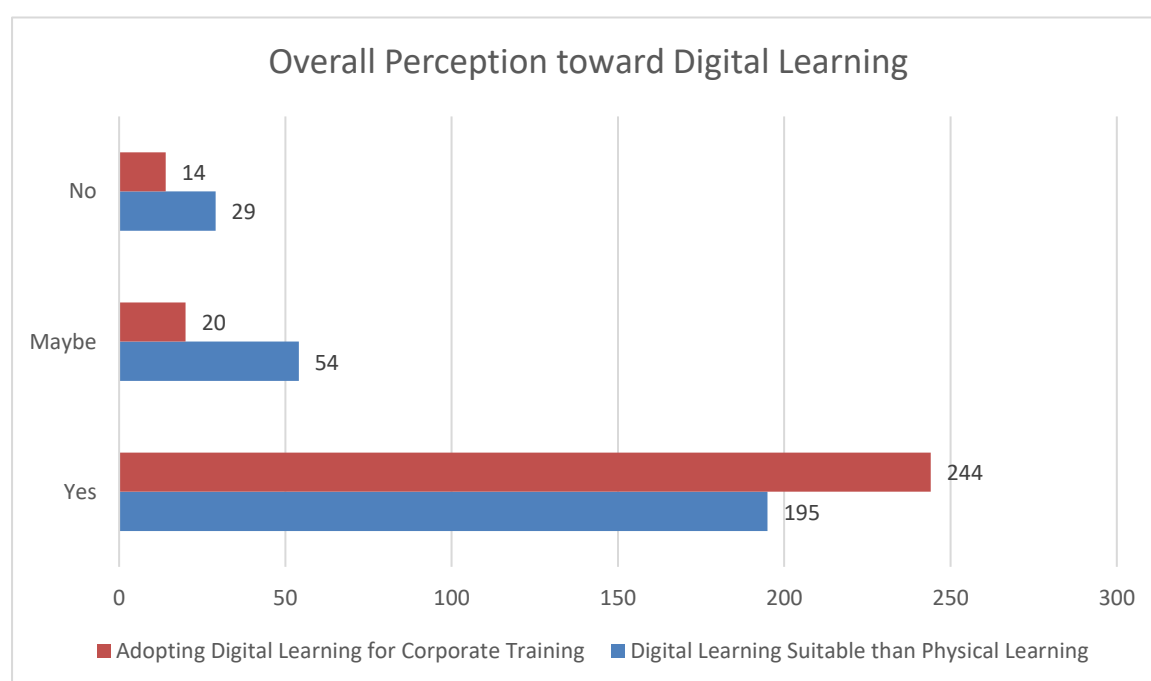


Figure 6. Overall Perception toward Digital Learning

4.5 EFFECTIVENESS OF E-LEARNING

Overall, 72% (n=201) of the respondents felt that the e-learning program was effective to a certain extent, even though 25% (n=70) could neither decide of its effectiveness or ineffectiveness (See Figure 7).

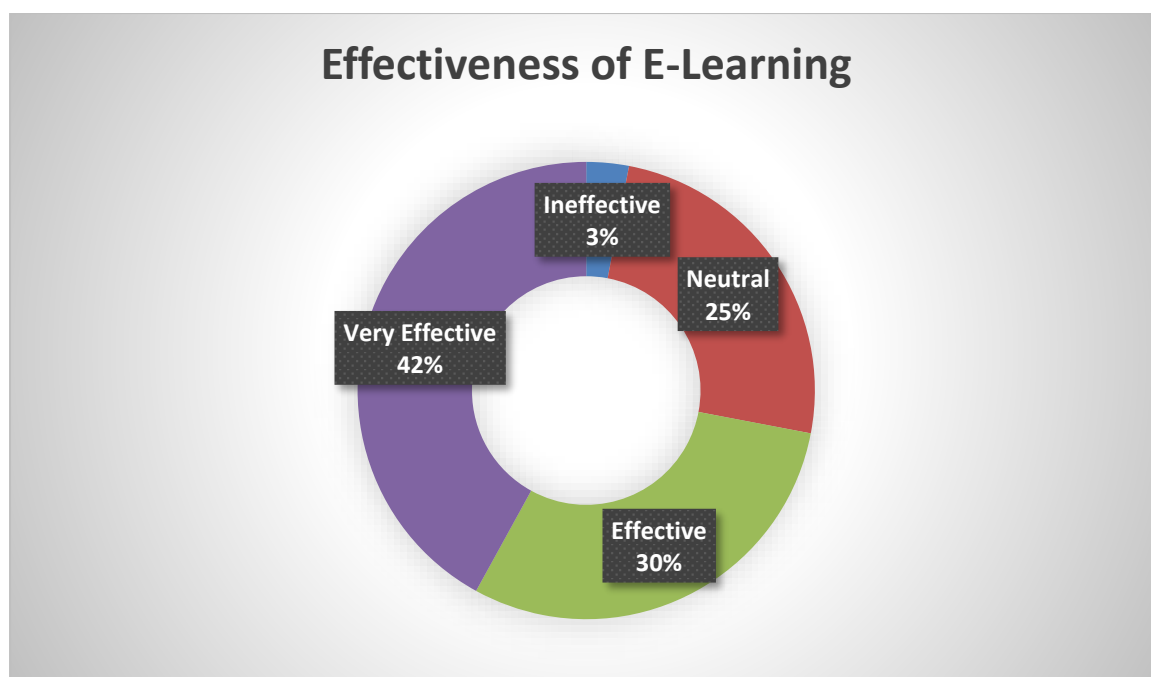


Figure 7. Effectiveness of E-Learning

Based on the above general view, the researcher sought to understand the effectiveness of the key learning resources: recorded lecture videos, recorded practical demonstration videos, assessments, and online classes. As shown in Table 7, the four items were marked as significantly effective with at least 50% choosing either “Effective” or “Highly Effective” options and about 35% choosing “Ineffective” and “Highly Ineffective” options.

Table 7. Effectiveness of E-Learning Resources

Materials	Effective	Highly Effective	Neutral	Ineffective	Highly Ineffective	Total
Recorded Lecture Videos	48	88	37	33	73	278
Recorded Practicals' Demonstration Videos	55	91	33	33	66	278
Assessments	55	106	18	22	77	278
Online Classes	59	95	29	18	77	278

The other measured metric was the effectiveness of self-learning – that comes with digital learning methods such as e-learning – in equipping students with the relevant skills.

Figure 8 shows that the respondents found it suitable to take charge of their learning process vis-à-vis being in a physical class interacting face-to-face with facilitators. However, 17% (n=48) hold a contrary opinion, saying that self-learning is ineffective to a certain extent.

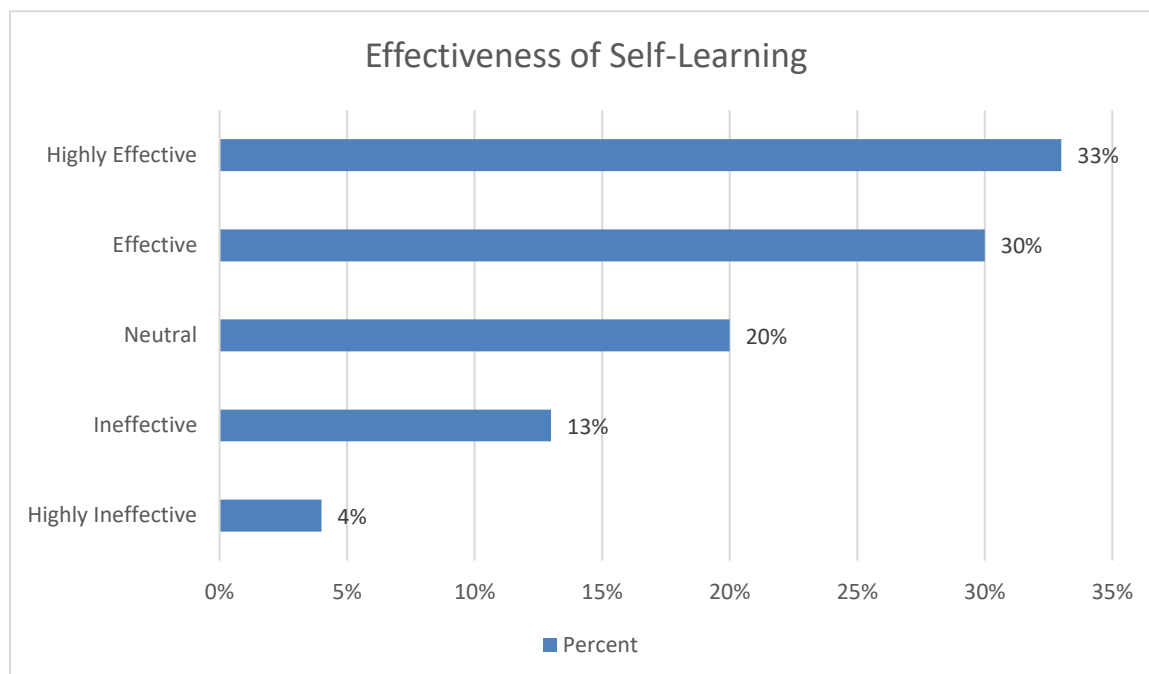


Figure 8. Effectiveness of Self-Learning

4.6 WEBSITE USABILITY

In terms of user experience, key usability features (design, colours, navigation, and images/icons) were subjected to a 5-level Likert scale to determine the extent to which the respondents like or dislike them. Table 8 shows that at least 66% (n=183) of the respondents “Like” or “Like Very Much” these usability features. On the other hand, no more than 18% (n=51) of the study participants said that they “Dislike” or “Dislike Very Much” the said features (See Table 8). Thus, it would be concluded that the overall usability aspect received a relatively positive rating.

Table 8. Usability Features

Usability Features	Dislike Very Much	Dislike	Neutral	Like	Like Very Much	Total
Overall Design	29	22	44	77	106	278
Website Colours	29	18	33	102	95	278

Navigating/Scrolling Pages	29	18	48	73	110	278
Website Images and Icons	29	22	33	88	106	278

However, since the digital learning tools have barely been used, progressive advancement of the platform is important. The study participants were asked to indicate their suggestions for enhancing user experience and usability. Some of the most common suggestions include “*increasing learning resources*”, “*improve delivery of practical lessons*”, “*make the website lightweight to reduce internet costs*”, “*simplify language*”, “*enhance login/authorization approach*”, “*offer offline training about the platform*”, “*introduce icons to replace some text*”, and “*reduce response time in grading*”. Evidently some of these suggestions are system-specific while others are policy issues.

4.7 CHALLENGES OF DIGITAL LEARNING

What is more, it was of interest to understand the challenges the students encountered while undergoing digital training, if any. However, the first step was to find out whether they found digital learning to be either easy or difficult. Figure 9 below indicates that only 11% (n=29) found this teaching paradigm to be difficult, 53% (n=146) said that it was easy, while 37% (n=102) were neutral about the subject.

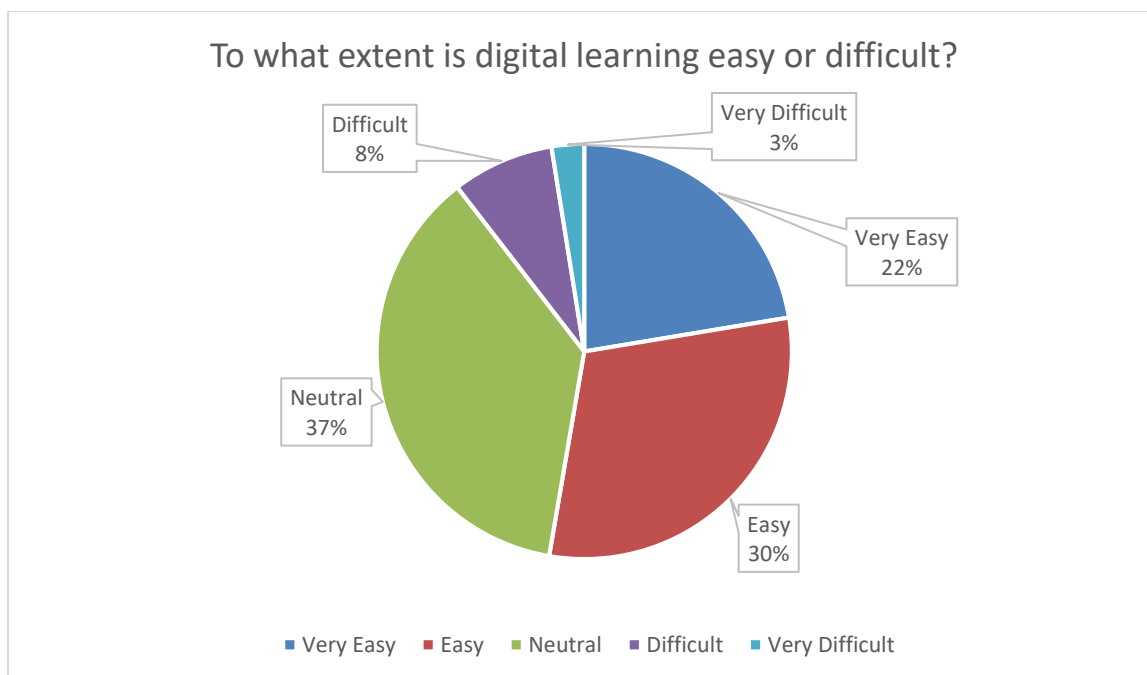


Figure 9. Is digital learning easy or difficult?

The next step was to unravel the specific challenges that made it difficult for the students encountered/experienced when undergoing digital learning/training. Being an open-ended question, the content analysis (theme derivation) of the responses shows that about 56% of the valid* responses said that “*lack of Internet*” (internet bundles, Wi-Fi, etc.) that could support uninterrupted learning was their major challenge (See Figure 10). Secondly, the issue of “*network connectivity*” followed closely with 19% pinpointing it as a key challenge, mainly in relation to being in areas where telecommunication signal is poor, especially when attending online classes or viewing recorded videos, lecturers, and practical demonstrations. Another notable challenge is “*lack of gadgets* (smartphones, PCs, laptops, etc.)” that could access the e-learning platform, thereby hindering students from studying when they should be or they want to. Other challenges include “*system interruptions*” due to occasional downtimes or slowness, and “*lack of sufficient learning support*” that come with physical learning, such as asking questions and discussing with fellow students (See Figure 10).

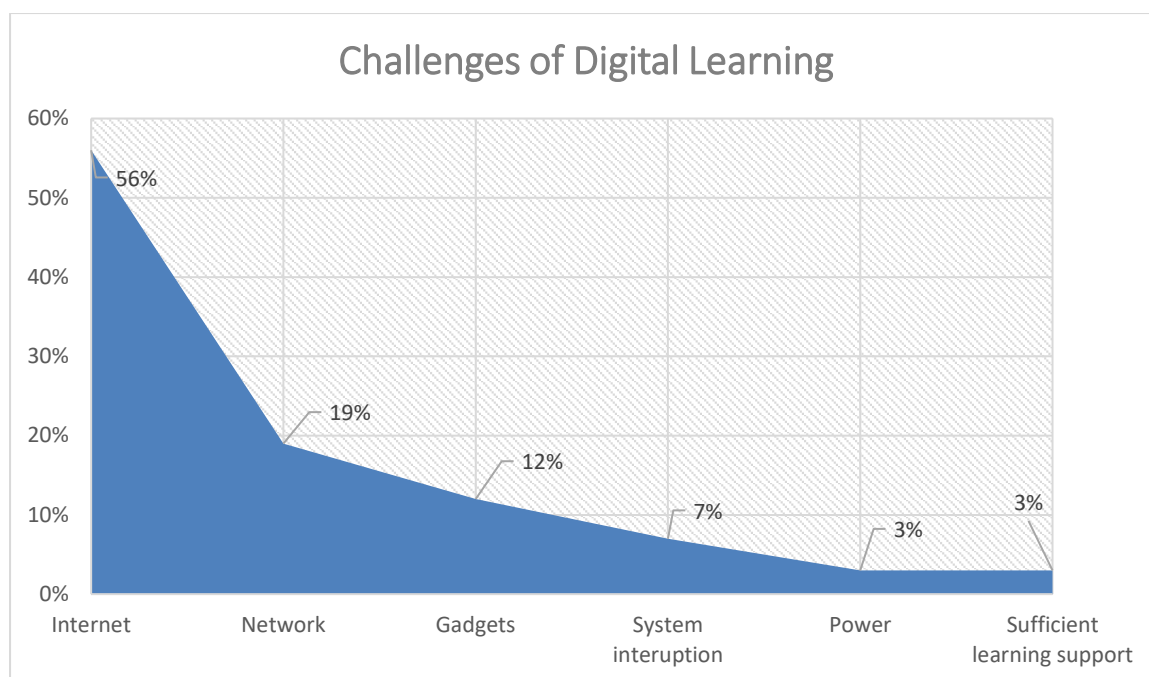


Figure 10. Challenges of Digital Learning

* Responses not answering the question on challenges of digital learning were discarded, and only valid responses were used in the above analysis.

4.8 EMOTIONS OF USING E-LEARNING

Additionally, the researcher sought to capture the general emotions of the respondents in regard to the introduction of digital learning tools in the TVET sector. When asked to express their general feelings toward this new approach, the following sentences are some of the notable responses – both positive and negative.

1. *“Digital learning was good and also it helped one to know how to use computer and the tactics used in a computer”*
2. *“Consider using Kiswahili language as well”*
3. *“It is good because you get to learn from any corner of the world anytime”*
4. *“Is a good thing in terms of theory classes/content but not suitable for practical lessons since they need face to face teaching”*
5. *“One does not waste time since you access materials anywhere, and others save money if you were to travel to school to attend classes”*
6. *“I feel very much happy since digital learning was an easy way for me to acquire knowledge and learn”*
7. *“It should also be implemented elsewhere to give other people the opportunity to be taught online”*

8. *“It made me learn more and it was educative”*
9. *“It is worse than physical learning because TVET students need physical lessons”*
10. *“It is a step towards the right direction in terms of connecting the world”*
11. *“It is good especially for those who do work part-time it will of benefit to them”*
12. *“It is good since one can manage time of studies and work”*
13. *“It is easier and cheaper compared to going to school”*
14. *“It should be applied as a part time learning approach”*
15. *“Not practical for technical skills training”*
16. *“It helps to open one’s own business”*
17. *“More comfortable and stimulate interest of using the digital methods”*
18. *“Enable student to know digital things”*
19. *“Not effective compared to class work”*
20. *“It is much easier than face to face learning”*

4.9 VOCATIONAL TRAINING CENTRES’ (VTCs’) OPINIONS

In another qualitative inquiry, the researcher was keen to assess whether VTCs’ are receptive of the e-learning ideology. Asked about their opinions about the shift from physical learning to digital learning, majority were positive about the developments. For instance, a common opinion was that *“LMS has allowed us to study from wherever we are”*, which was mainly a popular view because digital learning was introduced to them at a time when it was difficult to attend physical classes due to COVID-19. Additionally, a good majority opined that *“digital learning should be the most prominent method of teaching even after the COVID-19 pandemic is over”*, which means that they appreciate its benefits over face-to-face learning, even though they appreciate that the latter will remain part of a blended learning approach, mainly due to practical lessons. What is more, most of them indicated that *“digital learning not only equipped them with curriculum-related skills, but also digital skills”*, which, according to them, have helped them to be more technologically aware and advanced at personal levels. Moreover, LMS was seen by VTC students as *“an enriched version of*

learning since it has more educational information at disposal” – considering that in conventional learning, educational materials are dispersed and sometimes unavailable when needed while LMS contain much more digital learning materials that are available all the time in a centralized location. In other words, the LMS is seemingly not beneficial to only CAP YEI centres, but also VTCs that have adopted virtual learning by the help of CAP YEI – which highlights the sustainability of the initiative.

4.10 STUDENT’S PERSPECTIVE

To narrow down to the emotions related to the introduction of digital learning in the TVET sector, respondents were asked to outline the benefits they derived from using the LMS. As noted earlier, most participants alluded to the advancement of their technical prowess in dealing with digital tools after their course, which means that they can now use technology tools and features in other contexts other than learning, including business. Furthermore, the aspect of flexibility was prominent, especially among VTC students, who said that the introduction of LMS has enhanced the quality of their time since they can not only attend classes from wherever they are but also do more than just studying, including being a in part-time job. Another notable perspective was that digital learning is easier and cheaper than physical learning, and that they felt more comfortable with the latter due to the personal space, as well as the excitements that comes with using digital methods.

4.11 TRAINER’S/INSTRUCTOR’S PERSPECTIVE

Though the study focused more on students, it was also important to capture the opinions of trainers/instructors in relation to the use of LMS. The main inquiry was to compare the best choice between the conventional learning method and the use of LMS in digital learning. When asked to give reasons why they would choose one over the other, majority chose LMS over physical learning. Some of the reasons they gave include ability to have a larger class (reach more students) than an ordinary class would hold and ease of

administering tests/exams/assignments and grading. Additionally, the centralization and automation of learning materials was another reason, with some saying that they appreciate the allocated space to store private files, all of which has significantly reduced paperwork and made them more efficient in their work. For trainers in VTCs teaching technology related courses such as ICT, they said that the LMS has made students to have a clear understanding of the capabilities and applications of technology, which has made the course easier to teach. Their main concern remain the difficulties of delivering hands-on training for practical lessons like engineering, even though the recorded/streamed video demonstrations have been of great help to them on this front. While they are optimistic of gradual upgrades to address the shortcomings, they are positive that the use of digital learning in today's TVET class is the right move going forward.

4.12 INTERACTIONS – STUDENTS VERSUS INSTRUCTORS

Finally, the researcher was keen to understand the participants' view of the changed interactions. Traditionally, a face-to-face training meant that students would physically interact amongst themselves and with their instructors. However, with virtual learning, the interactions can only happen on the digital space. In their part, instructors felt that the LMS had allowed them to introduce a personalized interaction approach with students, where they could leave comments on discussion forums, assignments, and gradebooks that are specific to each student since information about them and their performance is available and centralized, which was difficult with the conventional paradigm. Additionally, they argued that it was easier to follow-up on previous interactions with students since the system meant that previous correspondence were always available for reference. For instance, one instructor said that “it is easier to follow up on performance targets agreed upon with students since what we agreed with them at the time of setting them is available and I can use the calendar feature to know when I should check the progress”. In their part, students felt that digital

learning have taken away their social interactions. However, those who acknowledge the many features available were fascinated with how they could keep the interactions going on tools such as discussion forums. Most importantly, some expressed their confidence in approaching instructors and asking questions since they could do so at any time regardless of whether the class was in progress, and without fear of how “other students will think about the ‘quality’ (sic) of [their] questions”. In other words, the study participants felt that the LMS offered better communication alternatives than physical learning.

5.0 SUMMARY AND IMPLICATIONS

This study sought to meet three specific objectives: (a) to study where students have transitioned into after undergoing virtual learning, (b) to assess the impact of digital learning on individual tendency to adopt digital tools at work/business, and (c) to assess the overall perception toward digital learning while in entrepreneurship and employment. In regards to the first objective, the study has found that only 27% of the respondents are unemployed, with 43.9% and 29.1% being in employment and self-employment, respectively, translating to a transition rate of 73%. On the tendency to adopt digital tools at work/business, about 95.3% of the respondents say that they have been adopted tools such as social media/digital marketing, websites, management software/programs, data analytics, and video conferencing, which is helping them to conduct business and carry out work-related tasks, all of which have been influenced by virtual learning they underwent. Additionally, issues of digital learning tools and self-learning effectiveness, as well as website usability received positive reviews/ratings from the respondents. Though they found the platform to be largely easy to use, they indicated that issues of internet and network connectivity and access to technological gadgets were the main challenges. Regarding perception toward digital learning, with benefits such as extended market reach, increased sales, increased revenue, reduced costs, and legal/regulatory compliance, majority of the respondents have developed a positive perception toward digital learning. The LMS is seemingly not beneficial to only CAP YEI centres, but also VTCs that have adopted virtual learning by the help of CAP YEI – which highlights the sustainability of the initiative. Students highlighted flexibility, advancement of digital skills, and better time management/use as some of the benefits of LMS, while instructors chose ability to reach more students at once, ease of administering tests/exams/assignments and grading, and centralization and automation of learning materials as their LMS highlights. Consequently, the recommendation is to continue rolling out the various digital learning tools and strategies and

empowering students to capitalize on the benefits of technology in their work occupations as well as entrepreneurial endeavours.

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