
Information users' preference on the use of print and Electronic Resources in Selected Universities in Tanzania: A Survey

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Abstract

This paper is based on a study that examined information users' preference on use of print and electronic resources in selected universities in Tanzania. A survey method was used as the research design to facilitate the collection of data from the three sampled universities in Tanzania, namely the University of Dar es Salaam (UDSM), the Open University of Tanzania (OUT) and Tumaini University-Dar es Salaam College (TUDARco). Purposive sampling technique was used to select respondents, comprising undergraduate and post-graduate students, academic and research staff. Empirical data for the study were collected using a questionnaire survey and interview guide. Out of 350 administered questionnaires, 327 were successfully completed and used for the study, yielding a 93.4 Percent return rate. The study found out that print resources are more preferred than electronic ones. These findings are not in congruency with the popular assumption that the ready availability of online resources has supplanted print resources. However, one significant finding in this study is that e-resources popularity has started to gain ground across the three universities under review. The respondents suggested fostering the use of both print and electronic resources in universities, for wider access of knowledge, particularly in the resource-limited contexts prevailing in Tanzania. Based on the findings, the study concluded that a hybrid collection is the panacea to optimising resources as it provides users with more access choices between the two formats.

Key words: User studies, universities-Tanzania, print resources, electronic resources, digital resources, hybrid library

Introduction

Historically, the introduction of printing was revolutionary in its impact (Stacy, 2008). According to Zha, Zhang, and Yan (2014), print resources are traditional information sources such as printed books and journals. Printing, as a pioneer of mass distribution of information and medium of communication, is second to none (Bastek, 2012). For centuries, printed resources have been major information carriers accessed and utilised for teaching, learning and research purposes in universities (Okon, 2013). As such, print resources have served as a vital avenue for

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disseminating scholarly information to the global society. However, Rubin (2000) asserts that the rapid development of ICT, coupled with electronic publishing, threatens the hitherto unparalleled dominance of print format in terms of access as the electronic format is proving to be dynamic in enhancing easy access even for remote areas far from the physical library. According to Mizrachi, Boustany, Kurbanoglu, Dogan, and Salaz (2016, 2018) and Mizrahi (2015), digital technology has penetrated the old age traditional book industry with success, with electronic format products proving more suited and convenient for some activities, and being popular with many educators, administrators and policy makers than traditional sources. In fact, the electronic 'invasion' has been so impactful that a common assumption now is that digital technology is poised to replace paper-based media in the foreseeable future.

Electronic resources refer to materials whose use requires computer or related technologies. The resources include e-journals, e-books, full-text databases, reference databases, dictionaries, and encyclopaedia (IFLA, 2012). These resources represent an increasingly important collection in libraries. In fact, the advent of the internet and its concomitant penetration in African institutions of higher learning libraries and information centres, including Tanzania's universities, has ushered in prospects for a digital divide in a continent already marked by digital divides. In this respect, advances in technology and the transformation of the information landscape have changed the way users interact with information. On one hand, the information technological development has provided users with an opportunity of being able to choose between the two media, on the other, it poses challenges also sparked by intense debate and pressure on university managements during the making of acquisition and subscription choices between print and electronic resources amid stringent library budgets.

Halloumeh and Jirjees (2016) observe that the debate on library's patrons' format preference has prevailed since the mid-1980s. Incidentally, the debate on these paradigms has also inadvertently widened the gap so much that the two paradigms appear like polar opposites although they are not. In reality, the two are complementary. In a study on why print and electronic resources are essential to the academic law library, WU(2005) raised a valid and fundamental question on whether "it is still logical for libraries to stock their shelves with printed texts and why should parent institutions provide funding for such acquisition". Although the paper was based on different geographical context and level of development, the points raised augur well with the position of this paper. As the Director of Library Services and Lecturer in Library and Information management programmes, the author of this paper often has had to contend with similar questions from the university management and academic staff. Probably, librarians and other information professionals elsewhere have faced a similar dilemma when handling collection development matters regarding the acquisition of print and electronic resources. At a university academic forum, which debated the efficacy of print and electronic resources, one senior academic staff contended:

My vision is that all the teaching and learning materials must be accessible online, and we need to provide students with- e-books because many of them are free-of-charge and that ...printed materials will belong to the history. The future is electronic (Professor Marketing-The Open University of Tanzania, 03, March, 2018).

Emphatic and contentious as the statement might appear, it also captures a popular belief among information users in an academic environment fraught with resource-poor contexts, and where acquisition of current and updated print resources is a nightmare. In fact, proponents of this stance envisage electronic resources to ultimately supersede printed ones. The illusion in this context is based on an assumption that all resources required in teaching are freely available through the internet, which is not often the case. According to Robinson (2010), cutting print

subscription appears, to many, as an attractive and obvious step towards getting rid of the information resources problem; however, this only addresses part of the problem.

It is against this, rather too optimistic, outlook about electronic resources that a professor in charge of academic affairs, speaking at the forum alluded to above, cautioned that:

Printing hard copies will be a longstanding technology in education and I don't see our university avoiding hard copies in the next twenty years in all its doing (1/3/2018).

Similarly, Schaffner (2001) cautioned the academic world that:

The trend toward the exclusive use of electronic resources should be cause for concern about the direction of scholarship, because a wealth of research materials is not now and may never be available in electronic formats.

Evidence to buttress this caution is available. For example, the University of Dar es Salaam library in Tanzania is the single largest repository of the country's national academic/research information heritage to-date. The library hosts a wealth of a wide range of research/archival information sources consisting of books, pamphlets, periodicals, newspapers, manuscripts, theses and reprints. The greater part of the collection consists of items on Tanzania, including those received on Legal Deposit. There is also a fair coverage of the other East African countries, particularly in statistical and periodical materials, published prior to the mid-1980s, including publications of the East African universities and official documents. Of the manuscripts, the Hans Cory, Kiswahili and Arabic, the Anglican Church Missionary Diary record of the Southern Diocese of Tanzania and the Fosbrooke collections, are the more significant ones. The Kiswahili manuscripts in Arabic script and Arabic manuscripts, which date back to before the 1930, and the Fosbrooke collection, are available in printed or handwritten format only and may not be found elsewhere in the world.

As such, there is the need for stakeholders in Tanzania's institutions of higher learning to discuss this emerging trend of thought cautiously with open minds, in order to avoid pre-determined decisions which may jeopardize university teaching, learning and research process. What is required is an inclusiveness that accommodates all key players and views to derive mutual benefits for all information users. In fact, Sharma and Kumar (2016) contend that where reading materials are available in divergent formats, users' preferences are required to engender a need-based investment in the acquisition of such resources and in order to ensure a balanced library collection. WU (2005) paralleled this understanding in more emphatic terms by asserting that a twenty-first century academic library requires both traditional print materials and electronic resources.

In order to provide a critical and fair assessment and understanding of the realities on the ground regarding library users' preference of print and electronic resources in the academic community, it was deemed imperative to solicit views of library patrons on their preference, in order to realise the best value for expended institutional financial resources. As such, this survey was designed to assess information users' preference on the use of print and electronic resources in selected universities in Tanzania, and make recommendations to university managements based on the empirical findings.

Objective of the study



The main objective of the study was to investigate information users' preferences on the use of print and electronic resources in selected Tanzanian universities.

The study's specific objectives were to:

- (a) Identify information users' preferences on the use of print and electronic resources.
- (b) Establish reasons behind such preferences.
- (c) Solicit views on strategies for achieving a balanced /rational use of financial resources in the acquisition and use of print and e-resources in academic libraries in Tanzania.

Research Questions

- (a) What format of materials do information users prefer most?
- (b) What are the reasons for information users' preference of either resource format over the other?
- (c) What can be done to achieve a balanced rational use of financial resources in the acquisition and use of print and e-resources in academic libraries in Tanzania

Literature review

Library information users, preference of print or electronic resources is an area of interest to institutions of higher learning in Tanzania, which needs to be investigated in order to plan better for academic library collection development. This comes at a time when university libraries the world over, are focusing on improving the provision of electronic and printed resources to cater for diverse information needs of their patrons. In fact, the use of electronic resources is no longer an option but a necessity, since the e- resources are increasingly becoming a preferred and effective source of scholarly information for enhancing teaching and learning in the academe, as well as in the resource-poor contexts. The evolving debate on the preference of print or e-information resources amongst university scholars is crucial and calls on libraries to evaluate users' preferences amidst budget cuts and constraints.

In fact, literature on this subject abounds in the developed countries, although it is beginning to gain prominence in universities and research establishments in developing countries. For example, Melcher (2017) conducted a library survey at Carmichael Library, University of Montevallo, Alabama, US on e-Books and e-Book readers. Respondents comprised students and staff. The results of the survey showed a general preference of using print books, whereby 59.6 percent of the respondents read printed books, but also occasionally read e-books. Since the study was conducted in the US, a nation endowed with advanced socio-economic and cultural patterns of development, it is difficult to generalise the findings of this study to a localised and particularised context of Tanzania where the current study was carried out in university settings.

Mizhirachi (2015), who examined the undergraduates' format preferences between electronic and print when searching for their academic readings at the University of California in the US, used online questionnaire administered to 400 students. The study found that 67.7percent of the respondents preferred print over electronic format for all courses, when they want to achieve or deeper learning outcome, while 32.3 percent preferred electronic resources. The results indicate that printed resources were still the mainstay of academic research despite the emergence of e-resources. However, participants in this study were mainly undergraduates and, therefore, the results may not necessarily be generalised to other categories of users. The current study involved all user groups with different academic backgrounds.

In another study, Mizrachi, Boustany, Kurbanoğlu, and Doğa (2016) investigated the Academic Reading Format International Study (ARFIS) involving students around the world.

The survey received responses from 9,279 undergraduate and graduate students, drawn from 19 countries spread out in four continents. The amalgamated results for both student-levels indicate a general preference for print, whereby about two-thirds of all the students reported strong preferences for print over electronic materials. In a similar study involving 10,293 college and university students in 21 countries, conducted by Mizrach, Salaz, Kurbonoglu, and Boustany(2018), *on behalf of ARFIS Research Group*, revealed that majority of students prefer to read their academic materials in print format. Although these were large-scale studies, the survey coverage did not include Africa, let alone Tanzania. As such, information users' preferences for use of print and electronic resources in Africa in general and Tanzania in particular, remains largely unexplored. This study, therefore, focused on the context of Tanzania's universities not covered by Mizrachi et al. (2016, 2018) studies.

Amaya and Secker's (2016) study on choosing between print and electronic...or keeping both, conducted in the United Kingdom, involved 655 students from different universities. Participants were drawn from undergraduates, postgraduates and students with visual impairments. The study found that 42 percent of the respondents indicated a high preference for reading materials in print format. The findings further revealed that the diffusion of e-resources remains rather low, even in the developed countries, although it has started to gain ground. Mizrachi's (2014) study also found similarities on the same between the UK and US, where user preference for print over e-resources was more pronounced in both countries. The study recommended that attention should be paid to providing students with print format facilities instead of assuming that course material should always be converted into digital formats. Pesut and Zivkovic (2016) survey on students' academic reading format preferences in Croatia, involved 232 students. The study found that 82 percent of the respondents did not prefer to read their courses electronically, compared to 81 percent of the respondents who preferred to do so in print format. However, the respondents said they sometimes preferred electronic format for organising large amounts of literature, which facilitated referencing.

Aharony and Bar-Ilan (2018) also observed that students in Israel preferred printed academic materials over electronic ones. However, deep and surface learners recognised the relative advantage e-materials offered for a fuller understanding of the learning materials. Similarly, Mawindo and Hopkins (2008) evaluated students' use of print and electronic resources at the University of Malawi's College of Medicine and found that students used both print and electronic resources, but print resources remained the more preferred choice. In the same vein Halloumeh and Jirjees' (2016) investigation of the use of e-resources versus print journals in academic libraries in Abu Dhabi found that majority, (65 percent), of respondent's preferred electronic journals to printed ones. However, the respondents also suggested that libraries should not cancel the acquisition of print format. In fact, other studies by Kiondo (2004), Liu (2000), Zell (2013) as cited in WGBLM (2016) and Sharma and Kumar (2016) are in consensus that electronic and print format should go hand-in-hand and concurred that a hybrid collection is a fair route to take as it provides users with more access choices between the two formats.

In Tanzania, there has been an upsurge of research work on e-resources; however, little or no research has been conducted to intensively assess library users' information preference on print and e-resources in the country's universities. Existing research to-date has largely focused on the general practices of e-resources usage rather than on issues of understanding users' preferences on print and electronic materials. In fact, there are still apparent disparities in ascertaining which type of resources are preferred by most of users, particularly in a print culture resource-limited context.



Studies on e-resources conducted in Tanzania have focused primarily on user patterns of e-resources in individual institutions and to-date, no study has compared information users' preferences either in individual or across universities in Tanzania. Amongst the research efforts directed towards e-resources usage include those by Katabalwa (2016) who studied the use of electronic journal resources by postgraduate students at the University of Dar es Salaam. The study found that majority of students used electronic resources for various purposes to supplement printed resources. However, this research falls short of shedding light on the usage of other information carriers such as print resources.

Similarly, Nkebukwa, (2016) examined the status of the usage of electronic resources by students at the College of Business Education. The study found that a majority of users were not aware of the e-resources available and, hence, did not utilise them as expected. Ideally, however, this raises more questions than answers, for example, if the use of e-resources is minimal, is it because of users' preference of print resources?

Mwantomwa, Elia, and Ndenje-Sichalwe (2017) investigated the utilisation of e-resources to support teaching, and research in Tanzania's institutions of higher learning. The study found that there was minimal use of most of e-resources the universities had subscribed to; the use of open access resources, on the other hand, was found to be high. This disparity was attributable to inadequate information on e-resources available in the library. However, this study did not provide usage statistics on other resources such as printed resources. Mtega, Dulle, Malekani and Chailla (2014) studied the usage of e-resources among agricultural researchers and extension staff in Tanzania. The research established that usage of popular agricultural e-resources remains low, probably due to limited awareness. The study, however, made no recourse to the use of print resources as an alternative in preference to e-resources.

Generally studies on e-resources conducted in Tanzania have focused on the availability and usage of the resources and none of them has looked at information users' preference of print or e-resources. This study, therefore, was designed to investigate users' preferences on the use of print and e-resources in selected universities, Tanzania, namely the Open University of Tanzania (OUT), Tumaini University - Dar es Salaam College (TUDARco) and the University of Dar es Salaam (UDSM). The study's findings can assist university managements, faculties, librarians; library users in determining user preferences so as to allow libraries plan for better and effective allocation of resources for the acquisition of both print and e-resources. Similarly, these findings can assist players in the publishing industry to know the preferences of their users and accommodate them accordingly.

Theoretical Framework

This study examined preferences on the use of print and electronic resources among students, academic staff, and researchers at three selected universities in Tanzania. Students, academic staff and researchers' use of electronic or print resources, their purpose for doing so and satisfaction levels with either electronic, or print resources, or both types of resources, are critical issues in determining users' needs and in linking them to the management ability to satisfy them amidst university dwindling budgets. To realise its objectives, this research was informed by a theoretical model that emphasise the use of electronic resources. The model that this study adopted is the Technology Acceptance Model (TAM) by Davis (1989).

Technology Acceptance Model

The Technology Acceptance Model (TAM) describes how users accept and use new technology. In particular, the model describes the factors that influence users' decisions on how and when to apply new technology, namely: Perceived Usefulness (PU) - defined as the degree to which a person believes that using a particular system would enhance his or her job performance and Perceived ease-of-use (PEOU), defined as the degree to which a person believes that using a particular system would be free from effort (Davis 1989). The model has continuously been replicated and expanded to provide evidence on the relationships between usefulness, ease of use, and system use. The two major upgrades are the TAM 2 (Venkatesh & Davis 2000 & Venkatesh 2000) and the Unified Theory of Acceptance and Use of Technology or (UTAUT) (Venkatesh et al. 2003). The basic tenets of this theory are that the invention of new technology can alter the way society responds to events or what they used to do fashionably old. In this study, the theory helped to establish the level of print and e-resources acceptance among study users in this ICT era.

Methodology

A survey research design was used in this study to facilitate the collection of information that paints a holistic picture of the existing situation on information users preference on the use of print and electronic resources in selected universities in Tanzania namely: the University of Dar es Salaam (UDSM), the Open University of Tanzania (OUT) and Tumaini University - Dar es Salaam College (TUDARco). According to Mugenda and Mugenda (2003), a survey attempts to collect data from members of a population to determine the current status of that population with respect to one or more variables.

The population for this study was 350 comprised of undergraduate and post-graduate students, academic and research staff from the three universities. These groups were chosen as part of the study population due to their proximity and degree of involvement in the generation and usage of information in both print and electronic formats in their academic and research endeavours as well as consultancy. Furthermore, academic and research staff were included because of their involvement in the selection and acquisition of library materials in print and electronic formats. This group constituted the largest contingent that participated in the survey. Similarly, three Directors of Library Services were chosen as part of the population because they are involved in the selection and acquisition of library resources in collaboration with academic staff.

The sample size for this study was 350 respondents. These were purposively selected from a target population of 26,141 from the three universities. The researcher considered this number to be manageable. Data for this study were collected from November, 2017 to March, 2018 using a combination of methods (triangulation) including standardized questionnaire with both close and open-ended questions, interviews, and documentary review in order to improve validity and reliability of the data collected. This was also done because each method has its own strengths and weaknesses. The methods employed in data collection helped to gather the data needed to answer the proposed research questions. The use of multiple methods also minimises the degree of specificity of certain methods to particular bodies of knowledge. The questionnaire with both closed and open-ended questions was administered to 350 respondents. All the 350 self-administered questionnaires distributed to the respondents were received back. However, thirteen were discarded because they were not adequately completed, hence leading to a sample of 327, yielding a 93.4 percent response rate. An interview guide was used to interview



three Directors of Library Services from UDSM, OUT and TUDARDco due to the nature of their responsibilities in the academic libraries. This method allowed the researcher to gather in depth information from these respondents based on their knowledge and experience. Moreover this information helped to get reliable data to supplement and validate the information obtained through the the use of the questionnaire. The interview guide supplemented the questionnaire survey.

Data collected using questionnaires were coded, entered into a computer, analysed and interpreted with the help of the Statistical Package for Social Sciences (SPSS) version 20 whereas data obtained from interviews were subjected to content analysis. Qualitative data analysis process entailed collecting, sorting and eventually organising the data according to emerging themes, in line with the objectives of the study. Verbatim statements from directors have been presented in form of quotes to support the findings of the study.

Presentation and Discussion of Findings

Social-demographic characteristics

Biographical data of the respondents the study has collected include gender, age, title, and academic qualifications. This provided information on the characteristics of the sample drawn from the three universities of OUT, TUDARco and UDSM. The characteristics of respondents based on universities are presented in Table1

Table 1 show that, 205(62.7%) respondents were males and 122 (37.3%) females. The table also shows that academic and research staff constituted 141 (43.1%) of the respondents whereas students accounted for 182 (55.7%) respondents. With regard to age, 53 (16.2%) respondents were aged between 18 and 25 years,121(37.0%) were aged between 26 and 35, 70 (21.4%) were aged between 36-45 years, and 54 (16.5%) were aged between 46and 55. The results also show that 22 (6.7%) respondents were aged between 56 and 65 while 7 (2.1%) had over 66 years of age.

In term of academic qualifications, 131 (40%) respondents were first degree holders (undergraduates,) 116 (35.5%) had master's degree whereas 77 (23.5%) were PhD holders and 3(0.9%)were postgraduate diploma. It is evident from demographic characteristics that the respondents, who participated in this study, represented categories of academic staff and researchers with varied academic qualifications and experiences. Thus, they were likely to provide varying views regarding the variables of this study and these were vital in understanding their preferences on the use of print and e-resources. Table 1 summarises the findings:

Table 1: Respondent Characteristics n=327

Variable	Variable category	Frequency	Percentage
Sex	Male	205	62.7
	Female	122	37.3
Respondent Category	Students	182	55.7
	Academic / Research staff	144	44
	Administrator	1	0.3

Age of Respondent

18 – 25	53	16.2
26 – 35	121	37.0
36 – 45	70	21.4
46 – 55	54	16.5
56 – 65	22	6.7
Over 66	7	2.1
n=327		

Academic Qualifications

First Degree/Equivalent(undergraduates)	131	40.1
Masters	116	35.5
PhD	77	23.5
Postgraduate Diploma	3	0.9

Source: Field Data (2017- 2018)

Users' information Preferences on the use of Print and Electronic Resources

The first objective of this study sought to identify information users' preferences on the use of print and electronic resources. Responses to questions on types of resources consulted, and types of materials preferred most by users were clustered because the information sought was related. Responses are as summed up in tables 2 and 3:

Table 2: Types of Resources Used n=293

Category	Frequency	Percent
Print resources	114	38.9
Electronic resources	55	18.8
Both	124	42.3
Total	293	100

Source: Field Data (2017-2018)

As Table 2 illustrates, 124(42.3%) respondents consult both printed and electronic resources followed by 114 (38.9%) who consulted printed resources whereas 55(18.8%) consulted electronic resources. Overall, both print and electronic resources seem to be important sources of information for the three universities involved in this study. As such, libraries should consider continuing acquiring both types to maintain a balanced collection that satisfies information user needs. The study findings corroborate those by Zell (2013) who contends that digital and print formats would continue to be complimentary in the foreseeable future and therefore both formats must be collected, maintained and supported

The results presented in Table 2 also indicate that the use of e-resources is surprisingly low (18.8%) among universities in Tanzania. This is so despite heavy investment made through the Consortium of Tanzania University Libraries to subscribe to and market the resources



through institutional websites, information literacy training and brochures. Interestingly, the result indicates that 124(42.3%) preferred both print and electronic formats. The findings are in line with those by Kiondo (2004) who advocates the need to adopt hybrid collections in order to meet the informational needs of users

Respondents from the three universities were asked to indicate the types of materials they preferred the most in their learning, teaching and research activities. Table 3 summarises the results generated from the responses obtained.

Table 3: Types of Materials Preferred Most (n=276)

Category	Frequency	Percent
Print	153	55.4
Electronic resources	83	30.1
Both	40	14.5
Total	276	100

Source: Field Data (2017-2018)

As Table 3 demonstrates, overall, majority 153, (55.4%) of the respondents that answered this question indicated their preferences for print resources, followed by 83 (30.1%) who preferred e-resources and 40 (14.5%) who preferred both types. From these findings, it is clear that print resources are more preferred over electronic ones. Based on these findings, it appears that university managements need to give more attention to print resources when allocating library budgets for the acquisition of learning resources.

Evidently, care must be taken not to rush into scrapping off printed resources, as this action might impair teaching, learning and research process. The findings confirm previous studies by Mizrahi et al. (2016), Aharony and Bar Ilan (2018), and Melcher (2015) which indicated preferences for printed materials. Although the adoption and use of e-resources is fairly a new phenomenon in Tanzania- e-resources' popularity is gaining ground among information users. This trend might be attributable to the widening access to ICTs, internet connectivity, e-resources promotion strategies, and information literacy training sessions conducted regularly in Tanzania's universities. During an interview, a Head of Readers and Technical Services who was acting as the Director of Library Services said:

"We normally conduct information literacy training for students and academic staff for the [purpose of orienting them and raising awareness on the available resources in the library and emphasis is on e-resources]" (Head, Readers and Technical Services and Acting Director of Library Services, OUT, 2018).

Reasons for information users' preferences of print or electronic resources

The second objective of this study sought to establish reasons behind users' preference of either print or electronic resources. The responses obtained have been clustered because the information generated is related. The resultant answers have been summed up in table 4.

Table 4: Multiple Responses for Purposes of Using Print and Electronic Resources

Category	Frequency	Percent
Teaching and learning	185	44.6
Research	160	38.6
Preparation of exams	67	16.1

Recreational purposes	2	0.5
Consultancy	1	0.2

Source: Field Data (2017-2018)

Table 4 illustrates that 185(44.6%) respondents said they use print and e-resources for teaching and learning purposes, 160 (38.6%) said they do so for research, 67 (16.1%) mentioned examination preparations, 2 (0.5%) mentioned recreation, and 1 (0.2%) identified consultancy. The findings corroborate with those by Katabalwa (2016), who reported that electronic resources are important and useful in supporting academic activities in institutions of higher learning, such as teaching, increasing knowledge, and research for generating new information for solving society problems. Besides, e-resources also supplement printed resources held by university libraries.

Printing electronic resources for use/reference purposes

The question was intended to establish whether electronic resources available online are used in their original form or if they are printed first. Responses are summed up in table 5:

Table 5: Printing Out of E-resources (n=321)

Category	Frequency	Percent
Yes	214	66.7
No	92	28.7
I do not know	8	2.5
Sometimes	7	2.2

Source: Field Data (2017- 2018)

According to Table 5, 214(66.7%) respondents indicated that they printed the e-resources they accessed or downloaded, 92(28.7%) said they did not, 8 (2.5%) said they did not know, and 7 (2.2%) said they sometimes did so.

When asked to state why they print out e-resources, 69(30%) respondents said they needed to ensure their availability when internet and computer access was not possible while 50 (21%) said it was easier to read in print than on the computer screens. The results also show that 33 (14.3%) of the respondents said they print e-resources out to have backup copies, in case they are removed from the hosting database.

Table 6: Reasons for Printing E-resources

Category	Frequency	Percent
For further reference in case there is no internet and computers	69	30.0
Ease of use/read of the material (concentration i.e comfortability. read anytime, anywhere, and when offline	50	21.7
Backup/permanent record in case it is removed from a database	33	14.3
Unreliable internet connectivity	15	6.5
Unreliable electric power	13	5.7
Easy accessibility of print resources	10	4.3
Internet costs	8	3.5



Information provided is credible because it has passed through peer review.	8	3.5
Reading e-resources on the screens strains the eyes and causes loss of concentration	7	3.0
For sharing with my students who cannot access them online or those without ICT facilities	5	2.2
E-resources are easy to keep	3	1.3
It saves time	3	1.3
Spending much time to read on ICT gadgets is unhealthy e.g. Eye problems	3	1.3
Lack of ICT facilities e.g. PCs for reading e-resources	2	0.9
Availability of printing devices e.g. Photocopy Machine	1	0.4

Source: Field Data (2017- 2018)

Note: These were multiple non-exclusive responses

According to table 6, some respondents did not prefer to print documents available online for reasons such as printing costs as mentioned by 26 (34.7%) respondents; readability of e-resources on screen as mentioned by 16 (21.3%) respondents, and the usage of other devices to store information as mentioned by 14 (18.7%) respondents.

Table 6: Reason for not printing E-resources

Category	Frequency	Percent
Printing cost is an obstacle	26	31.7
E-resources are easily readable on the ICT Screens e.g. PCs	16	19.5
They can be stored/saved/kept on ICT devices e.g. Google Drive, PCs, Flash drives for future use	14	17.1
I normally note down key points I need	7	8.5
They are easily accessible online	5	6.1
Lack of printing facilities	4	4.9
No need of doing so	4	4.9
Time factor	2	2.4
Internet resources are not sometimes satisfactory	2	2.4
Reduces the burden to carry	2	2.4
Total	84	100.0

Source: Field Data (2017- 2018)

Note: Multiple Non-Exclusive Responses

Overall, these findings show that majority of respondents end up printing e-resources out. In other words, despite the availability of e-resources, users convert them into paper-based texts. This affirms the earlier findings by Liu and Stork (2000) and Marshall (1997) who contend that people are likely to continue printing e-documents out for in-depth reading due to the instability of online resources.

Table 7: Consulting traditional library after accessing E-resources (n=321)

Category	Frequency	Percent
Yes	211	65.7

No	97	30.2
I don't know	13	4.0
Total	321	100

Source: Field Data (2017- 2018)

With the development of ICT, coupled with the availability of online e-resources, there is a notion that the role of traditional physical library is becoming increasingly redundant in this ICT era.

In response to a question on whether they would still consult a traditional library after finding the information they needed online, 211(65.7%) respondents insisted that they would, whereas 97(30.2%) said they would not and 13(4.0%) were non-committal. Despite the availability of information online, users still trust traditional libraries and would continue using their sources. The traditional library would continue supporting academic endeavours, even in the ICT era, which suggests the value of having hybrid academic libraries.

Indeed, the availability of information online has not obliterated the culture of using the traditional library, which is entrenched in the culture of their usage for educational and research purposes. The findings of this study corroborate with those of Vernon (2006) and Clay (2012) who found that students got to university having already developed particular reading habits which they are often reluctant to change.

Future of print and electronic resources in Tanzania University libraries

The third objective of this study sought to solicit views on strategies for achieving a balanced /rational use of financial resources in the acquisition and use of print and e-resources in academic libraries in Tanzania. To get a composite picture on the future of print and e-resources, respondents were asked to indicate their perception on the future of the two information resource types in the light of current university libraries' subscriptions practices to E- resources in Tanzania. The responses received have been presented in Tables 8, 9, 10 below.

University Subscriptions to resources

With regard to the universities' subscription to resources, the respondents provided responses whose results have been presented in Tables 10, 11: 12

Table 8: University libraries' subscription to resources (n=278)

Category	Frequency	Percent
Yes	240	86.3
No	8	2.9
I don't know	30	10.8
Total	278	100

Source: Field Data (2017- 2018)

In all, 240 (86.3%) respondents confirmed their respective libraries' subscription to both print and electronic learning resources, followed by 30(10.8%) who did not know if this was done, and 8(2.9%) who indicated otherwise. Due to the intervention of the Consortium of Tanzania University and Research Libraries (COTUL), many academic and research libraries in



Tanzania have bought the idea of subscribing to e-resources and the trend has been spreading like the proverbial wild fire. However, the consortium has concentrated much on e-journal subscription at the expense of other resources such as print. As academic libraries are integrating e-resources in their collections, it is pertinent to consider also subscription of printed resources. Indeed, print resources also need prioritisation to have a balanced and diverse collection. With regard to the type of e-resources the university libraries subscribed to, the respondents' responses have been summarised in table 9:

Table 9: Types of e-resources University libraries subscribed to

Category	Frequency	Percent
E-journals	150	35.4
E-book	115	27.1
Lecture notes/	97	22.9
Theses and dissertations	61	14.4
Databases	1	0.2

Source: Field Data (2017- 2018)

Table 10 presents responses received on the future of both types of resources. Respondents indicated what they felt was going to happen with regards to the two types of resources.

Table 10: Future of Print and Electronic Resources in Tanzania University Libraries

Category	Frequency	Percent
Print resources will continue to co-exist with electronic resources	267	52.5
Electronic resources will supplement print resources	161	31.6
Electronic resources will eventually replace printed resources	81	15.9

Source: Field Data (2017- 2018)

Note: Multiple Non-exclusive Responses

According to Table 10, majority (267; 52.5%) of respondents indicated that print resources would continue to co-exist with e-resources, 161(31.6%) opined that e-resources would supplement print resources and 81(15.9%) mentioned that e-resources would eventually replace print ones . These findings are consistent with those of Kiondo (2003), Zell (2013), Liu (2005) and Wu (2003) who agitate for a hybrid information environment in which online information do not supplant information in print but add access opportunities for information users. Besides, both formats should be collected, maintained, and supported by librarians. On the other hand, IFLA (2012) stresses that e-resources present a number of challenges not encountered with the selection and acquisition of traditional analogue materials, hence they urge libraries to develop clear policies and processes for the selection and management of such resources. Such policies and processes are intended to provide clarity to staff and ensure that e-resources within the library are developed by considering costs, technical feasibility, licensing, access and preservation requirements, and constraints.

Conclusion and recommendations

This study investigated information users' preferences in the use of print and e-resources in Tanzania's universities. The overall picture and lessons emerging from this study indicate that Information users' preference on the use of print and Electronic Resources in Selected Universities in Tanzania: A Survey
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majority of information users still prefer printed resources over e-resources. This outcome goes against the widely assumed notion, particularly in the context of resource-limited Tanzania, that freely availability online resources have replaced printed ones. The implication is for university managements to rethink carefully and take cautionary measures when deciding to reduce or scrap off subscriptions for printed resources to ensure they continue providing information services that support teaching, learning and research agendas. In short, the present academic library climate in Tanzania supports a hybrid environment in which both print and e-format are complementary to cater best for the interests of information users. However, this conclusion does not belie that in Tanzania e-resources are gaining steady ground among users, a culture that should be nurtured to flourish in the face of limited up-to-date print resources and editions in many of the current academic libraries. The findings of this study are also congruent with the Davis (1989) Technology Acceptance Model (TAM), due to the accelerating acceptance, adoption and utilisation of e-resources among university academic user communities in the selected universities in Tanzania. Similarly, e-resources are now increasingly becoming a preferred and effective source of scholarly information and their usefulness in enhancing teaching and learning is systematically being acknowledged.

Overall, the basic tenets of this theory are that the invention of new technology can alter the way society responds to events or what they used to do in an old way. As a way forward, the majority of the respondents embrace hybrid libraries that provide both print and e-resources.

Declaration

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