Users' acceptance of e-resources usage at the Institute of Finance Management, Tanzania

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ABSTRACT

Whereas a large proportion of an institutional budget is allocated to the subscription of e-resources, the low usage of these resources by faculty members and students remain a longstanding challenge. The present study gauged the acceptance of e-resources usage by faculty members and students at the Institute of Finance Management. The study has employed a cross-sectional descriptive research design to gain insights into the acceptance and use of e-resources. A survey instrument was administered to 90 users of e-resources (that is, students and faculty members) conveniently. The study's findings reveal a difference in the usage of open access and subscription e-resources. The e-resources subscribed to by the Institute registered insignificant usage compared to open access resources. Factors such as perceived usefulness, ease of use, users' competencies, and facilitating conditions have been found to predict the behavioral intention of faculty and students to use e-resources. Inaccessibility of subscription e-resources, inadequacy of computers and information literacies and poor Internet connectivity have been found to limit the usage of e-resources. To increase the usage of subscription e-resources, the adoption of e-resources access enhancing tools such as LibHub, marketing the resources through outreach programmes, and increasing computer and information literacies are necessary.

Keywords: *Technology acceptance, e-resources, online learning resources, Tanzania*

INTRODUCTION

Electronic resources play an important role in enhancing teaching, learning and research activities (Mwantimwa, Elia & Ndenje-Sichalwe, 2017). Higher learning institutions all over the world make available a wide variety of these resources for use by undergraduates, postgraduates, researchers, and other information users in their respective institutions. The sources constitute an essential part of the indispensable scholarly reference services and resources provided by academic libraries (Kwafoa et al., 2019; Bwalya & Ssebbale, 2017; Okiki & Asiru, 2011). Since the early 1990s, several initiatives to enhance the availability of scholarly e-resources and information in Africa have resulted in a significant increase in the number of African institutions accessing these resources (Lwoga & Sukums, 2018; Manda, 2005). However, while the number of higher learning institutions subscribing to these resources has risen tremendously, their usage has been unsatisfying (Mwalongo, 2018; Mtega et al., 2013; Alphonce, 2015; Lwoga & Sukums, 2018; Manda, 2005; Msagati, 2014; Dulle, 2010; Association of Commonwealth Universities [ACU], 2010). This indicates that e-resources subscribed to by institutions and through COTUL, a consortium in Tanzania, are underutilized. In particular, e-databases such as Emerald, Sage Publications, Wiley, and Taylor and Francis, have been reported to be significantly underutilized by students and faculty members of different higher learning institutions (Mwantimwa et al., 2017).

The attributory factors militating against effective use of these resources include lack of awareness and limited information search skills (Adeoye & Olanrewaju, 2019; Msagati, 2014), inadequate funds to buy the necessary facilities, and electricity problems (Mwalongo, 2018; ACU, 2010; Manda, 2005). Similarly, Gakibayo et al. (2013) and Dulle (2008) found that the utilisation of e-resources was not only affected by lack of information literacy and computer skills, but also by insufficient access to computers and slow Internet connectivity. While there are many empirical studies focusing on e-resources, their focus has been on aspects other than users' acceptance of electronic resources usage. Apart from that, hardly any study has been undertaken to gain more insights into users' acceptance of electronic resources using the Technological Acceptance Model (TAM) in higher learning institutions in Tanzania. It is against this background that the present study has attempted to assess users' acceptance of electronic resources at the Institute of Finance Management (IFM), Tanzania. In particular, the study examined types of e-resources accessed, gauge perceived ease of use and usefulness of e-resources, identify users' competencies and conditions facilitating the acceptance and use of e-resources, and examining factors limiting e-resources usage. In addition, the study established the associations of perceived usefulness, ease of use, facilitating conditions and users' competencies. The study was mainly guided by the following research questions:

1. What types of e-resources are accessed and frequently used by faculty members and students?
2. What factors limit e-resources usage by faculty members and students?

LITERATURE REVIEW

Types of e-resources used

Electronic resources as electronic representation of information and knowledge are available in diverse forms such as e-databases and libraries. Specifically, e-resources collections used comprises full text databases, e-journals, images, and multimedia in the form of CD-ROMs, tapes, and Internet and web technologies (Sahu & Pandey, 2018; Lihitkar & Rajyalakshmi, 2014; Msagati, 2014; Tunji et al., 2011). Also, e-resources constitute e-discussions, news, online tests, e-learning tutorials, data archives, e-mails, and online chats (Sahu & Pandey, 2018). Other important e-resources in supporting teaching, learning and research include online dissertations, theses and digital archives (Joo & Choi, 2015), e-dictionaries, encyclopaedias, newspapers (Natarajan et al., 2010), online catalogues, and other reference works (Tunji et al., 2011). It is worth noting that e-resources are becoming the most popular and important resources in teaching, learning, and research activities (Joo & Choi, 2015). This is associated with the growth of open access initiatives which enhance the accessibility of e-resources that were inaccessible previously. The diversity of e-resources accessed through different search engines and databases enhances their usability. For instance, Wikipedia and Google have been reported to provide users with numerous open access resources (Lwoga & Sukums, 2018). In addition to providing users with a wide range of e-resources, open access incredibly reduces costs associated with information access (Adeoye & Olanrewaju, 2019; Mtebe & Raisamo, 2014).

Users' acceptance of e-resources usage

Factors influencing the acceptance of e-resources usage among users vary. Noting from the literature reviewed, it is generally agreed that many factors influence acceptance of e-resources usage in teaching, learning and research. Basically, the acceptance of e-resource usage depends on factors such as perceptions, ability of the users, and facilitating conditions. Thus, the introduction and use of e-resources in academic settings has faced or continues to face a battle with users' acceptance, but there have been some positive results (Ngo & Eichelberger, 2019; Sahu & Pandey, 2018). This indicates that library users' acceptance of e-resources is increasing

(see Arshad & Ameen, 2018; Bwalya & Ssebbale, 2017). With regard to how people accept e-resources, a study by Singh and Nhung (2012) reveals that users' perception has a big influence on their usage of these resources. Similarly, Hindagolla (2014) states that the acceptance and usage of e-resources are influenced by users' perceived ease of use, usefulness, and abilities. Similarly, Alajmi (2019) associates the acceptance of these resources with performance expectancy, habit, hedonic motivation, and facilitating conditions. Other authors (such as Alajmi, 2019; Mtebe & Raisamo, 2014; Singh, 2013) have associated acceptance of technology use with performance, effort expectance, social influence, and facilitating conditions. In particular, perceived usefulness of e-resources fosters their usage in teaching, learning, and research. For instance, perceived usefulness of e-resources is believed to improve teaching performance and research tasks (Bwalya & Ssebbale, 2017; Mwantimwa & Nkhoma-Wamunza, 2016). E-resources are believed to enable users to improve not only their academic performance, but also their general effectiveness and productivity. Because of that, perceived usefulness is found to predict the usage of e-resources (Samuel, Onasanya & Olumorin, 2018; Hindagolla, 2014; Donghua, 2008; Tommaro, 2008). Specifically, e-resources play a critical role in improving learning, teaching, and research processes (Arshad & Ameen, 2018; Tunji et al., 2011).

Apart from that, factors such as ease of use have been found to play a critical role in increasing acceptance of e-resources usage. This is noted from a study by Arshad and Ameen (2018) who disclose that perceived ease of searching e-databases fosters the usage of the resources in teaching, learning, and research. According to Jeong (2011), ease of use is a primary determinant of behaviour intention. Further, Donghua (2009) notes that the determinants of intention to use significantly predict actual use behaviour and the direct impact of perceived usefulness and indirect impact of perceived ease of use on both behaviour intention and actual behaviour indicates the importance of ease of use. On the other hand, contents' relevance and system quality have been reported to influence the perceived usefulness, ease of use, and eventual acceptance and use of e-resources (Hindagolla, 2014). In connection with this, Donghua (2008) notes that the perceived usefulness and perceived ease of use fully mediate the impact that information quality and system quality has on behaviour intention. Besides that, factors that influence acceptance and use of e-resources include speed of access to needed resources (Okello-Obura, 2010; Chiemeke et al., 2007), ability to search using multiple files simultaneously, and the ability to access documents from outside the library (Okello-Obura, 2010). Moreover, factors such as remote accessibility, large information capacity, immunity from the effects of time and space limitations, convenience and strong shareability (Alajmi, 2019; Zhang et al., 2011), currency of contents, and costs of access determine the acceptance of e-resource usage (Chiemeke et al., 2007; Mtebe & Raisamo, 2014). Waldman (2003) asserts that users with high self-efficacy when it comes to computers are more likely to explore new technologies, software, and databases than those with limited computer skills. Likewise, Tella and Tella (2003) contend that self-efficacy has a significant relationship with academic achievement. In a related study on library instructions and self-efficacy, Ren (2005) also established a positive correlation between students' self-efficacy and the frequency of electronic resources usage.

Furthermore, self-efficacy and beliefs motivate people to use e-resources by determining how much effort they can expend, how long they can persevere in the face of difficulties, as well as their resilience to failures in their efforts to reach their goals. For instance, students who have self-confidence believe in their capabilities. In relation to this study's perspective, students who have confidence in themselves use e-resources more than those with low esteem. Hindagolla (2014) reports that the effect of perceived abilities of users was found as a strong determinant of intention to use e-information resources and adoption via perceived ease of use. According to the author, self-efficacy is a more powerful determinant of actual system use. Tunji et al. (2011) lend support to the view that ability and experience in the use of computers and users' attitudes regarding computing are important determinants of the acceptance and use of e-resources to support teaching, learning and research activities.

Factors limiting e-resources usage

From the literature reviewed, it appears that there are numerous factors limiting the usage of e-resources among users. Evidently, the limiting factors are associated with limited information literacy skills, users' poor attitudes; low Internet bandwidth, unreliable power, and shortage of funds to subscribe to e-resources (Mtega et al., 2013; Lwoga & Sukums, 2018; Nazir & Wani, 2015; Mwantimwa et al., 2017). In addition, lack of time, inaccessibility of some databases, use of long passwords, and lack of computers have also been found to limit the usage of e-resources by faculty members and students (Kinengyere et al., 2012). Further, lack of orientation on the use of e-resources among users and the shortage of librarians are attributory factors to the under-usage of e-resources in higher learning institutions (Nazir & Wani, 2015; Alphonce, 2015; Msagati, 2014). Also, factors such as individual and institutional differences lead to other constraints associated with lack of interest to use e-resources (Ahmed, 2013).

Research model and hypotheses

Based on the nature of this study, the researchers deployed the Technology Acceptance Model (TAM) developed by Davis in 1989. Since it was first proposed the model has been modified by a number of scholars (Chen et al., 2002; Wu & Wang, 2004; Venkatesh & Bala, 2008; Porter & Donthu, 2006; Venkatesh et al., 2003). The original TAM developed by Davis (1989) is comprised of perceived ease of use [PEOU], perceived usefulness [PU], attitude toward using [ATU], behavioral intention to use [BI], and actual system use [AU] as its components. TAM has been subjected to modifications that have integrated additional variables to strengthen it and improve its relevance (Venkatesh & Bala, 2008; Wu & Wang, 2005; Legris et al., 2003; Venkatesh & Davis, 2000). While Davis (1989) believed, as shown in the original TAM, that technology acceptance is determined by users' perceptions such as perceived ease of use and perceived usefulness, and attitudes, Venkatesh and Bala (2008) argued that facilitating conditions and individual ability are also important predictors. As a result, the authors modified the model to integrate individual differences, systems characteristics, social influence, and facilitating conditions as important determinants of perceived usefulness and perceived ease of use (TAM3). Figure 1 is mainly based on the original TAM and Simplified TAM3 with an additional variable of users' competencies.
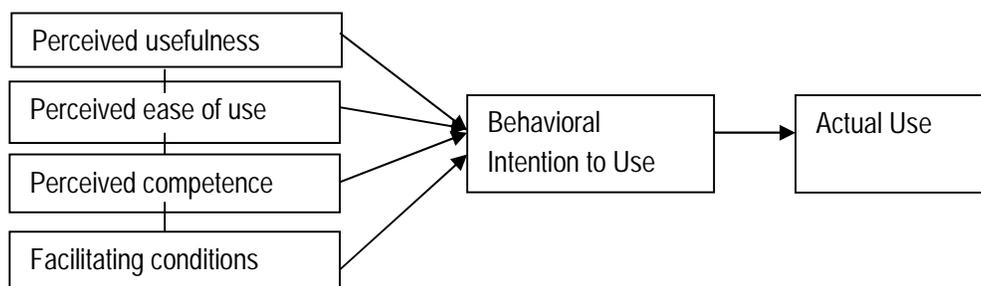

 Figure 1: Adopted TAM to measure e-resource usage acceptance

In the context of this study, the framework suggests that a user decides to access and use e-resources because of their perceived usefulness. If successful in the search and retrieval, a user then makes use of the resources. Under Perceived Ease of Use, it is assumed that if a user's interaction with e-resources is seamless, e-resources will be considered easy to use. Self-efficacy explains that the more easy to use that a system is, the greater is the user's sense of efficacy. Moreover, a tool that is easy to use can make users feel that they are in control of what they are

doing. Due to its ability to illustrate the direct link between perceived ease of use and attitude, Users' ICT competence is one of the underlying intrinsic motivational factors. Perceived ease of use can also contribute, in an instrumental way, to an improvement in e-resource access and use. Based on the proposed research model for the acceptance of e-resource usage by library users, six hypotheses were proposed:

H1. Perceived ease of use has a strong association with perceived usefulness of e-resources;

H2. Perceived usefulness has a strong association with behavioral intention to use;

H3. Perceived facilitating conditions have a strong association with ease of use of e-resources;

H5. Users' ICT competence has a strong association with ease of use of e-resources and;

H6. Behavioral intention to use has a strong association with actual use of e-resources

Prior TAM empirical studies (for example, Saade et al., 2007; Wu & Wang, 2004; Porter & Donthu, 2006; Yi & Hwang, 2003; Moon & Kim, 2001; Saade & Bahli, 2005; Ketikidis et al., 2012) suggest that perceived usefulness and perceived ease of use are important determinants of technology, systems and online resources usage. Noting from these studies, perceived ease of use has a strong connection with perceived usefulness and behavioral intention to use. However, the studies did not go further to gauge the influence of other variables such as users' competencies and facilitating conditions. In contrast, the present study has an extended focus that looks at how acceptance of e-resources usage is influenced by users' ICT competence and facilitating conditions, in addition to perceived usefulness and ease of use factors.

METHODOLOGY

Study design and settings

A descriptive research design was used to gain insights on users' acceptance of e-resources usage. To collect the descriptive data, the study employed a cross-sectional survey design under which data on the variables of interest such as types of e-resources, factors influencing acceptance and limiting factors were collected and examined to determine the relationship between them. The study design was advantageous as it was compatible with the available time and resources. Besides, descriptive research focuses on the characteristics of the population or phenomenon that is being studied. It focuses more on the "what" of the research subject rather than the "why" of the research subject (Sue & Ritter, 2012). The study was conducted at the Institute of Finance Management (IFM), one of the higher learning institutions located in Dar es Salaam, Tanzania. The IFM was purposively selected because its library subscribes to a variety of online databases and resources from different providers such as SAGE Publications, Springer, Emerald and Taylor and Francis through COTUL. Besides that the users at IFM have opportunities to retrieve open access resources.

Study population and sampling

The study involved both academic staff and students who were of interest to this study in realising the research outcomes given their use of electronic resources at the Institute. A total of 90 students and faculty members participated in the study. For the purposes of data collection, a non-probability-convenience technique was used to select 71 students from a total of 1247 and 19 faculty members from the 177 at the Institute. The sampling process was influenced by the time as well as financial resources available for conducting the study. Despite this, the sample was deemed as representative enough to make the findings of the study generalizable to the entire population of the IFM.

Socio-demographic characteristics

The study sought to determine socio-demographic characteristics (sex, age, study level and discipline) of respondents. This was important to increase understanding of e-resources users patterns. Table 1 summarises the socio-economic characteristics of the respondents:

Table 1: *Socio-demographic characteristics* of the sample

Characteristics (n = 90)		Frequency	Percent
Sex	Female	39	43.3
	Male	51	56.7
Age	20-30	63	70
	31-40	20	22
	41-50	5	6
	51-60	2	2
E-resources user	Undergraduate	49	54.4
	Postgraduate	22	24.4
	Academic staff	19	21.1
Academic discipline	Accounting	48	53.3
	Insurance	13	14.4
	Information Technology	11	12.2
	Economics	10	11.1
	Tax Management	8	8.9

Table 1 shows that the majority (56.7%) of the study's respondents were male while females comprised a minority (43.3%). The study sample also indicates that most of the study respondents were students simply because their population ratio against that of academic staff guaranteed their higher representation in the survey. Moreover, the majority of library users at the IFM library were mainly undergraduate and postgraduate students. The majority of the students were males while female students made a smaller part of the sample. This disproportional sex representation is attributed to the nature of the IFM population which is made up of more male students. Furthermore, the sampling technique deployed could have been a factor in the composition of the sample. With the technique, it is easier to come into contact with an undergraduate considering that they are the majority in the Institute's population. The data also show that the majority of the respondents were aged between 20 and 30 years, mainly youths and young adults, a clear congruency with the general demographic profile of the study population. In terms of study programmes, the data reveal that the majority of respondents pursued accounting while those studying in other disciplines such as IT, insurance, and tax management were fewer. This seems to imply that the majority of students at the Institute are pursuing qualifications in accounting. This is understandable because the Institute is primarily identified as a banking and finance higher learning institution.

Study methods

Both primary and secondary data were collected through cross-sectional survey methods. Specifically, primary data were collected through questionnaires and observations. Questionnaires were administered to users (that is, students and faculty members) of e-resources conveniently. The survey questionnaire consisted of two main sections. The first section comprised questions that solicited data on respondents' socio-demographic characteristics while the second included questions on the types of e-resources utilised, the frequency of their usage, factors for their acceptance and those that limit their usage. A structured questionnaire was used

to increase the accuracy and reliability of data (Samuel et al., 2018; Adeoye & Olanrewaju, 2019). The study used nominal and ordinal scales to measure the influence of perceived usefulness, ease of use, competencies and facilitating conditions on the acceptance of e-resources usage. In particular, a five-point Likert-type scale with anchors from "Strongly Agree" to "Strongly Disagree" as was used by Saade (2007). Accordingly, secondary data in this study were obtained from a review of relevant literature related to electronic learning.

Data processing and analysis

The collected data were checked for completeness before coding, entering, and verification for analysis were done. After the coding process data entry was done using IBM Statistical Product for Service Solutions (SPSS) version 20 computer programme for proper data storage, management, and analysis. This software was employed to derive descriptive and inferential statistical data presented in tabular form in this document. Descriptive statistics such as frequency and percent helped to determine differences among variables while inferential statistics helped to establish intercorrelations of factors for acceptance of e-resources usage. In other words, analyses using inferential statistics were performed to gauge the relationships and strengths of the association of the variables.

RESULTS

Types and frequency of using e-resources

The respondents were asked to indicate the types of e-resources (that is, subscribed and unsubscribed by the institution) they use. The results show that a significant proportion (76.7%) of the respondents used unsubscribed resources while fewer (23.3%) said they use subscribed to e-databases. To increase understanding on the types of e-resources used by faculty members and students, respondents were asked to indicate the types of open access and subscribed e-resources they use and frequency with which they use them in their teaching, learning, and research activities. Table 2 summarises the responses obtained:

Table 2: *Types and frequency of using open access e-resources*

Types of e-resources (n = 90)	Frequently		Occasionally		Never	
	F	%	F	%	F	%
Books	33	36.7	51	56.7	6	6.6
Journals	42	46.7	44	48.9	4	4.4
Dictionaries	34	37.8	51	56.7	5	5.5
Dissertations/theses	29	32.2	43	47.8	18	20.0
CD-ROM	16	17.8	21	23.3	53	58.9
Images	28	31.1	47	52.2	15	16.7
Internet resources	79	87.8	11	12.2	0	0.0
Social media	81	90.0	9	10.0	0	0.0
Discussions	19	21.1	14	15.6	57	63.3
Newspapers	28	31.1	25	27.8	37	41.1
News	25	27.8	16	17.8	49	54.4
Online catalogue	19	21.1	33	36.7	38	42.2
Online referencing tools	32	35.6	24	26.7	34	37.7
Digital archives	9	10	16	17.8	65	72.2

The results indicate that faculty members and students use different types of open access e-resources. It is worth noting that social media and Internet resources were the most frequently used e-resources. These were followed by e-books, dictionaries, images, journals, and

dissertations/theses. Surprisingly, the majority of the respondents never accessed and used digital archives, engaged in online discussions, used CD-ROMs, and accessed online news. In addition, online catalogues, newspapers, and referencing tools appear to be moderately deployed by the faculty and students at IFM. Table 3 presents types of subscribed e-databases by IFM:

Table 3: Types of subscribed e-databases used by faculty and students

Types of subscribed e-databases (n=90)	Frequency	Percent
Emerald	35	38.9
IMF e-Library	33	36.7
AJOL	25	27.8
JSTOR	19	21.1
Wiley Online Library	18	20.0
Cambridge Journal Online	14	15.6
Springer E-Journal	12	13.3
Palgrave Macmillan	9	10.0
The Taylor and Francis	8	8.9

The results indicate that a moderate percentage of the faculty members and students involved in the study use Emerald the most, followed by IMF e-library, AJOL, JSTOR, and the Wiley Online Library frequently. It was also observed that Cambridge Journals Online, Springer E-Journals, Palgrave Macmillan, and Taylor and Francis were accessed and used less.

Perceived usefulness and ease of use, competence and facilitating conditions

The faculty members and students were asked to rate the level of agreement on the factors predicting the acceptance of e-resources such as perceived usefulness (PU), perceived ease of use (PEU), perceived competence (PC) and perceived facilitating conditions as presented in Table 4:

Table 4: Perceived usefulness, ease of use, competence, and facilitating conditions

PU, PEU, PC and PFC of e-resources (n=90)	Disagree		Neutral		Agree	
	F	%	F	%	F	%
Perceived usefulness (PU)						
E-databases provide current learning materials	9	10	2	2.2	76	84.5
Use of e-resources enhances my effectiveness in learning and research	7	7.8	8	8.9	69	76.7
Using e-resources helps me to find information that is reliable and relevant in the area of my specialisation	4	4.4	11	12.2	68	75.5
I feel that e-resources are useful in accomplishing my daily tasks	8	8.9	16	17.8	55	61.1
Perceived ease of use (PEU)						
Accessing and using e-resources are very easy for me	10	11.1	11	12.2	62	68.9
It is easy to access e-resources from different search engines such as Google	6	6.6	5	5.6	72	80
Perceived competence (PC)						
I feel confident when I use my computer to access and use e-resources	24	26.7	18	20.0	40	44.5

I feel confident when I use my smartphone to access and use e-resources	10	11.1	15	16.7	60	66.7
I feel confident to search and retrieve e-resources	18	20	24	26.7	40	44.5
Perceived facilitating conditions (PFC)						
Availability of a wider range of e-resources increases the likeliness of their usage	7	7.7	6	6.7	73	81.1
The availability of computer laboratories enhances the usage of e-resources	23	25.6	28	31.1	39	43.3
The availability of internet connection motivates me to access and use e-resources	9	10	13	14.4	68	75.6
Ownership of smartphone fosters the use of e-resources	13	14.4	25	27.8	52	57.8
When I access and use e-resources I save a lot of time	2	2.2	2	2.2	42	46.7

The findings in Table 4 indicate that perceived usefulness of e-resources influenced the majority of respondents to use them. In particular, the ability of e-resources to provide current learning materials; enhance effectiveness in learning and research activities, and provide information that is reliable and relevant to one's area of their specialisation enhances their acceptance. Apart from these, the resources' usefulness in accomplishing teaching, learning and research activities has been found to positively influence their acceptance. In all, these results suggest that e-resources' usefulness in teaching, learning, and research activities plays a great role in their acceptance at the Institute of Finance Management. With regards to ease of use, the results show that most of the respondents disclosed that the ease of access of e-resources as compared to printed materials fosters their usage. In relation to this, the results reveal that most respondents perceived that the ease of access to and convenience of use of computers are important predictors of intention to access and use, and actual use of e-resources.

Furthermore, the results in Table 4 show that respondents perceived that confidence in their ability to use computers and smartphones enhances access and use of e-resources in teaching, learning, and research. These results demonstrate the ability of many students and academic staff to use computers and smartphone to access, retrieve, and use e-resources determined their likeliness to accept the usage of these resources. Some users indicated that confidence of using diverse online systems and databases, searching, and retrieving e-resources fosters their access to and use of e-resources. Apart from that, the results suggest that availability of a wide range of e-resources useful in teaching, learning, and research activities; presence of computer laboratories and Internet services; and ownership of smartphones are the facilitating conditions important in fostering the acceptance of the usage of e-resources. The results also suggest that that the ability to access and use e-resources to help users to save time encourages their acceptance. These results signify that facilitating conditions; that range from hardware, software, and time are important players in fostering usage of e-resources in teaching, learning and research activities.

Intercorrelations of factors for acceptance of e-resources usage

Pearson's r was used to test the level of associations between factors of acceptance of e-resources usage by faculty and students at IFM. The analysis was based on the following hypotheses:

> **H1**. Perceived ease of use has a strong association with perceived usefulness of e-resources;
> **H2**. Perceived usefulness has a strong association with behavioral intention to use;

H3. Perceived facilitating conditions have a strong association with ease of use of e-resources;

H5. Users' ICT competence has a strong association with ease of use of e-resources and;

H6. Behavioral intention to use has a strong association with actual use of e-resources

Table 5 summarises data outputs of Pearson's r correlation coefficient:

Table 5*: Intercorrelations of factors for acceptance of e-resources usage*

N = 90		PU	PEU	PC	PFC	BIU	AU
PU	r						
	p						
PEU	r	.719					
	p	.002					
PC	r	.229	.981				
	p	.110	.000				
PFC	r	.563	.491	.523			
	p	.032	.139	.006			
BIU	r	.761	.664	.591	.709		
	p	.004	.000	.051	.003		
AU	r	.648	.572	.475	.564	.905	
	p	.000	.056	.003	.022	.000	

PU = Perceived usefulness, PEU = Perceived ease of use, PC= Perceived competence, PFC= Perceived facilitating conditions, BIU= Behavioural intentions to use, AU= Actual use

The Pearson's r for the associations between the PEU and PU (r = .719, *p* = .002), and PU and BIU (r = 761, *p* = 004) suggest that there are strong and positive associations between the variables. However, the strongest and positive associations are found between BIU and AU (r = .905, *p* = .000), and PC and PEU (r = 981, *p* = .000). These results signify that changes in one factor are strongly correlated with changes in another variable because the associations for these factors are statistically significant. In contrast, the results in Table 5 show that PFC and PEU are moderately correlated and there is no statistically significant association between them. While hypotheses H1, H2, H4 and H5 are supported, H3 has been rejected. The results suggest that the selected factors are connected to the use of e-resources. In other words, the results show that the PU, PEU, PC, PFC and BIU are important determinants of actual use of e-resources by faculty and students at IFM.

Factors limiting e-resources usage

On the factors limiting e-resources usage, the researchers presented factors that have been reported in the literature and asked respondents to indicate their level of agreement with regarding each of them as a factor that limits their e-resources usage. The results obtained are summarised in Table 6:

Table 6*: Factors limiting the usage of e-resources*

Factors (n=90)	Disagree		Neutral		Agree	
	F	**%**	**F**	**%**	**F**	**%**
Poor quality of internet services and network at the campus hinders the usability of e-resources	8	8.9	5	5.6	67	74.5
Lack of help and support from experts limits the use of e-resources	10	11.1	11	12.2	56	62.2
Limiting access to subscription e-resources to the campus surroundings due to IP restrictions	19	21.1	12	13.3	50	55.6
Inadequacy of computers and information literacy limit usage of e-resources	8	8.9	10	11.1	64	71.1

The results show that a large proportion (74.5%) of the faculty members and students involved in this study cited poor quality of Internet services and network on campus, and inadequacy of computers and information literacy (71.1%) as factors that limit the usage of e-resources. The results also show that lack of help and support from experts with regard to usage of these resources (62.2%) and their inaccessibility off-campus (55.6%) also have a negative effect on their usage.

DISCUSSION

The study's findings indicate that faculty members and students have diverse choices of e-databases and resources (subscription and open access e-resources) to access and use to accomplish academic activities. Although e-books, dictionaries, encyclopaedias, and journals have been found to be used frequently, social media and Internet resources were the most frequently used resources. Although social media appears to be more frequently used than resources that are traditionally considered more academic (for example, e-books and journals), it is important to note that social media tools are becoming important platforms for exchanging teaching, learning, and research materials among faculty members and students. Surprisingly, a large proportion of faculty members and students utilise open access e-databases and resources more than subscriptions. This, however, can be explained by the fact that with subscription resources, users' choices are limited to the e-databases and resources their institution can afford while there is a wide range of open access resources available through search engines such as Google (see also Lwoga & Sukums, 2018). Besides that, access to and use of subscription e-resources are limited to campus surroundings with restrictions of IP address. IP restriction is one of the main problems for people who want to access and use subscription e-resources outside of the institution. Open access e-resources are therefore helping to break down this barrier to information-rich resources particularly in areas where print and subscription e-resources are rather limited.

Perceived usefulness, ease of use, ICT competence, and facilitating conditions have been found to play a critical role in predicting the acceptance of e-resources usage. Regarding perceived usefulness, the usage of e-resources has been reported to be accepted as they provide access to current, relevant, reliable, and a wide range of academic materials. As a result, students and faculty see access to and use of e-resources as useful to their academic endeavours by making teaching, learning, and research more effective, as also observed by Singh (2013). In fact, such access provides desired, current and rich scholarly information on a continuous basis, thus, saving the time of users that would otherwise be spent on searching through voluminous pages of print materials. Perceived ease of use of e-resources is associated with competence of deploying various ICT tools such as laptops and smartphones. Increased ownership of laptops (between

40-50%) and smartphones (>70%), and access to desktop computers is likely to foster an increase in the usage of e-resources by faculty members and students. Access to Internet services and computer laboratories are also key ingredients in the facilitation of access to and use of e-resources. For example, wireless Internet services are believed to boost access to and usage of e-resources.

Regarding the correlation between the variables under test, the actual use of e-resources has been found to depend on behavioral intention of use. This suggests that behavioural intention to use e-resources is not instinctive. A combination of factors such as perceived usefulness, ease of use, users' ICT competence, and facilitating conditions together predict the behavioral intention to use e-resources by faculty and students (Hindagolla, 2014 Jeong, 2011; Donghua, 2008). These results, therefore, suggest that the four selected variables predict the acceptance of e-resources usage through behavioural intention to use them. In this case, behavioral intention to use mediates between predictors and the actual usage of e-resources. Based on the findings, the integration of facilitating conditions and users' ICT competence into TAM increases the applicability of the model in explaining predictors of behavioral intention to use e-resources by faculty and students. It is evident that a noticeable number of prior TAM studies (for example, Wu & Wang, 2004; Ketikidis et al., 2012; Saade et al., 2007) are in agreement that perceived usefulness and ease of use are important predictors of actual use of technology and systems through behavioural intention to use. On the other hand, few TAM studies (for example, Alajmi, 2019) integrated facilitating conditions and individual ability into the model to predict behavioural intention to use information resources.

IMPLICATIONS OF THE STUDY

The present study is one of emerging attempts to gauge users' acceptance of e-resources usage at IFM in Tanzania. It continues to validate the TAM on users' acceptance of e-resources usage by faculty members and students. Like prior studies (for example, Samuel et al., 2019; Ngo & Eichelberger, 2019; Adeoye & Olanrewaju, 2019; Porter & Donthu, 2006), the findings of this study do not draw a complete picture of e-resource usage predictors. The findings also limit generalisations of the findings to different higher learning institutions due to the fact that only one higher learning institutions was studied. From this, caution must be taken in generalising and applying the results in different context. Theoretically, the study contributes a model based empirical test for future research to employ TAM in determining other predictors of e-resources usage by faculty members and students. In fact, some pressing questions regarding the users' acceptance of e-resources usage in Tanzania remain unanswered. Further studies to measure the influence of demographic characteristics and other predictors of e-resources usage in higher learning institutions are crucial.

CONCLUSION AND RECOMMENDATIONS

In the course of revealing information users' acceptance of the usage of electronic resources, the following conclusions have been drawn from the study findings. Information users generally have a positive attitude towards the use of e-resources in teaching, learning, and research. Despite the financial investment by the Institute to subscribe to different e-resources such as e-books and journals, faculty members and students mainly depend of non-subscription teaching, learning, and research information resources. The quality of subscription e-resources is not underestimated by the faculty members and students. The IP address restrictions to access to e-resources outside institutions undermine the effective usage of subscription e-resources. Based on these conclusions, adoption of e-resources access enhancing tools such as LibHub (Kiosk), Remote X, or Web proxy is necessary. Awareness creation and marketing of potential e-resources through outreach programmes and departmental visits are likely to increase the usage

of these resources. Computer and information literacy programmes are important determinants to foster the usage of e-resources.

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