

## **Satisfaction with E-Resources and Perception of Libraries by Postgraduate Students at Daystar and Multimedia Universities in Kenya**

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### **Abstract**

University libraries are expected to provide current, varied, sufficient and authoritative information resources for all academic programs on offer, and adopt information communication technologies in information provision and management. However, issues of support services offered on e-resources, competencies of library staff, provision of diverse e-resources and satisfaction with e-resources are some of the issues that cause dissatisfaction among postgraduate students. This study sought to examine how satisfaction with e-resources influences perception of libraries by postgraduate students at Daystar and Multimedia Universities in Kenya. The objectives of the study were: to determine satisfaction with e-resources; to establish postgraduate students' perception towards libraries; and to establish the effect of satisfaction with e-resources on perception of university libraries. Most postgraduate students' perception of university libraries is inappropriate. This is attributed to users experience and satisfaction which they have had with e-resources. It adopted a descriptive survey research design in sampling 116 postgraduate students and 4 library staff using simple random sampling and purposive sampling methods respectively. Primary data was collected through online questionnaires and interview guides. Descriptive and inferential statistics were used in the analysis. The results revealed that satisfaction with e-resources had a significant correlation with perception of university libraries. An R squared of 0.415 was found, implying that satisfaction with e-resources accounts for 42% of variations in perception of libraries by postgraduate students. The study concluded that satisfaction with e-resources has a statistically significant influence on postgraduate students' perception of university libraries. The implication is that satisfaction with e-resources is a critical determinant of postgraduate students' perception of university libraries. The university library management needs to strengthen the satisfaction related aspects such as friendliness, professionalism, communication, reliability, and timeliness, which seem to be strong drivers of perception.

**Keywords:** *Satisfaction with e-Resources, perception of university libraries, postgraduate students*

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### **1.0 Introduction**

A university library is positioned in institutions of higher learning to support teaching, learning and research activities (Allen & Taylor, 2017). Nzivo (2012)

observes that perception of a library is the way users see and think about the library. In this study, perception of a library is used to mean the way a user thinks or feels about the products and services offered in

the library. Burke notes that users see the library from the electronic paradigm; thus, today's end users don't see the library as a primary destination for research. This study was guided by three objectives; namely, to determine satisfaction with e-resources by postgraduate students; to establish the perception of postgraduate students towards the library; and to find out the effect of satisfaction with e-resources on perception of university libraries by postgraduate students.

Globally, substantial research work exists on perception of students on University libraries (El Fadil, 2013). However, numerous problems were encountered in assessing e-resources which were crucial in forming the University libraries perception (Okogwu, 2019). These included slow internet connectivity, information overload, loss of access to content due to cancellation of subscription, as well as lack of e-resources relevant to users need, remote access challenges among others. El Fadil (2013) noted that factors such as support services on use of e-resources, satisfaction with e-resources and competencies of library staff determine postgraduates' perception of library.

Tiemo and Atebo (2016) defines users' satisfaction as the means which users determine that a product or service meet the required needs and expectations. Further, they suggested that the extent or level of library usage reflected the degree of user satisfaction which may be measured by use of questionnaires or interviews. Adequate and comfortable infrastructure, adequate space and improved collection in terms of quality and quantity are also indicators of satisfaction in libraries.

Librarians who continuously engage in research activities helps to meet the needs

of their users, hence go a long way in improving user satisfaction. Daystar University and Multimedia University belongs to Kenya Library and Information Services Consortium, which foster collective subscription to electronic resources to cope with the increasing cost of information resources. Both universities provide full text online books and full text online journals; print books and print journals; audial visual resources, institutional repository consisting of past exam papers; and theses abstracts. All online electronic information sources are provided with off and on campus access.

Librarians are heavily involved in imparting skills that were required for effective and maximum use of e-resources (Jayaram & Radhzkruhna, 2014). Jayaram and Radhzkruhna further stated that the ability to seek and exchange information using databases is not only dependent on access to technology but also requires procession of necessary technical skill. In both universities' librarians and faculty collaborate in order to offer skills to postgraduate students.

A study by Nzivo (2012) focused on satisfaction at Kenya National Library Services (KNLS), while Perera (2005) as cited by Yusuf and Iwu 2010, emphasized on the values of information literacy in university libraries towards addressing plagiarism. Notably, there is no study that has been done in Kenya, particularly at Daystar University or Multimedia University on satisfaction with electronic resources and perception of postgraduate students in influencing perception of university libraries, hence the research gap.

The university libraries are expected to provide current, varied, sufficient and authoritative information resources for all academic programs on offer, and adopt

information communication technologies in information management. However, there are still lagging issues that cause dissatisfaction among postgraduate students, especially with regard to e-resources. The nature of e-resources influences the perception held by postgraduate students about the university libraries. The formed perception is expected to either increase or decrease the use of e-resources by postgraduate students. Therefore, it is crucial for libraries to ensure that students get the right experience regarding the use of e-resources.

In the 2010 OCLC study, there was witnessed intricate online navigation processes in many university library websites, and the lack of ready support for online users was raising unprecedented users' dissatisfaction despite the many e-databases subscribed by university libraries (Burke, 2011). The aforementioned nature of dissatisfaction is likely to influence the way postgraduates perceive the library, hence raising the question on why involvement of expensive, stringent measures and standards are not bearing the intended fruits of satisfying postgraduates' information needs, and changing the perception held by users of University libraries.

This study sets to determine how satisfaction with e-resources influences perception among postgraduate students at Daystar University and Multimedia University libraries. This study sought to determine how satisfaction with e-resources influences perception among postgraduate students at Daystar and Multimedia University libraries.

The study was guided by theory of reasoned action. Reasoned Action theory was developed by Ajzen and Fishbein in

1975. The theory guided satisfaction with e-resources and perception in this study. The theory reasons that for an individual to develop a certain behavior, the results gotten must be appealing to them otherwise, the individuals will drop the behavior (Ajzen & Fishbein, 1975). The indicators of satisfaction of e-resources include net promoter score, user satisfaction score, user retention score and abandonment rates (Feng & Wei, 2020). Net promoter score is how frequent a library user recommends library e-resources to other people (Feng & Wei, 2020), while user satisfaction score indicates the level of library satisfaction with the library e-resources (Feng & Wei, 2020).

User retention score shows how many library users are still using library e-resources (Feng & Wei, 2020), and abandonment rates entails how many library-resource users have stopped using library resources because of reasons emanating from low satisfaction rates (Feng & Wei, 2020). A postgraduate student satisfied with e-resource should be able to access instant, relevant and diverse e-resource service from the library (Ankara & Atuase, 2018).

In Asia, a study by Sohail and Ahmad (2017) reported that many library users were well knowledgeable with progresses in e-resources, services and their appropriate use in academics and research. Despite that, optimized satisfaction on use of e-resources was being hindered by sluggish downloading and obstruction of university's website. The study did not assess the various internet providers preferred by sampled university libraries. A poor internet provider could be a contributory factor on poor e-resource downloads. While focusing on academic libraries in Ghana, Tetteh and Baah (2019) assessed the user satisfaction derived from library value. Tetteh and Baah considered

undergraduate students, faculty personnel and librarians in e-Ghana Institute of Journalism (GIJ) Todd and Ruth Warren institute and Ashesi University College (AUC) academic libraries. They reported that library services, information resources and the physical library setting had slightly improved their value because users had shown high satisfaction in them.

In Kenya, Maina et al., (2017) on usage and user satisfaction of library resources in Kisii University, showed that though there was satisfaction on available resources to some extent, both the librarians and the library users had not yet fully incorporated computerization; hence, there was low awareness of library e-resources; low training on library users; as well as insufficient investments on e-resources and library management systems.

## **2.0 Materials and Methods**

This study was sampled postgraduate library users in Daystar and Multimedia university libraries and four library staff. There is no extant literature on factors influencing perception and satisfaction with electronic resources in Daystar and Multimedia university libraries in Kenya. The study adopted descriptive survey research design. The total target population was 583 postgraduate students and 4 library staff; 2 of whom were in charge of e-resources, and 2 were university librarians. Using simple random sampling technique, a sample size of 20 percent of the target Postgraduate student

population was selected. This resulted to 116 postgraduate students, with 90 students from Daystar University and 26 from Multimedia.

The response rate from Daystar and Multimedia was 61 and 16 respectively, making a 66.4% response rate. The library staff were selected using purposive sampling technique. This resulted to 4 library staff with a response rate of 75%. Online questionnaires administered using goggle form were used to collect data amongst postgraduate students. Online interview schedule was used to collect data from among the four library staff.

Both qualitative and quantitative data was collected. The data was analysed using Statistical Package for Social Sciences (SPSS) with descriptive statistics such as mean, percentage, frequency and standard deviation used. Inferential statistics which included the correlation and regression analyses were also used to assess the relationship between the study variables.

## **3.0 Results and Discussions**

### ***Reliability Statistics***

Prior to conducting the inferential statistics, reliability of the data was determined using internal consistency measure, that is, Cronbach's Alpha, which was computed using the SPSS software. The results are in Table 1.

**Table 1**

### ***Reliability Statistics***

Cronbach's Alpha	Number of Items	Comment
.890	26	Reliable

The Cronbach's alpha value was 0.890. According Bhattacharjee (2012), the

correlation coefficient above 0.7 was adequate and indicated worthwhile

dependability of data. Therefore, the items in the questionnaire were considered reliable and adopted in the subsequent analyses.

**Response Rate**

A total of 116 questionnaires were administered to the sampled respondents. These were postgraduate students from both Daystar and Multimedia Universities. Out of the 116 questionnaires, 77 were properly filled and returned. This represented a 66.4% response rate. This could be attributed to the fact that data was

collected via online questionnaires since Universities were closed due to the corona virus pandemic. However, according to Saunders, Lewis and Thornhill (2009), a return rate above 50% was adequate for analysis.

**Background profiles of the respondents**

Background information relating to the respondents is provided in this section. The categories include, gender, course program, level of studies and course type. The findings are summarized in Table 2.

**Table 2**  
**Background Profiles of Postgraduate students**

		Daystar	Multimedia	Frequency	Percent
Gender	Female	38	10	48	62.3
	Male	23	6	29	37.7
	<b>Total</b>	<b>61</b>	<b>16</b>	<b>77</b>	<b>100</b>
Course Program	Masters	16	45	61	79.2
	PhD	16		16	20.8
	<b>Total</b>	<b>32</b>	<b>45</b>	<b>77</b>	<b>100</b>
Level of Studies	Course work level			40	51.9
	Research level			37	48.1
	<b>Total</b>			<b>77</b>	<b>100</b>
Course type	Analytical chemistry (Masters)			1	1.3
	Applied mathematics (Masters)			2	2.6
	Clinical Psychology (Phd)			14	18.2
	Communication (Masters)			8	10.4
	Community development (Masters)			4	5.2
	Counseling Psychology (Phd )			1	1.3
	Corporate communication (Masters)			7	9.1
	Counseling Psychology (Masters)			10	13.0
	Communication (Phd)			1	1.3
	MBA Marketing (Masters)			2	2.6
	MBA Finance (Masters)			12	15.6
	MBA Logistics (Masters)			3	3.9
	MBA Monitoring and evaluation (Masters)			1	1.3
	MBA Project Management (Masters)			2	2.6
	MBA Strategic management (Masters)			7	9.1
	Pure Mathematics (Masters)			2	2.6
<b>Total</b>			<b>77</b>	<b>100.0</b>	

The findings in Table 2 reveal that there were more female (48, 62.3%) postgraduate students than male (29, 37.7%) students who took part in this survey. However, the gender composition met the constitutional requirement of at least a third representation from each gender. The results also indicate that most (61, 79.2%) of the participants were pursuing masters program, while the remaining (16, 20.8%) were doing PhD. The findings were line with the sampled population, where the number of masters students was more than those undertaking PhD programs. However, both groups comprised of postgraduate students and the focus of the study was to examine their perception of university libraries as determined by the satisfaction they derive from using e-resources.

Further, the findings showed that (40, 51.9%) of the participants were doing their course work, while the remaining (37, 48.1%) were doing their research component. This implies that the number of students doing their course work and research component was almost the same. The postgraduate students both at course work and research work level require to use e-resources in university libraries implying that respondents in this study

were better placed to give their perceptions on university libraries.

Additionally, the findings reveal that the participants were undertaking different courses in their respective universities. Among the courses mentioned by students were; clinical psychology, communication, counseling psychology and MBA finance. Having students from different courses taking part in this study was advantageous considering that they had varying experiences with regard to the use of e-resources provided through university libraries; therefore, provided meaningful information for this research.

***Descriptive Statistics on Satisfaction with E-Resources***

The objective of the study was to determine the satisfaction with e-resources by postgraduate students at Daystar University and Multimedia University. The participants were requested to rate their agreement or otherwise against each statement posed to them, using a 5-level Likert scale of 1 - strongly disagree; 2 – disagree; 3 – neutral; 4 – agree; and 5 – strongly agree). The statements sought to examine the level of satisfaction with electronic resources among postgraduate students. These descriptive results are indicated in Table 3.

**Table 3**  
***Descriptive statistics on postgraduate’s satisfaction with e-resources***

<b>Statements (N=77)</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>Mea n</b>	<b>Std. Dev</b>
The kinds of e-resources in the library repository are updated regularly and relevant with the course content required by post graduate student courses.	4(5.2%)	18(23.4%)	22(28.6%)	27(35.1%)	6(7.8%)	3.17	1.04
The file sizes of e-resources have low megabytes which is economical to postgraduate students where one can	0(0%)	6(7.8%)	45(58.4%)	23(29.9%)	3(3.9%)	3.30	0.67

download multiple files at convenient cost.

Electronic resources in the library can be sent and re-shared through common ways such as emails, and WhatsApp messages.	1(1.3%)	16(20.8%)	31(40.3%)	27(35.1%)	2(2.6%)	3.17	0.83
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Electronic resources are easy to access and download by post graduate students who have basic computer skills	0(0%)	12(15.6%)	14(18.2%)	41(53.2%)	10(13%)	3.64	0.90
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The library environment and electronic resources are user friendly and do not expose postgraduate students to any hazards such as too much volume on audio resources and too much light for e-books	2(2.6%)	7(9.1%)	22(28.6%)	33(42.9%)	13(16.9%)	3.62	0.96
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Diverse and huge volume of e- resources of has promoted more knowledge impartation to postgraduate students	1(1.3%)	9(11.7%)	20(26%)	34(44.2%)	13(16.9%)	3.64	0.95
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<b>Aggregate Mean</b>						<b>3.42</b>	<b>0.89</b>
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The findings in Table 3 reveal that majority of the respondents with an aggregate mean score of 3.42 and standard deviation of 0.89 agreed with several statements on satisfaction with e-resources by postgraduate students. With reference to the objective which sought to determine the satisfaction with e-resources, postgraduates were highly satisfied with the ease of access of e-resources and the ability to download the e-resources (51, 66.2%) m=3.64); followed by satisfaction with huge volume of e-resources (47, 61.1%) mean=3.64); and then friendly library environment (46, 59.8%) mean=3.62).

The results indicate that postgraduate students were least satisfied with relevance

of the e-resources materials (33, 42.9%) mean=3.17); followed by ability to share the e-resources (29, 37.7%) mean=3.17). This implied that postgraduate students felt that e-resources were easy to access and download, the e-resources were many and diversified and the library environment was friendly for using e-resources. This supports Ankarah and Atuase's (2018) assertion that a postgraduate student satisfied with e-resources should be able to access instant, relevant and diverse e-resource service from the library.

Further, the respondents expressed their overall level of satisfaction with e-resources provided through the university, as presented in Table 4.

**Table 4**  
*Level of Satisfaction*

	<b>Frequency</b>	<b>Percent (%)</b>
Poor	9	11.7
Fair	30	39
Good	31	40.3
Excellent	7	9.1
Total	77	100

The findings in Table 4 indicate that a number of students (31, 40.3%) felt that e-resources provided by the university were good, (30, 39%) felt that they were fair, (9, 11.7%) noted that they were poor, while (7, 9.1%) indicated that the e-resources were excellent. Overall, most of the respondents expressed that e-resources provided by the university were fairly good.

When asked the main issues that cause dissatisfaction among postgraduate students with regard to e-resources in the library, staff respondents noted lack of sufficient networked computers; poor internet connection; power failure; unavailability of required information materials; difficulty in identifying relevant databases to meet their information needs; lack of access to the relevant information materials; large mass of irrelevant materials; and challenge of filtering the results from the search.

The library staff in-charge of e-resources was asked to state how they determine satisfaction of postgraduate student with e-resources service. The staff stated by providing an e-resources utilization form in the library, where users can write remarks to reflect their level of satisfaction; and the library customer feedback form, where users can fill in and

give their complaints, compliments and recommendations, the library management

carries out a customer satisfaction survey through to determine their level of satisfaction with library services; while the library e-resources training forms allows trained students to provide their feedback on level of satisfaction.

When asked to explain measures undertaken by the library in addressing the dissatisfaction mentioned above, staff respondents cited improvement of internet connection; regular library staff meeting to review students' concerns; involvement of university management; collaboration with other universities on best library practices; students training on library use; effective communication with students; and increased volume of e-resource materials.

The findings imply that personalized service and immediate feedback are important factors that determine satisfaction with e-resources by postgraduate students. The results also imply that satisfaction among postgraduate students with regard to e-resources is influenced by a number of issues, namely; poor network connection, power failure, and lack of access to relevant materials among others.

The findings agree with assertions by Feng and Wei (2020) that indicators of

satisfaction of e-resources included: net promoter score, user satisfaction score, user retention score and abandonment rates. Further, Ankarah and Atuase (2018) argued postgraduate students satisfied with e-resource should be able to access instant, relevant and diverse e-resource service from the library.

In addition, the results are consistent with Sritharan (2018) claim that most students are well satisfied with the library e-resource service, although more subscription was required on e-resources; more training plans for library users needed to be organized; distant access capacity was required; and innovation of mobile alert services for raising awareness on new issues of e-resource materials need to be done.

The findings of this study imply that satisfaction with e-resources is a critical determinant of postgraduate students' perception of university libraries. Students expect to receive the best library services that will facilitate and boost their learning. However, this is not always the case and sometimes they are dissatisfied with the library services. Some of the best practices that enhance students' satisfaction include good internet connection, students training, adequate and relevant e-resources, personalized services and immediate feedback.

#### ***Descriptive Statistics on Perception of University Libraries***

The postgraduate student respondents were asked to describe the university library using descriptive adjectives with an aim of establishing their perception towards the

library. Majority of the respondents described the library as resourceful, accessible, friendly, silent, focused, reliable, comfortable, modern, informative, warm, convenient and ambient. However, other respondents felt that their library was obsolete, old, limited and un-resourced. The perception of university libraries by students is paramount since it determines the extent of resource utilization. On one hand, a good perception about the library would result to more students making use of the library, while a negative perception would lead to more students preferring other learning facilities and resources other than the library.

According to Kim (2017), a library user's perception is positively correlated with the utility of an academic library. The postgraduate students' perception of university libraries was determined by a number of factors. The aspects of friendliness, professionalism, communication, reliability, and timeliness stood out as critical drivers of the perception held by postgraduate students on the university libraries which gave an aggregate mean of 3.4.

#### ***Correlation Analysis Results***

Correlation analysis provides the relationship between the independent variable, satisfaction with e-resources [X] and dependent variable, perception of university libraries by postgraduate students [Y]. The correlation analysis was used to show the relationship between variables in terms of strength and direction. Results are shown in Table 5.

**Table 5**  
***Correlation Results: Satisfaction and Perception***

		Y	X
Y	Pearson Correlation	1	
X	Pearson Correlation	.644**	1
	Sig. (2-tailed)	.000	
	N	77	77

\*\* Correlation is significant at the 0.01 level (2-tailed).

The findings in Table 5 indicate that satisfaction with e-resources, X (r = .644\*\*, p=.000), had a strong positive and significant correlation with perception of university libraries by postgraduate students (Y). The P value shows that relationship between the independent and dependent variable is very strong.

This implies increase in satisfaction with e-resources will result to improved perception of university libraries by postgraduate students. Ankarah & Atuase (2018) argued that a satisfied postgraduate student on e-resource should be able to

access instant, relevant and diverse e-resource service from the library.

***Influence of Satisfaction on Perception of university libraries by postgraduate students***

The study sought to determine the effect of satisfaction with e-resources on perception of university libraries by postgraduate students at Daystar University and Multimedia University. The independent variable (satisfaction with e-resources) was regressed on the dependent variable (perception of university libraries). Tables 6, 7 and 8 provide model summary, ANOVA and coefficient results respectively.

**Table 6**  
***Model Summary; Satisfaction and Perception***

Model	R	R Square	Adjusted Square	R Std. Error of the Estimate	Durbin-Watson
1	.644a	0.415	0.407	0.47418	2.137

a Predictors: (Constant), X

b Dependent Variable: Y

The findings in Table 6 reveal an R square of 0.415 implying that satisfaction with e-resources (X) accounts for 42% of

variations in perception of university libraries by postgraduate students (Y).

**Table 7**  
***ANOVA; Satisfaction and Perception***

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	11.967	1	11.967	53.222	.000b
	Residual	16.863	75	0.225		
	Total	28.83	76			

a Dependent Variable: Y

b Predictors: (Constant), X

The ANOVA Table 7 gives the significance of the model in forecasting changes in dependent variable. The model was valid (a good fit of the data), ( $F_{(1, 75)} = 53.222$ ), ( $P = .000$ ) implying that

satisfaction with e-resources was a statistically significant predictor of perception of university libraries by postgraduate students.

**Table 8**  
*Coefficients; Satisfaction and Perception*

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.908	0.346		2.627	0.01
	X	0.728	0.1	0.644	7.295	0.000

a Dependent Variable: Y

Since all the factors of satisfaction, predictor (X) have identical (Likert) scales and due to the fact that the constant value is significant, the study preferred interpreting the B-coefficients rather than the beta coefficients. Consequently, the value of regression weights shown in Table 8 indicate that satisfaction with e-resources had a significantly positive effect on perception of university libraries by post graduate students ( $\beta_1=0.728$   $P < .000$ ).

completing their course as opposed to withdrawing.

Additionally, the results mirrored those of Sritharan (2018), who found out that most students were well satisfied with the library e-resource service, although more subscription was required on e-resources; more training plans on online library use needed; enhanced distant access capacity required; and innovation of mobile alert services for raising awareness on new issues of e-resource materials made. The implication is that satisfaction with e-resources is critical in influencing perception held by postgraduate students on the university libraries. Therefore, university libraries have a role to play in meeting the needs of the students, specifically, in regard to provision of e-resources.

The findings imply that satisfaction with e-resources contribute statistically and significantly towards perception of university libraries by postgraduate students. The findings are consistent with Krieb (2018) postulation that library was able to retain all students that consulted with the reference counter or were present at library trainings and also had a statistically higher rate of remaining in school, hence able to use library often. Further, the findings concur with Soria, Fransen and Nackerud (2017) who argue that students who utilized e-books and acquired library instruction training had meaningfully enhanced their chances of

#### 4.0 Conclusion

The study concluded that satisfaction with e-resources has a positive and significant influence on perception of university libraries by postgraduate students. This implies that satisfaction with e-resources is

a critical determinant of postgraduate students' perception of university libraries. Students expect to receive the best library services that will facilitate and boost their learning.

However, this is not always the case and sometimes they are dissatisfied with the library services. Some of the best practices that enhance students' satisfaction include good internet connection, continuous students training, adequate and relevant e-resources, personalized information services and immediate feedback. The availability of these practices is expected to enhance how postgraduate students perceive university libraries.

## **5.0 Recommendations**

This study recommends the need for the university library management to

strengthen the satisfaction related aspects. In particular, the management should focus on the following aspects; enhancing accessibility of e-resources, provision of diverse e-resources and friendly library environment. Addressing these aspects will result to improvement in the perception of university libraries by postgraduate students.

Specifically, the findings will inform the streamlining of policies on access and utilization of e-resource by the management of universities. In order for university libraries to be perceived as resourceful, accessible, friendly, reliable, comfortable, modern, informative, warm, convenient and ambient, the information professionals need to change online operational practices with regard to e-resources.

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