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Integration of e-Consumer Elements in Adult and Community Education

M/s Anastasia Nyawira Gakuru

Lecturer, University of Nairobi, P.O. Box 30197, Nairobi, Kenya

Tel: 254-072-184-2247

Dr Joseph Mwinzi (corresponding author)

Lecturer, University of Nairobi, P.O. Box 30197, Nairobi, Keny

Tel: 254-072-266-8516

Dr Joseph Nungu (corresponding author)

Lecturer, University of Nairobi, P.O. Box 30197, Nairobi, Kenya

Tel: 1-(780)-264-7903 or 254-724-708-8935

Prof Samson Gunga (corresponding author)

Lecturer, University of Nairobi, P.O. Box 30197, Nairobi, Kenya

Tel: 254-072-261-0869

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Abstract

Kenya, like other countries in Africa and across the world is in the grip of technological advances leading its agencies and parastatals to digitize their operations. A pertinent question, therefore, is whether adult and community education, in its current packaging in Kenya, is empowering the participants to engage in using e-consumer services actively, meaningfully, and in beneficial ways in their daily transactions. This study, therefore, sought to investigate the level of integration of e-Consumer elements in Adult and Community Education. The study adopted a mixed-method research study targeting adult learners in Nairobi County,

adult education officers, and adult education instructors. The study collected data using interviews and questionnaires. The study established that integration of ICT services in adult centers is still facing numerous challenges which are evident by the poor use of e-consumer services by the adult learners.

Keywords: Adult, e-consumer, community education, Kenya

1. Introduction

In the last few decades, the meaning of literacy has expanded beyond just reading and writing skills. It is now described as the skills required to function in different social contexts. However, functional approaches to the promotion of literacy and education leave out a critical understanding of how adult literacy operates in the marketplace (McCartney, 2021). It fails to see how literacy is embedded in social contexts. This fact is more relevant more so in today's technologically advanced digital world where the consumer world is fast transforming to become an e-consumer platform where different sets of digital literacy skills are required to successfully navigate and access the marketplace. Advances in technology have upped the ante for adult literacy. It is redefining the skills required to function successfully at work and in everyday life (Norman & Skinnner, 2016). Information and Technology (ICT) is also offering new tools with huge potential for improving adult education and literacy provided that educators can source and utilize them effectively. There are a variety of computer and video technologies, consumer electronics, and telecommunication with features suited for adult education. Within each type of these technologies are hardware, software, and learning materials available to enhance the adult learners' literacy on e-consumer services.

In the U.S, hardware such as multimedia systems integrating sound, touch, pictures, and words as well as telephones and portable devices such as smartphones and laptops are used in adult literacy classes. Software devices include drill programs to permit learners to practice various skills repeatedly. The software also includes simulations that allow adults to interact with realistic reproductions of real-life social and work situations. In using these approaches, adult and community learning motivates adults with limited technical knowledge to hone their skills and give them greater control and privacy over their interaction with digital platforms (McCartney, 2021).

Vitale (2021) asserts that engaging learners in digital platforms such as online learning programs can encourage students to interact with the internet and the services offered therein. However, successful engagement of adult learners over online platforms requires engagement provided by the instructors that promoted confidence and self-efficacy among the students. Such an approach is adopted in Germany and Italy where the delivery of adult classes has been shifting to online platforms to promote continuity of education and upgrading of individual digital literacy skills (OECD, 2020). Norman and Skinnner (2016) argue that electronic tools provide little value for their intended users if the users lack the skills needed to effectively engage them. In Canada, nearly half of the adult population have literacy levels that are below what is required to fully engage in an information-rich society. Consequently, this brings about challenges among the consumers on how to engage with e-platforms that require skills sets of their own. The challenge is also experienced in most African countries

where despite the potential of ICT to facilitate development both socially and economically, it is creating a divide between the digitally literate and digitally illiterate members of the society. Many countries in Africa are struggling to meet the needs of their population. For instance, in Namibia, the majority of adults are severely technologically disadvantaged and the majority lack the necessary skills needed to navigate the increasingly digital world where the provision of services is shifting online as basic government services are being provided digitally (Shihomeka, 2021).

Similarly, in Kenya, several parastatal agencies are offering to shift their services to digital platforms. For instance, National Transport Service Authority (NTSA), Kenya Revenue Authority, Immigration Services, and even Huduma Services require individuals to use digital services to access or conduct some of its operations. However, this evolution is negatively impacting adults who lack the skills sets required to navigate these platforms. In the country, adult and community learning is still in its inception stages and its main focus has been on promoting basic literacy skills. Consequently, the adults rely too much on aided assistance in accessing digitalized E-consumer services for example annual tax returns and driving licenses renewal. Overdependence on aided assistance in the utilization of E-consumer services jeopardizes the cost implications and intrusion to the privacy of sensitive individuals' information due to overreliance on strangers to execute their e-consumer service needs. A pertinent question would be whether adult and community education, in its current packaging in Kenya, is empowering the participants to engage in using e-consumer services actively, meaningfully, and in beneficial ways in their daily transactions. This study, therefore, sought to investigate the level of integration of e-Consumer elements in Adult and Community Education

2. Literature Review

The boundaries between literacy and technology are dissipating. Results stated by Yobaski and Nolan (2011), outline that ICT integration in education categorizes as E-Learning and E-Consumer. Consequently, integrating ICT in E-Consumer mainstreams ensures service delivery and all-consumer operations. In addition, it offers administrators effective, timely, and accurate information ensuring improved and knowledgeable decision-making. E-Learning ensures mainstreaming ICTs in education through integrated teaching and learning process. In this new system, the instructional process is carried out with the aid of computers, mobile phones, or tablets, among other technological gadgets (Walji, Deacon, Small & Czerniewicz, 2016). Further, Yobaski and Nolan (2011) argue that the interrelationship between literacy, technology, and development forms an integral approach to healthier living. Literacy provides technical skills and a wider text establishment that includes the ability to solve problems using information, communication, analyzes, access, evaluation, and generate new knowledge. From this standpoint, ICT is not only identified as just as a medium of literacy skills delivery agent but, also as an essential fragment constituting an information-literate-society and acquaintance economy. Therefore, individual involvement in this knowledgeable society requires to be equipped with essential skills needed for technological utilization to access, distribute, and generate new information and information goods for the individualized benefit and the social improvement as a whole (Janssen, 2012).

There is a constant and rapid change in all types of working environments, leading to the need to constantly train and keep on retraining people in new products, technologies, and services that are found in their environment. Adopting and utilizing information technology in schools is vital for promoting active thinking, collaborative and lifelong learning. It also promotes student motivation, grants better access to information and working resources, helps the students to communicate and think creatively while also helping to deepen understanding (Yin, 2014). Importance of e-Learning and knowledge management at the workplace is needed so that the workers can use the learned skills in their workplace. Leading to the adult learners being more relevant at their places of work. ICT is deeply reliant on literacy and each expertise makes exceptional demands on the literacy skills of the users. This means that the adult learners need to be ICT literate to use the ICT technologies provided by the Government effectively (Watson, Loizzo, Watson, Mueller, Lim, & Ertmer, 2016).

In developed countries like Germany, Sweden, and the United Kingdom directed their investment towards their people. This led to an annual evolution rate in human information to about 10 percent every year (UNESCO, 2014). Leading to tremendous development in this country in areas of research, innovation, and education. In Australia, the country introduced a new notion of connecting education and economy. They called it 'creative capital.' This led to the growth in both computer use and internet access in workplaces as well as homes. Leading to an increase in computer and internet access from 16 percent to 46 percent (Australian Bureau of Statistics, 2003). This was achieved because the country saw that adult literacy instruction prepares people, both directly and indirectly, for the workforce. There was an overall of 83 percent of Australian businesses using computer and internet services (Australian Bureau of Statistics, 2003).

The African countries are still at the infancy stage in terms of ICT use. This is because according to (Stewart, 2013) there is around 1 internet user for every 250–400 people. This shows that a lot still needs to be done so that the African countries can be able to integrate ICT with e-consumer services effectively. In Kenya, it is notable in many institutions especially in the universities where ICT has been adopted and integrated into learning inform of e-learning, monitoring of students' admission and examination records among others (Itari, 2017). The Kenya Revenue Authority (KRA) is another example of a public institution where success stories on ICT integration are evident as Personal Identification Number (PIN) can be applied online and also a taxpayer can file tax returns online owing to the integration of ICT with the internet. However, a lot still needs to be done in Kenya in the integration of e-learning and e-consumer services, both directly and indirectly, for the workforce market. This is because adult literacy education should prepare people, both directly and indirectly for the job market and also enable them to fit in the fast-growing world of technology today.

Computer-assisted tutorials and other traditional technology-supported resources help make learning more accessible to individuals. By using technologies such as radios and televisions, adults have the opportunity to improve their aptitude to understand prose text which in turn increases their literacy, continued utilization of literacy skills, their employability and promotes lifelong learning.

Individual participation in this society requires the skills required to the usage of technology as an avenue to access, distribute and generate new info and knowledge goods for the benefit of the individual and society. This study sought to identify areas that integration has been done and areas that need to be integrated so that adult learners can be well equipped with the skills needed to fit in the fast-changing society.

3. Methodology

This study adopted a mixed-method design. The design adopted used a combination of quantitative and qualitative research techniques (Teddie & Tashakkori, 2012). A mixed-methods design was chosen because it is one where both quantitative and qualitative methods could be used to answer the research questions in a single study.

The target population of the study comprised all adult education officers in the Nairobi sub-county, adult learners, and tutors in all adult learning institutions in Nairobi County. According to a report in the Office of Adult Education in Nairobi County 2018, there was one adult education officer in each sub-county, 13,531 adult learners, 223 tutors in 220 educational centers. The other target population included management officers in e-consumer service providers that is Huduma center as well as cyber café providers designated by Huduma Center to offer e-consumer services were sought. Nairobi County was chosen because it is the headquarters of the country and therefore the hub of e-consumer services.

Table 1. Distribution of target population

NO.	SUB COUNTY	No. of centers	No. of tutors	Total No. of Adult learners
1	Makadara	8	15	348
2	Dagorreti	18	19	2194
3	Westlands	18	18	433
4	Kasarani	35	32	3011
5	Mathare	19	10	368
6	Njiru	20	18	967
7	Kamukunji	28	27	2253
8	Langata	17	15	741
9	Kibra	15	26	675
10	Embakasi	23	24	611
11	Starehe	19	29	1960
	TOTAL	**220**	**223**	**13561**

Source: Nairobi County Adult and Community Education Office 2018.

To determine the study sample size of adult learners the researcher used Slovin's formula (Matula, Kyalo, Mulwa, & Gichuhi, 2018):

$$n = \frac{N}{1 + Ne^2}$$

Where: n= sample size

N= size of population

e=margin of error (0.05)

Therefore, by substitution, this as follows

$n = \left[\frac{13531}{1+(13531*0.05^2)}\right]$ = 389 adult education Learners.

To get the sample size for the tutors, the study was guided by Neuman (2013) who recommended 50% of the target population. The tutors were drawn from 50% randomly selected adult education centers in Nairobi Sub-county. This is as distributed in Table 2

Table 2. Sampling matrix for adult learners, tutors, and centers

No.	Sub County	Total No. of centers	Sample for centers using formulae 50/100*N	Total No. of tutors	Sample for tutors using formulae 50/100*N	Adult learners total	Adult learners(sample using Slovings formulae
1	Makadara	8	4	15	8	348	10
2	Dagorreti	18	9	19	10	2194	63
3	Westlands	18	9	18	9	433	12
4	Kasarani	35	17.5	32	16	3011	86
5	Mathare	19	9.5	10	5	368	11
6	Njiru	20	10	18	9	967	28
7	Kamukunji	28	14	27	14	2253	65
8	Langata	17	8.5	15	8	741	21
9	Kibra	15	7.5	26	13	675	19
10	Embakasi	23	11.5	24	12	611	18
11	Starehe	19	9.5	29	15	1960	56
	TOTAL	**220**	**110**	**223**	**112**	**13561**	389

Source: Researcher.

To get the adult education learners, tutors, and adult education centers who participated in the study, simple random sampling was used. In this case, the list of all students from each center was be made and a certain number will be picked using the replacement method. This enabled all the learners, tutors, and centers to have an equal probability of being picked. However, to get the respondents from Huduma centers, and Cyber cafée offering e-consumer services, purposive sampling was used. This will involve picking the senior manager from each of the institutions/organizations/enterprises. This is because the senior managers are more conversant with the running of the organization.

The study used questionnaires and interview schedules to collect data from the selected respondents as per the objectives of the study. A questionnaire was used to gather data from tutors and adult education students. Questionnaires for adult learners and instructors/facilitators included both open-ended and close-ended questions. The interview schedule was used to gather information from officers in the County education offices, managers from Huduma Centres, and selected cyber café persons.

A pilot study was being carried out before the implementation of the actual study. Piloting was important since the researcher was able to confirm whether the instruments of the research were clear to the respondents and whether they would yield relevant and adequate data for the study. According to Orodho (2005), piloting is also important in that it helps to assess and identify any problems respondents would encounter in completing the questionnaires that may not have been foreseen when constructing the questionnaires. Piloting was conducted in the sub-counties that were not be involved in the main study.

Veal and Darcy (2012) argue that validity is the extent to which information collected by the researcher truly reflects the phenomenon being studied. To enhance content validity, appropriate and adequate items relevant to research objectives will be contained in the questionnaires. Validation was done by use of expert judgment where my supervisors who are experts in the area will check whether the research instruments are valid and in line with the study objectives.

Reliability of the instruments refers to the consistency of scores or answers from one administration of an instrument to another, and one set of items to another (Patton, 2015). The questionnaire was pre-tested using the split-half method with all the questions except those that seek respondents' recommendations. It involved scoring two halves (odd versus even items) of a test separately for each respondent and then calculating a correlation coefficient for the two sets of scores using the Pearson product-moment correlation formula.

The researcher engaged research assistants in data collection. The research assistants were trained to familiarize themselves with the questionnaires. They administer the questionnaires to the respondents and then pick them later after they have been filled up. The researcher also interviewed the cyber café manager by going to the cybers and filling up the interview schedule, Huduma center managers and county education officers all were also filled up an interview schedule as guided by the interviewer.

According to Yin (2014), the process of analyzing data involves ordering raw data collected

to draw meaning. For this study, questionnaires were collected and the researcher began by first checking for completeness of the data, accuracy, and uniformity. Once done, analysis was done descriptively using frequency and percentage. To present the findings, tables were used. data analysis is the process of bringing order and meaning to raw data collected. Qualitative data from open-ended questionnaire items and responses to interview questions were organized and analyzed thematically. Such data was presented qualitatively, using in-depth descriptions and direct quotations.

This study adhered to all research ethical considerations, namely, official research protocols, participant informed consent, confidentiality, anonymity, and protection of data. Formal permission to conduct the study was sought from the National Commission for Science, Technology, and Innovation. Thereafter, the researcher wrote an introductory letter to research participants detailing the purpose of the research. Participants were then briefed on data collection, their rights as participants, including the right to participate or to withdraw from the research. The participants were assured of the confidentiality of their responses and the anonymity of their identifications. This was achieved by ensuring research participants' names, personal numbers, or any other forms of identification are not indicated on the questionnaire and the final report. The interviewees were identified as interviewees 1, 2, or 3 when quoting them verbatim in the report to ensure confidentiality. All returned questionnaires as well as transcripts of interview responses will be stored securely in the researcher's office.

4. Analysis

Under this section, presentation of the data analysis and results are presented. In table 3, the demographic characteristics of the respondents are provided.

Table 3. Demographic Characteristics-Adult Instructors

	N=108	**F**	**%**
Gender	male	69	63.9
	female	39	36.1
Employment	volunteer	12	11.1
	part-time	24	22.2
	full-time	60	55.6
	self-help	12	11.1
Duration of Employment	1-5 yrs	57	52.8
	6-10yrs	30	27.8
	11-15 yrs	12	11.1
	16-20yrs	6	5.6

	>21 yrs	3	2.8
Age	<30 years	45	41.7
	31-40 years	51	47.2
	41-50 years	9	8.3
	>50 years	3	2.8

It shows that the majority of the adult and community education instructors 69(63.9%) were male while the females were the minority at 39(36.1%). Most of the instructors 60(55.6%) were employed full-time while 24(22.2%) were part-time employees, 12(11.1%) were volunteers and self-help respectively. In regards to the period of employment, most of the instructors 57(52.3%) had been employed for between 1 to 5 years, 30(27.8%) had been employed for between six and ten years and 12(11.1%) had been employed for between 11 and 15 years while only 6(5.6%) and 3(2.8%) had been in employment for between 16-20 years and more than 21 years respectively. In regards to age, most of the respondents were below forty years 96(88.9%).

Table 4. Demographic Characteristics-Adult Learners

	N=375	**F**	**%**
Gender	Female	240	64.0
	Male	135	36.0
Age	Below 18 years	24	6.4
	18 - 29 years	213	56.8
	30 - 39 years	90	24.0
	40 - 49 years	24	6.4
	50 - 59 years	24	6.4
Duration in the institution	Below 1 year	54	14.4
	1 - 2 years	207	55.2
	3 years and above	114	30.4
The time they attend school	9 am to 3.30 pm	150	40.0
	8 am to 11 am	123	32.8
	2 pm to 5 pm	72	19.2
	11 am to 2 pm	30	8.0
Adult learners learning level	Beginner	45	12.0
	Intermediate	120	32.0

	Advance	210	56.0
Employment Status	Business	108	28.8
	Employed	63	16.8
	Not working	204	54.4
Type of Adult Learners	Self- sponsored	204	54.4
	Sponsored	150	40.0
	Partial Sponsored	21	5.6
Sponsorship body	Government	78	20.8
	NGO	63	16.8
	Not applicable	165	44.0
	Relatives	69	18.4

In Table 4, the demographic characteristics of the adult learners are presented and show that the majority of adult learners 210(56%) were in the advanced stage while 120(32%) were in the intermediate stage with only 45(12%) being beginners.

Most of the learners 204(54.4%) were not working while 108(28.8%) were in business and only 63(16.8%) being employed. Most of the students 204(40%) were self-sponsored while 150(40%) were sponsored and only 21(5.6%) were partially sponsored. Lastly, the table shows that most of the students 165(44%) were not using sponsorship while the government-sponsored 78(20.8%), NGOs sponsored 63(16.8%), and relatives sponsored 69(18.4%) of the adult learners. Table 2 shows that the majority of adult learners 240(64.0%) were females while the males were 135(36.0%). In regards to the duration in the adult learning institution, most of the learners 207(55.2%) and 114(30.4%) had been in the institution for between 1-2 years and more than three years respectively. Further, the majority 213(56.8%) were between ages 18-29. The adult learners also attended school between nine am to three-thirty pm 150(40%) and eight am to eleven am 123(32.8%).

In regards to the integration of digital literacy in teaching and learning in Adult and Community Education, the instructors were asked whether digital literacy classes are offered in their institutions. Figure 1 shows their responses where half of the respondents 54(50%) indicated that they offer digital literacy classes while the remaining half indicated that they do not offer digital literacy classes.

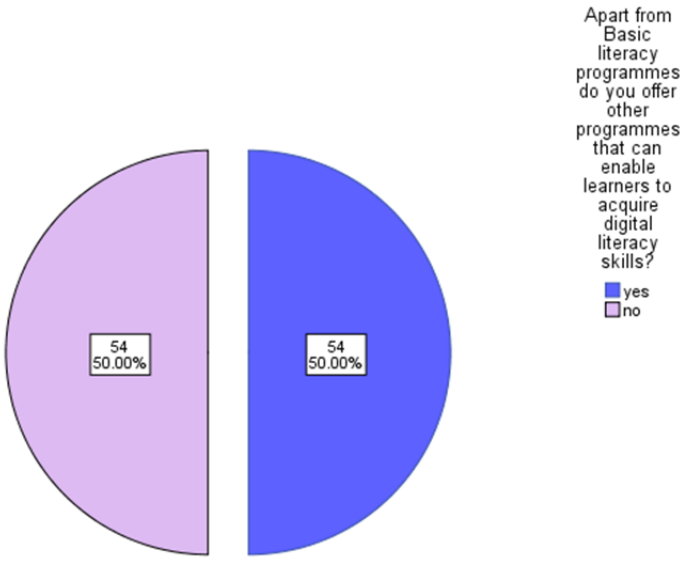

Figure 1. Digital literacy classes

The instructors were also asked whether the time allocated for teaching digital literacy classes was sufficient to engage students in participatory instructional approaches. Their responses are presented in Figure 2.

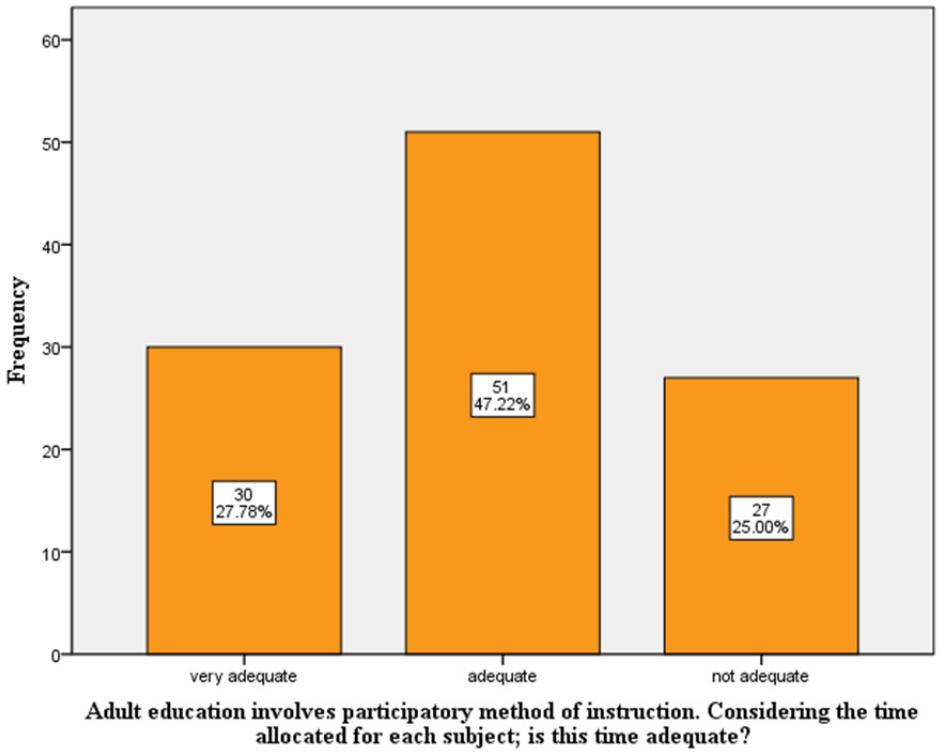

Figure 2. Time allocation

Most of the instructors 51(47.22%) indicated that the time allocated to digital literacy was sufficient while 30(27.78%) indicated that the time allocated was very adequate to promote participatory instruction. However, 27(25%) felt that the time allocated for digital literacy classes was not sufficient to promote participatory instruction.

Table 5. Integration of E-learning- Adult instructors' respondences

Integration	**N=108**	**F**	**%**
Are there challenges in implementing computer literacy in adult education in your institution?	Yes	90	83.3
	No	18	16.7
What is your opinion on the attitude of adult learners towards the inclusion of computer literacy in the adult education curriculum?	Very positive	48	44.4
	Positive	57	52.8
	Negative	3	2.8
Does your school have physical facilities that support the use of ICT	Yes	77	71.3
	No	31	28.7
Does the school have internet facilities available for the students	Yes	54	50.0
	No	54	50.0
Do the teachers involve the students in the practical use of ICT in the schools	Yes	57	52.8
	No	51	47.2
Are the learners taken to e-consumer service provider centers	Yes	24	22.2
	No	84	77.8
Has the government integrated e-consumer services in the teaching and learning	Yes	24	22.2
	No	84	77.8

Table 5 shows the responses of the instructors on a range of questions regarding the integration of e-learning in adult and community learning centers. The respondents were also asked if their schools have any challenges implementing computer literacy in adult education and the majority 90(83.3%) indicated that they face challenges while only 18(16.7%) refuted the claims.

Further, the findings reveal that the majority of adult learners are either very positive

48(44.4%) or positive 57(52.8%) about inclusion of computer literacy classes in the adult education curriculum though 3(2.8%) felt that the adult learners had a negative attitude towards inclusion of computer literacy.

In regards to the physical facilities necessary to support the use of ICT in teaching and learning, the majority of instructors 77(71.3%) indicated that the institutions have the physical facilities to support ICT use while only 31(28.7%) claimed that their institutions lacked physical facilities to facilitate the use of ICT.

The instructors 57(52.8%) indicated that the teachers involve the students in the practical use of ICT while 51(47.2%) claimed that the students are not involved in the practical use of ICT in the schools. However, the students 84(77.8%) indicated that the learners are not taken to e-consumer service provider centers while only 24(22.2%) indicated that they take their students to e-consumer provider centers.

Lastly, the instructors also indicated that the government has not integrated e-consumer services in teaching and learning 84(77.8%) while only 24(77.8%) indicated that the government has integrated the services in teaching and learning.

The adult learners were asked to indicate the strategies used by their instructors in regards to the integration of ICT in Adult and Community Learning and table six provides their responses.

Table 6. Integration of E-learning- Adult learner's responses

Integration	**N=375**	**Yes**	**No**
Role-play	F	144	231
	%	38.4	61.6
Process demonstration	F	147	228
	%	39.2	60.8
Trips to cyber cafes	F	63	312
	%	16.8	83.2
Lecture Method	F	207	168
	%	55.2	44.8

The table shows that role play is not mainly used by the adult instructors indicated by the majority of the adult earners 231(61.6%) with only 144(38.4%) indicating that their instructors do use role-play. In regards to process demonstration, the majority of respondents 228(60.8%) indicated that their instructors do not use process demonstration on how to use digital platforms to access e-consumer services. Only 147(39.2%) indicated that their instructors use process demonstration to help them understand the use of e-consumer

services.

Field trips to cyber cafes were rarely a strategy integrated into adult and community learning with the majority of students 312(83.2%) indicating that they are not taken to cyber cafes for practical experiences with e-consumer services while only 63(16.8%) indicating that they visit cyber cafes with their instructors.

Mainly, the lecture method was found to be used by most instructors when teaching digital literacy in classes 207(55.2%) while only 168(44.8%) of the adult learners indicated that their lecturers do not use lecture methods while instructing them.

The interview findings from the Adult Education Officer revealed that lecture method and process demonstration are mainly adopted approaches to ICT learning in the centers. He argued *'well mainly the instructors tend to use lecture methods while teaching ICT, But we also encourage them to use practical methods and where possible we do field trips to promote the learners' interaction with some of the ICT facilities outside of the center… though the use of more practical approaches to learning is constrained by lack of sufficient time and resources*.'

The study sought to know whether the approach taken to integrate ICT in Adult and Community Learning was significantly associated with the adult learners' use of e-consumer services. To achieve this, a chi-square Pearson analysis was conducted and table 7 shows the results.

Table 7. E-consumer use of and integration of ICT in Adult and Community Learning Centers

Integration	**N=375**	**E-consumer Use**			**P-value**
			Yes	**No**	
Role-play	Yes	F	87	117	0.0065
		%	23.2	31.2	
	No	F	57	114	
		%	15.2	30.4	
Process demonstration	Yes	F	81	105	0.040
		%	21.6	28	
	No	F	66	123	
		%	17.6	32.8	
Trips to cyber cafes	Yes	F	36	144	0.036
		%	9.6	38.4	
	No	F	27	168	
		%	7.2	44.8	
Lecture Method	Yes	F	96	108	0.196

	%	25.6	28.8
No	F	99	72
	%	26.4	19.2

The table shows that the majority of respondents whose tutors integrated role play in adult education were those who used e-consumer services 87(23.2%) whereas the majority of those whose instructors did not use role play 114(30.4%) were those who indicated that they do not use e-consumer services. These findings suggest that the instructor's integration of role-playing as a method of instruction is likely to influence the adult learners' up-value-consumer services as supported by the statistically significant p value 0.0065<0.05. As Yin (2014) argues, implementation and use of ICT in schools can help promote cooperative, lively and enduring learning, increase students' motivation, offer better access to information and shared working resources, extend understanding, help students think, and promote creativity. Therefore, exposing adult learners to e-consumer services through role-playing can enhance their understanding and creativity.

The majority of respondents 81(26.1%) who use e-consumer services were those whose instructors integrated process demonstration in adult learning while the majority 123(32.8%) of those who did not use e-consumer services were those whose instructors did not adopt process-demonstration as a means of instruction which was statistically significant at p-value 0.040. These findings suggest that instructors who demonstrate how processes work using practical are more likely to enable their learners to adopt the skills required to perform various e-consumer services as compared to those who do not. This may mainly be attributed to the ability of the learners to master the process as the instructors demonstrate it practically. These are in line with Watson, Loizzo, Watson, Mueller, Lim, and Ertmer, (2016) who argued that the importance of e-Learning and knowledge management at the workplaces is needed so that the workers can use the learned skills in their workplace and can be best achieved through demonstration. Process demonstration leads to the adult learners being more relevant at their places of work. ICT is deeply reliant on literacy and each expertise makes a unique appeal on the mastery skills of the users. This means that the adult learners need to be ICT literate to use the ICT technologies provided by the Government effectively (Watson, Loizzo, Watson, Mueller, Lim, & Ertmer, 2016).

The table shows that trips to cybercafes were statistically significantly associated with the use of e-consumer services at a p-value of 0.036. These findings suggest that the majority of adult learners who were exposed to cyber-café trips were more likely to use e-consumer services 36(9.6%) while the majority of those who were not exposed to cyber cafes 168(44.8%) were not likely to use e-consumer services. These findings imply that taking the students on field trips where they can practice digital literacy is important in determining their likelihood of using e-consumer services. Itary (2017) reiterates that practical exposure to computer-assisted tutorials and other traditional technology-supported resources, such as radio and television, can make education more accessible and help adults improve their ability to decode and comprehend prose text, thus increasing their literacy, employability, and their continued use

of literacy skills to become lifelong learners this will enable the adult learners to be informed and always keep up with the advancing technology making them still relevant to the job market.

Lastly, the majority of learners who indicated that they were instructed using lecture methods 108(28.8%) were not likely to use e-consumer services while the majority of those who were not instructed using lecture method 99(26.4%) were likely to use e-consumer services. These findings imply that lecture methods did not promote the adult learners' use of e-consumer services at a p-value 0.019>0.05. Therefore, the findings suggest that the lecture method does not have a positive influence on the adult learners' comprehension of the e-consumer processes. As Itari (2017) several challenges are facing the integration of ICT in Kenya and one challenge stems from how learners are instructed on ICT.

The adult learners were also asked to indicate ways in which e-learning has been implemented and figure

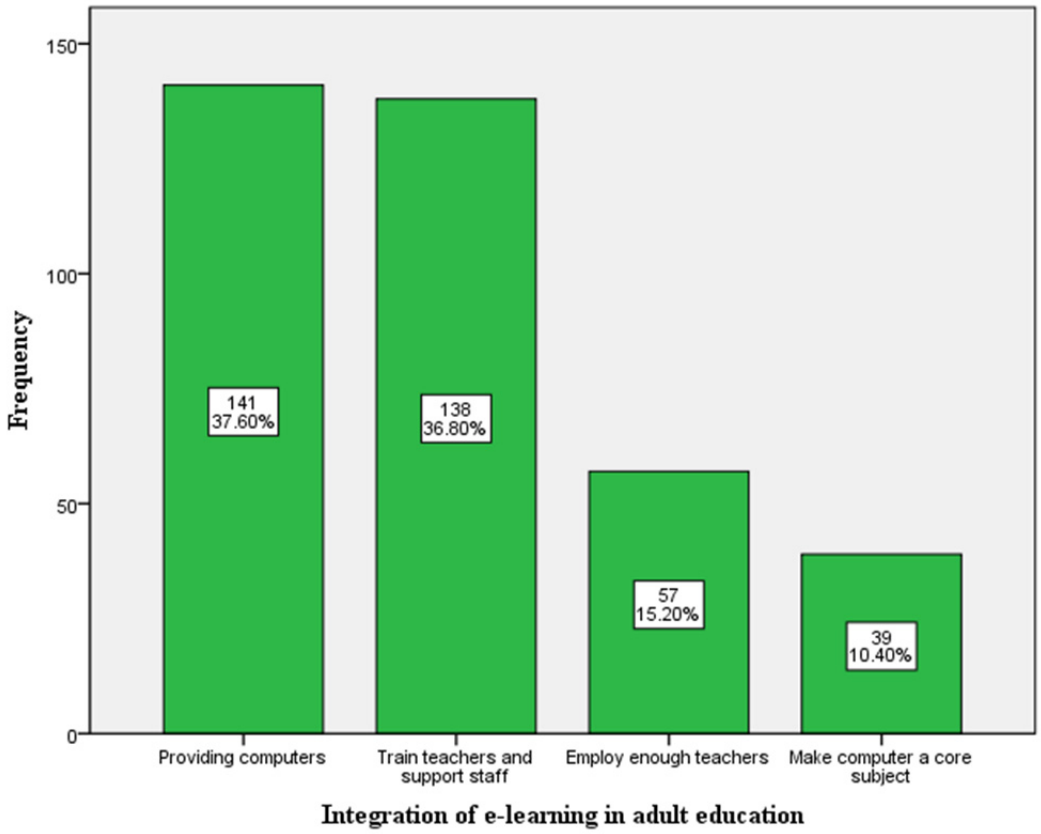

Figure 3. Integration of e-learning in adult education

The adult learners were asked how the integration of e-learning has been implemented in adult education. Most of the 141(37.6%) indicated that computers have been provided while 138(36.8%) indicated that the teachers and support staff have been trained. The other 57(12.2%) indicated that enough teachers have been employed as a strategy and 39(10.4%) argued that computer has been made a core subject. These findings imply that efforts to

integrate e-learning have mainly been done by providing computers and training teachers and support staff. The study wanted to examine whether there was an association between the strategies for integration of e-learning in adult education and the digital use among adult learners. These findings point towards major progress towards ICT integration and as Yobaski and Nolan (2011) argue that the interrelationship between literacy, technology, and development forms an integral approach to healthier living. Literacy provides technical skills and a wider text establishment that includes the ability to solve problems using information, communication, analyzes, access, evaluation, and generate new knowledge.

The interview with the adult education officer also revealed that there are several measures that have been put in place to promote the integration of ICT in the learning institutions. He stated '*well of late, the government and well-wishers have worked in tandem to enhance ICT in the centers. They are donating computers, smartphones, and laptops to the institutions, even though they are not near enough to meet the needs of all our learners. There have also been seminars and workshops for our instructors to help them master the new digital services and hopefully pass on this knowledge to the learners.'*

The respondents were also asked to indicate the challenges facing the integration of ICT in adult and community learning. Their responses are provided in Figure 4.

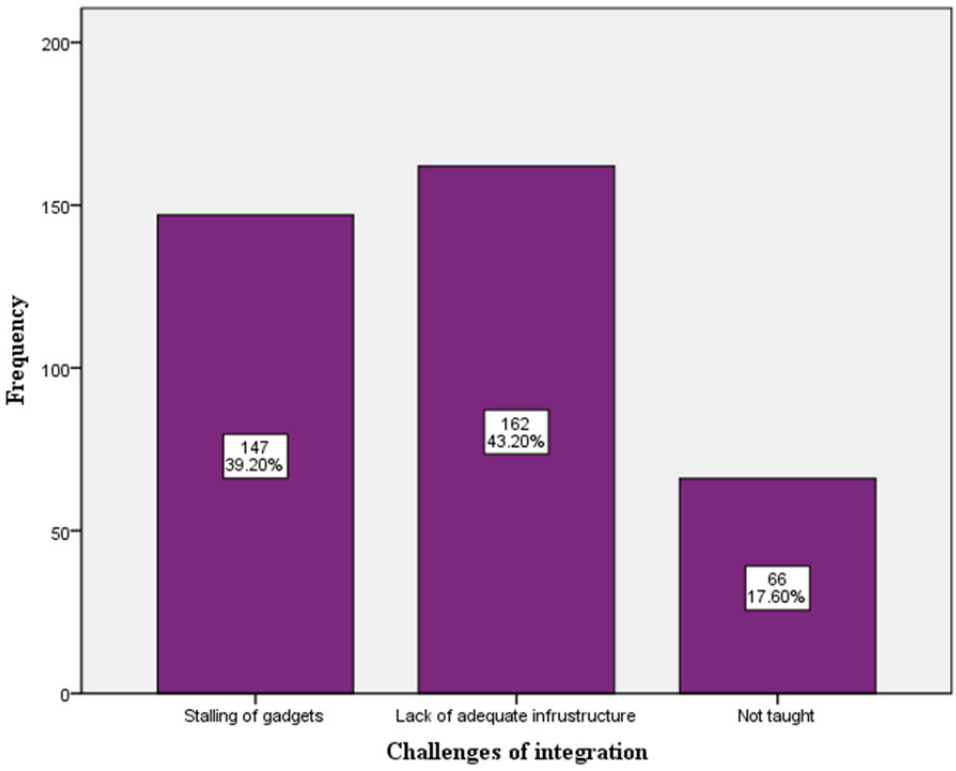

Figure 4. Challenges of Integration

One of the key challenges identified by the adult learners is stalling of gadgets 147(39.2%)

while 162(43.2%) identified the lack of adequate infrastructure 162(43.2%) and only 66(17.6%) argued that not being taught was a major challenge. These findings support the claims by Stewart (2013) who argued that African countries face numerous challenges in integrating ICT due to lack of infrastructure to facilitate its smooth integration.

5.0 Conclusion

The purpose of the study was to determine the integration of ICT in adult and community learning. The study established that integration of ICT is critical for the adult learners' use of e-consumer services. There are various approaches used to integrate ICT such as the use of role-playing, process demonstration, and field trips to cyber cafes to expose the adult learners to e-consumer services. Overall, the process of integrating ICT in adult and community learning in Kenya is faced with challenges such as lack of resources, poor infrastructure, and the limited time allocated to ICT teaching and learning.

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