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Assessment on Usage of the Library Website Resources by Students in the Information Studies Programme at the University of Dar es Salaam

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ABSTRACT

The study investigated students' usage of electronic resources available on the UDSM Library's website. Specifically, the study determined whether information studies students were aware of the electronic resources, how frequently they used them, and whether their demographic characteristics influenced their usage. The study also examined the students' satisfaction with the functional and non-functional attributes of the website resources. A mixed-methods research design combining both qualitative and quantitative data collection methods was used. The sample consisted of 118 student respondents who were selected using a stratified random sampling technique. The data were collected through questionnaires and interviews with class representatives and three library staff familiar with website design. The study employed content analysis to analyze the qualitative data and Statistical Product and Services Solution (SPSS) for chi-square tests to analyze the quantitative data. Observations were also made on aspects that could be observed, such as response speed and user interface. The results of the study reveal that the majority of respondents were aware of the electronic resources available on the UDSM Library website, and there was a relationship between awareness and the respondents' years of study. The study also found that most respondents frequently accessed and used the website's resources, and this was not influenced by gender. However, open-access repositories and e-books were preferred to subscribed resources and journals, respectively. Although respondents were generally satisfied with the quality of information resources, they were dissatisfied with some non-functional aspects of the website, including response speed, accessibility of information resources off-campus, and multiple and misleading user interfaces.

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INTRODUCTION

Libraries are information centers designed to collect, process, and provide information for a wide spectrum of users, including both undergraduate and postgraduate students.

They may be categorized into manual, semi-computerized, and computerized libraries. Any of these libraries may have electronic resources given the availability of computers, network infrastructures, and

users' ability to work with information and communication technology (ICT) tools and facilities. Most libraries link their electronic resources on their websites for easy access, retrieval and use of information. Experience shows that libraries' websites can only meet the needs of users if they have the desired functional and non-functional attributes. Whereas the former embodies both process-oriented and data-oriented requirements, including the processes an electronic library must do and the information it must contain, the latter entails requirements that have nothing to do with the processes or information to be contained in an electronic library. However, they are attributes that, if they are missing, may influence users to not use electronic resources. These include performance speed, security, and the cultural or political preferences of the users.

Websites and electronic resources generally have become a panacea to geographical constraints, outdated library information, and the need for physical access to information (Umar, 2015). Dramatic changes have been brought about by the availability of the internet, which has led to an increase in the usage of electronic information resources and changed the way they collect, organize, and disseminate information (Haroon and Ata, 2010). In the developed world, ICT supports and facilitates remote access to electronic resources, and this has brought significant benefits to its users because they get access to different types of quality electronic resources for academic and recreational purposes. Library websites and the information they contain are easier to use, allow users to share materials, allow users to access materials using electronic devices irrespective of their physical location, and provide links to online databases (Shadrack, 2017). Additionally, websites and electronic resources meet user needs and interests since they can be accessed without necessarily approaching other people and thus protect users from

pandemic diseases, including Ebola and COVID-19. Given the quality and contents of websites and electronic information resources in the developed world, for instance, physical library visits by users, including students, have decreased because they can access library services online outside the library buildings in places such as lecture rooms, dining halls, or hostels using their laptops, smartphones, etc. It is for this reason that libraries in developing countries, and Tanzania in particular, have also designed websites to harness the benefits that accrue from the available ICT infrastructure.

The University of Dar es Salaam (UDSM) Library has adopted ICT use in some functions. These include applications in the online public access catalog and library circulation system, user registration, booking of open access and subscribed electronic resources, and provision of both open access and subscribed electronic resources. All services that are ICT-supported are available via the library website. The subscribed resources include Ebscohost, Emerald Insight, the Wiley Online Library, Cambridge Journals Online, and licensed resources like Research4Life, and so on. Thus, it was anticipated that most users, including students who have gadgets like smartphones, tablets, and laptops, could be able to access online electronic books, journal articles, research papers, etc., and in so doing, curtail overcrowding of students in the library for reading purposes. However, this has not been the case. A quarterly report released by the Reader Services Department of the UDSM Library indicated that the number of users that physically visited the library had risen from 74,533 in March 2021 to 124,249 in June 2021 instead of decreasing. Meanwhile, Edga (2020) also observed that the utilization of electronic resources has been low. The question is, does this have anything to do with website design? or is it that users are not aware of or not satisfied with the resources contained on the

website? This warranted an investigation on the students' awareness and use of the electronic resources contained therein, as well as user satisfaction with functional and non-functional attributes of the website, with a view to improving it.

BACKGROUND INFORMATION

The main goal of the UDSM library website is to inform users about the rules and procedures for using library services, including print materials, and to provide links to various electronic resources. The importance of this study derives from the fact that the UDSM Library has meager financial resources. It cannot afford to purchase print books and at the same time subscribe to all the resources that are available on the market. Towards the end of each year, subscriptions to the electronic resources are renewed in order to meet the information needs of the users. Customarily, usage statistics provided by publishers, whose authenticity can hardly be verified, are used for the selection of resources. There was a need for a scientific study whose findings would inform shareholders about the usage of the available library electronic resources. This was one of the tasks that this research set out to complete in order to improve the quality and content of the University of Dar es Salaam Library website. The findings of this study were expected to improve the practice of selecting electronic resources in Tanzanian academic libraries and contribute to the body of existing literature on the use of electronic resources.

Students' awareness of the electronic information resources

The usage of library websites largely depends on the extent to which users are aware of their content. Several studies have been conducted to assess the awareness of students about electronic resources and services in universities worldwide. For example, Tlakula and Fombad (2017) observed that students' usage of electronic resources at the University of Venda, South

Africa, was low due to a low level of awareness. Zarghani et al. (2015) also revealed that undergraduate students' awareness of library electronic resources was low and recommended information literacy programs and enhanced information retrieval skills. Mwantimwa & Elia (2017) conducted a study on the utilization of e-resources to support academic purposes such as teaching and research in higher education institutions, including the University of Dar es Salaam. Their study found that the majority of respondents were aware of the availability of electronic resources and online databases in general. Azuibuike (2016) observed that there was high awareness of electronic information resources among the postgraduate students at the University of Ibadan and Lagos State University. Similarly, Habiba and Chowdhury (2018) reveal that some students at Dhaka University were not aware of the availability of electronic journals in the university library. The study reported a lack of knowledge and awareness of e-journals among students and faculty members. It follows that the greater the awareness of resources, the greater their use. Therefore, promoting awareness of the library website and its resources at the UDSM Library should be given high priority, especially now that it incurs a high cost to acquire them. This study could not jump into investigating the usage of the library's website resources by students without first establishing their level of awareness of their potential use. Therefore, the first objective was investigated respondents' awareness of the website resources.

Students' Access to and use of Electronic resources

Library website resources include electronic books, electronic journals, digital collections, multimedia, etc. Notwithstanding their potential, there have been differing findings on the level of students' access to and use of the resources. For example, Mutani (2016) examined the

utilization of library resources at Saint Augustine University (SAUT) in Tanzania, focusing on how often users utilize the available library resources. It was found that users' utilization of library resources was very low. Elsewhere, Madondo et al. (2017) assessed the usage of electronic information resources by students at Africa University, Zimbabwe. The findings indicate that there was low usage of electronic information resources by students in the study area. De Rosa et al. (2006), on the other hand, indicate that electronic libraries are accessed and used by most students for academic purposes such as assignments, research, and information acquisition. A study by Gardner et al. (2005) indicates that most students use electronic library services more often. Furthermore, studies by Dilevko et al. (2002) and Moncrieff et al. (2007) argue that fewer students visit libraries physically while more access information electronically. This situation was in contrast to the one that prevailed at the UDSM Library prior to this study, where so many students had been physically visiting it despite the existence of the website which could be accessed online. The existence of contradictory findings regarding e-resource access and use compelled the researcher to investigate what was going on with the University of Dar es Salaam's websites and resources. Therefore, the second objective of this study was to determine respondents' access to and use of the website resources.

User Satisfaction with the Functional and non-functional attributes of Electronic e-resources databases

User satisfaction with the website's electronic resources often depends on the quality of the components that make up the website. It is usually preceded by a system that meets user needs (Kim, 2011). For instance, Frias-Martinez and Chen (2005) assessed user satisfaction with electronic library interfaces at Brunel University. The results indicate that no user was satisfied

with the interface. Gowda and Shivalingaih (2009) argue that the use of library electronic resources largely depends on the available information technology's user-friendliness to meet the information needs of the users. An information system that is not user-friendly leads to difficulties with accessibility and low usage of the library's electronic resources. Habiba and Chowdhury (2018) found that the overall user satisfaction levels of e-resources at the Dhaka University Library varied from user to user. For example, approximately 5% of respondents were dissatisfied with factors such as content, while others were generally satisfied with the e-resources. Mutani (2016) found that only half of the total respondents were moderately satisfied with the available library e-resources at Saint Augustine University. These studies uncovered factors that impede user satisfaction with electronic resources, some of which were examined in this study. For example, Ashaver and Bem-Bura (2013) identified frequent Internet interruptions, inadequate computers in the library, and a lack of skills required for electronic library use as constraints to effective access and use of electronic resources. Studies such as those by Omeluzor and Akinwove (2016) and Oyewo and Bello (2014) observed that constraints on students' access to and use of electronic resources include a lack of advanced searching skills, a lack of guidance on use, slow connectivity, poor computer literacy skills, a lack of awareness, and insufficient resources in various study areas. Similarly, Zarghani et al. (2015) attribute the inadequate use of electronic libraries to a lack of awareness about their existence. Moyo (2004) insinuates that inadequate information literacy and technological literacy skills and competencies on the part of library users and the librarians offering the services hinder the effective exploitation of the resources and services available to them in the electronic environment. Madondo et al. (2017) observed that electronic information resources were substantially

underutilized by students at the University of Namibia's Northern Campus due to a shortage of computers, unreliable internet connections, and a lack of information literacy skills. In addition, Habiba and Chowdhury (2018) noted that other problems encountered by users when using e-resources include a limited number of titles available, limited access to back issues, difficulty finding relevant information, inability to be accessed from home, slow download speed, and limited access to computers. Generally, several studies concerning electronic libraries and services have been conducted around the world. However, no study has been conducted at the University of Dar es Salaam library to assess users' satisfaction with the library's website or electronic

resources. Therefore, the third objective of this study was to respondents' satisfaction with some functional and non-functional attributes of the university library website.

THEORETICAL AND CONCEPTUAL FRAMEWORKS

This study used a modified version of Delone and Mclean's multidimensional information systems success model to show connections among variables. The Delone and Mclean's Multidimensional Information Systems Success Model (1992) has six constructs. These constructs are system quality, information quality, use, user satisfaction, individual impact, and organizational impact, which determine the key attributes of an effective information system.

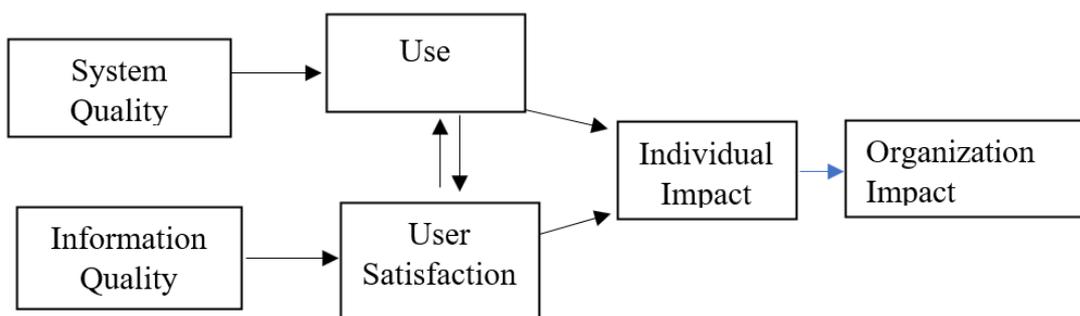


Figure 1: Delone and Mclean's Information System Success Model (Delone and Mclean 1992:87)

According to Delone and Mclean (1992), system and information quality inform use and user satisfaction with the system. When users are satisfied with the system, there is high usage of the system, which in turn has a highly positive impact on the individual who uses it. Collective individuals' positive impact leads to organizational impact. System quality entails the extent to which an information system is easily adapted, usable, available, and reliable when users are interacting with it. Information quality refers to a situation where the content that an information system produces is relevant, easy to understand, complete, and secure.

The system's use embodies how often users access and use the information system, which sites they mostly access, how many full-text documents are downloaded, etc. User satisfaction entails the extent to which a user believes the information downloaded is relevant and that the system itself is easy to access. The individual impact is measured by considering the extent to which users improve the performance of their duties in the organization, hence the organizational impact. The above model was adapted to suit this study, as indicated in Figure 2 below:

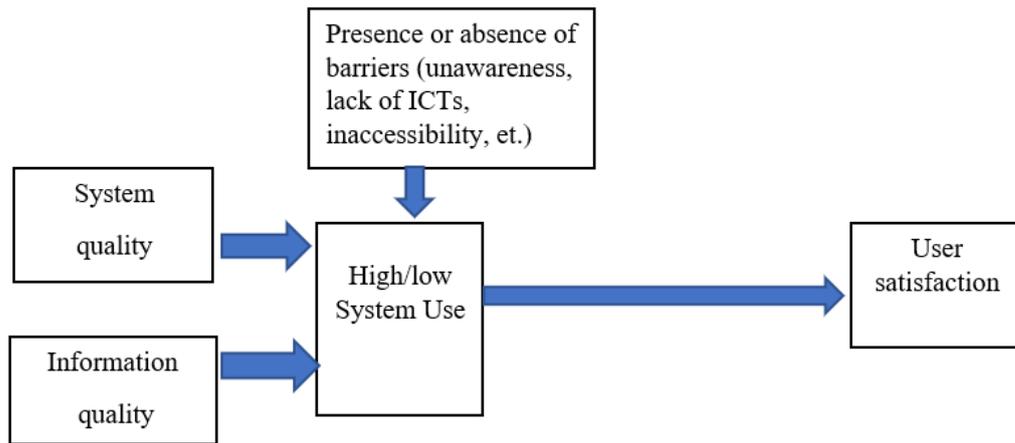


Figure 2: Modified Delone and Mclean's Information System's Success Model (Modified by the Researcher, 2021).

The modified model accounts for websites as systems and postulates that their use is subject to the quality of the system's components, including functional and non-functional attributes of the systems. It is assumed that library website resources have to be made known to users by creating awareness so that they may make use of them. Having been aware and using the website resources will either leave a permanent positive or negative impression on a user, for he or she will either be dissatisfied with or satisfied with the system. These factors influence the extent of use, which can be high or low. Furthermore, the absence or vice versa of challenges was added because no matter how often a website is used, there will be no positive impact if it is confronted with a number of challenges. Unlike the Delone and Mclean models, the impact on a user and organization was not included due to the nature of the study. The purpose of this study was not to test this model but rather to use it to guide the study.

METHODS AND MATERIALS

This study employed a descriptive research design, whereby a mixed-methods research approach and the survey method, in particular, were employed. These work well when there is a relatively large sample size. Stratified random sampling was used to obtain student respondents from all years

of study, and purposive sampling was used to obtain library staff who were familiar with the library website design. A mixed-methods research approach was used because of its strength in integrating qualitative and quantitative data and the ability to study phenomena in greater depth. Thus, a questionnaire with both closed and open-ended questions was distributed to the Information Studies students through emails and some by hand. These were deemed an appropriate population because they take courses on electronic information resources and the use of information and communication technology generally. In areas such as retrieval speed and user interface, observation was used to supplement the questionnaire. Informed consent from the respondents was sought, and the respondents were assured of the confidentiality and privacy of the information they would provide. The quantitative data were processed using SPSS, in which some variables were subjected to Chi-square tests. The qualitative data were analyzed using content analysis. The next section presents and discusses the findings.

RESEARCH FINDINGS AND DISCUSSION

The demographic data of the respondents, which include gender and programme of study are presented. Age was not

considered since all students appeared to be young.

Table 1: Gender of the respondents (n=118)

Category	Frequency	Percent
Male	51	43.2
Female	67	56.8
Total	118	100

(Field data, 2022)

The results indicate that female respondents were the majority compared to the number of male respondents. However, this does not mean that females were more frequent users of the library's website resources than males.

Year of study of the respondents

In respect to year of study. Results are summarized in Table 2 below:

Table 2: Respondent's Year of study

Category	Frequency	Percent
First year undergraduates	34	28.8
Second year undergraduates	38	32.2
Third year undergraduates	36	30.5
Postgraduates	10	8.5
Total	118	100

(Field data, 2022)

Table 2 shows that undergraduate respondents were the majority, of whom second-year students had the greatest number (32%), while postgraduate students had a lower number (8.5%) because they are usually fewer compared to

undergraduates. Furthermore, with the exception of postgraduate students, this finding indicates that the number of respondents according to the year of their studies did not differ significantly among respondents, as they were all around 30%. This was not worked out by the researcher, it was the result of a cluster random sampling procedure in which every second student on the list was picked for inclusion in the study.

Respondents' awareness of electronic resources

Respondents were also asked to indicate their awareness of the website resources that contain subscribed and open-access resources. The results are summarized in Table 3.

Table 3: Respondents' Awareness of the Website Resources

Category	Frequency	Percent
Aware	75	63.6
Moderately Aware	43	36.4
Total	118	100

(Field data, 2022)

The finding indicates that the majority of the respondents were aware of the website's resources. It was learned later that most respondents who indicated that they were moderately aware of the resources were first-year undergraduate students who attributed it to missing the library orientation program following hectic schedules once the university opened.

Table 4: Cross tabulation between Year of study and Awareness of the Website resources

Year of Study	Awareness of the Website Resources		Total	Chi-square	df	p-value
	Aware	Moderately Aware				
First year undergraduates	12 16.0%	22 51.2%	34 28.8%			

Second year undergraduates	25 33.3%	13 30.2%	38 32.2%	19.893	3	0.000
Third year undergraduates	31 41.3%	5 11.6%	36 30.5%			
Postgraduates	7 9.3%	3 7.0%	10 8.5%			
Total	75 100.0%	43 100.0%	118 100.0%			

(Field data, 2022)

Table 4 indicates that the *p*-value is less than the significance level. Thus, there is a relationship between the categorical variables, namely the respondents' year of study and awareness of the website resources. This may be attributed to the fact that the longer one stays at the university, the more aware he or she becomes of the resources that the university library provides for academic purposes.

Table 5: Respondents' Frequency of Access to and Use of Website Resources (n=118)

Category	Frequency	Percent
Very often	24	20.3
Often	40	33.9
moderate	45	38.1
Occasionally	9	7.6
Total	118	100

(Field data, 2022)

Table 5 indicates that a majority of 64 (54%) respondents often access and use website resources, while 54 (46%) do not access them frequently. Respondents who indicated that they do not use website resources frequently attributed it to failure to access them off-campus, unreliable internet connectivity, inadequate ICT infrastructure, and a low response rate. Several studies, including Arshad and Ameen (2018), Oyewo and Bello (2014), Omeluzor and Akinwove (2016), and Madondo et al. (2017), appear to consider a lack of advanced search skills to be the major barrier to e-resource utilization, though they do not directly link the problem to electronic libraries. However, in this study, lack of skills does not appear to be a big issue because, to a large extent,

respondents are information literate. This does not rule out that all users of the website resources do not encounter this problem. This study identified the inaccessibility of electronic libraries from distant places and slow download speeds, as constraints to effective access and use of the website resources. These findings correspond to those by Habiba and Chowdhury (2018), who identified the same problems.

Further probing into the matter indicated that a significant number of the respondents do not use electronic resources due to reliance on lecture notes for their assignments, as one student respondent put it:

“Electronic resources are too abundant to select.

We believe that instructors generate exam questions from their lecture notes so we opt for them”

Unlike in the past, when students were eager to learn and gain knowledge, nowadays some students want only to pass the examination. Therefore, findings indicate that all respondents access electronic resources, although to varying degrees. Even so, the majority of them use it often. These results are in sharp contrast with Mutani (2016), who found that utilization of library resources by users at Saint Augustine University in Tanzania was very low, but Mutani's (2016) study did not specifically focus on electronic resources. However, these results are consistent with findings by Olawabu et al. (2016), who found that students who were in the third year of their studies were the

most frequent users of electronic resources because of their research activities. Also, these findings do not echo findings by Gardner et al. (2005), which found that most students use electronic library services more often compared to traditional library services when they are in distant places. The contrast may be a result of the fact that some students at UDSM are not able to access an electronic library when

they are off-campus, not because they are not available, but rather because they have not registered for the resources.

Furthermore, the researcher wished to know whether access to website electronic resources was influenced by demographic characteristics of the respondents, particularly gender. Table 6 shows the findings:

Table 6: Cross tabulation between Frequency of Access to and Use of Information and Gender of the Respondents

Frequency of Access to Website Resources	Gender		Total	Chi-square	Df	p-value
	Male	Female				
Very often	13	11	24	1.155a	3	0.764
	22.4%	18.3%	20.3%			
Often	20	20	40			
	34.5%	33.3%	33.9%			
moderate	22	23	45			
	37.9%	38.3%	38.1%			
Occasionally	3	6	9			
	5.2%	10.0%	7.6%			
Total	58	60	118			
	100.0%	100.0%	100.0%			

(Field data, 2022)

Table 6 indicates that the p-value (0.764) is greater than the significance level. Therefore, it may be rightly inferred that there is no relationship between respondents' frequency of accessing the website's resources and their gender. Perhaps this is because both female and male respondents have similar information needs, and resources that meet their needs are available through the same platform.

Types of Accessed E-resources

Respondents were asked to indicate the type of website resources that they accessed

most. These were categorized into two types: open and subscribed resources, but some could indicate if they thought they accessed and used them equally. Their responses are summarized in Table 7. The finding in Table 7 indicates that most respondents access open-access resources more than subscribed resources. However, a significant number of respondents indicated that they access and use both open-access repositories and subscribed resources. The open-access repository that is used most is Theses and Dissertations.

Table 7: Types of e-resources accessed

Category	Frequency	Percent
Subscribed e-resources	32	27.1
Open Access repositories	52	44.1
Both open and subscribed resources	34	28.8
Total	118	100.0

(Field data, 2022)

This was attributed to difficulties in accessing subscribed resources and the fact that, in order to identify research gaps, one must check what has been done in the country and what has not. Such information is obtainable from theses and dissertations and may not be available in published materials. Among the subscribed resources, the findings show that e-books are accessed and used more than e-journals.

Perhaps this is because the majority of respondents were undergraduates, who do not take part in research activities.

Purpose for which Respondents access and use Website Resources

It was imperative to find out purposes for which students access and use information. The results are shown in Table 8 below:

Table 8: Purposes for which Respondents Access and Use Website Resource

Category	Frequency	Percent
Seminar presentations	48	41
Class assignments	39	33
Research	19	16
Examinations	12	10
Total	118	100

(Field data, 2022)

The above finding indicates that the majority of the respondents, access and use website resources for seminar presentations and class assignments but not for examinations. Most students use "desa," meaning lecture notes, for tests and examinations. This was confirmed through an interview, where the person said that when exams approach, the library's digital collection becomes vacant while other collections, particularly special reserves, garner a number of users. However, it should be noted that, at that time, only a few respondents had started conducting research. This could be a reason why the research was not mentioned by a large number of students.

The researcher sought to investigate students' satisfaction with the attributes of the Website resources. As a result, respondents were asked to indicate the extent to which they were satisfied the website resources. This issue had several components derived from the need to assess quality of information and some non-functional attributes of the library website. The findings are as follows:

Quality of Information Resources

Respondents were asked to indicate whether they were satisfied with the quality of the information resources that it contains. Their responses are summarized in Figure 3 below:

Respondents' Satisfaction with Some Functional and Non-Functional Attributes of the Website Information Resources

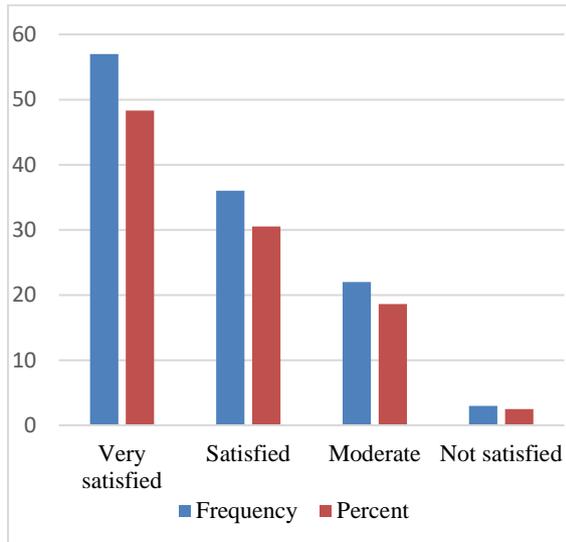


Figure 3: Respondents Views on Quality of Information (Field data, 2022).

Figure 3 demonstrates that a majority 93 (83%) of the respondents indicated that they were satisfied with the quality of the available information resources. Nine (16%) of the respondents indicated that they were moderately satisfied and only one 1 (02%) was not. Further probing on this issue indicated that there was one respondent who was visually impaired, thus one percent that was not satisfied with the available resources. These findings are in sharp contrast to studies by Gowda and Shivalingaih (2009) and Oyewo and Bello (2014), which show that most of the library users were not satisfied with the electronic library resources due to factors such as low level of awareness, inadequate literacy skills, and their negative attitudes towards the kind of services provided. This may have been occasioned by the fact that findings show that most respondents in this study were aware of the e-library and its resources and were information literate. However, the findings of this study correspond to findings by Habiba and Chowdhury (2018), who found that over half of the respondents in their study indicated that they were generally satisfied with the e-resources.

Table 9: Respondents' Views on Retrieval Response Speed

Category	Frequency	Percent
Very satisfied	10	8.5
Satisfied	13	11
Moderate	50	42.4
Not satisfied	45	38.1
Total	118	100

(Field data, 2022)

Table 9, shows that a majority 95 (80%) of the respondents, indicated that they were not satisfied with the response speed when retrieving information. Only 23 (20%) of the respondents, indicated that they were satisfied. Furthermore, one staff member had this comment:

“For now, retrieval speed is inadequate, but we expect this issue to cease soon”

These findings were confirmed through observation in which some users were caught waiting too long for the information they searched for to be retrieved. Therefore, generally, the majority of respondents were not satisfied with response speed. This finding is echoed by Oyewo and Bello (2014) and Omeluzor and Akinwove (2016) studies that identified slow connectivity as one of the factors that constrain users' access to information.

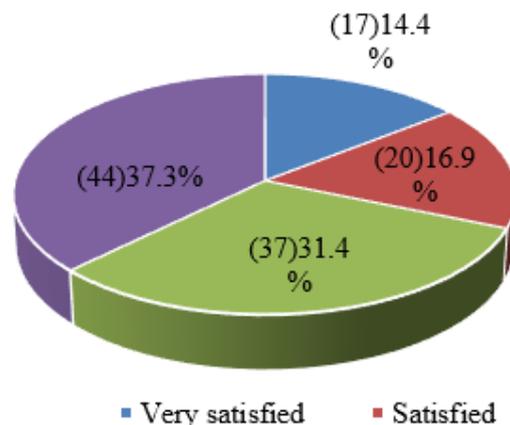


Figure 4: Respondents' Views on Satisfaction with the User Interface (Field data, 2022).

Figure 4 reveals that the majority of the respondents, 81 (68.7%), were not satisfied with the UDSM Electronic Library's user interface, while only 37 (31.3%) were. Most

respondents who indicated that they were not satisfied with the interface attributed it to the malfunctioning of a single search and retrieval window. The dissatisfaction of some respondents with the user interface was confirmed through observation, during which it was found that there were several user interfaces rather than one. For instance, Wiley has one, Ebscohost has another, Springer has another, and so forth. Also, the website menu shows the option "Journals," but when clicked, it only displays the University of Dar es Salaam journals, whereas one expects to get access to open and subscribed journals. The names of publishers as well as their images are displayed on the website menu. However, there is no information that guides users on how to click on those images to be able to access such databases. Variation in user satisfaction with interfaces was echoed in Frias-Martinez and Chen's (2005) study, which found that user satisfaction with digital library interfaces at Brunel University varied due to users' levels of expertise. Thus, there was not a specific type of user that was satisfied with the interface. They found that the greater the increase in expertise, the lower the user satisfaction. They attributed this finding to the fact that information studies students are generally competent in search skills and digital information (Mungwabi, 2019). Perhaps this is a direct result of the non-involvement of users during the design and implementation of the library website in question.

CONCLUSIONS, RECOMMENDATIONS AND AREAS FOR FUTURE RESEARCH

Conclusions: The study's goal was to assess how frequently students in the University of Dar es Salaam's Information Studies Program used the UDSM Library website's resources. The findings indicate the majority of the respondents are aware of the available website resources, and this is associated with their year of study. The usage of website resources is generally high and not influenced by gender, and the open-access repository is

being used the most. Furthermore, findings revealed that the majority of students are satisfied with the quality of information resources but not with response speed, distant accessibility, or multiple user interfaces. Some critical challenges highlighted include the inaccessibility of the electronic library off-campus, low response speed, and unreliable connectivity. Despite the bottlenecks indicated, students use website resources for academic purposes. Therefore, there are aspects in which the UDSM Electronic Library has been a success. The findings suggest user participation in the design and implementation of library websites is crucial.

Recommendations: The University of Dar es Salaam Library should improve its awareness programs to ensure the available website resources are well known to the university community. This would allow information resources to be used and achieve value for money. User education through information literacy programs and other library training should be provided sustainably. Furthermore, the UDSM Library should ensure registration for access and use of resources is done at the library or online, unlike the present practice, in which users must be registered at the Computer Center. This will enable students to access website resources from distant locations and around the clock. Available user interfaces are integrated into one single interface, but it does not work. The library should consider activating it and increasing bandwidth so that response speed may be improved. Furthermore, the library website should be linked to theses and dissertations maintained by other higher learning institutions since they seem to be preferred by the respondents. The e-resources selection committee should consider balancing subscriptions to e-journals and e-books. This is because experience shows that much attention has always been paid to the subscriptions of journals rather than books. Last but not least, the UDSM management should consider increasing budget allocation for library activities to foster the effective operation of electronic library services. These

include sustainable power through the use of generators.

Areas for future research: This study developed a conceptual framework that guided this study but has not been tested. There is a need to conduct a study that will test the model used to guide this study. Another study may be conducted to assess the impact of the electronic library on the parent organization, as indicated in Delone and Mclean's 1992 model. The model indicates that information systems have an impact on both individuals and organizations.

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REFERENCES

- Ashaver, D., and Bem-Bura, M. D. (2013). Students' Perception of Library Services in Universities in Benue State, *IOSR Journal of Research and Method in Education*, 1(5): 41-48.
- Azubuike, C. O. (2016). Information Literacy Skills and Awareness of Electronic Information Resources as Influencing Factors of their Use by Postgraduate Students in Two Universities in South-West Nigeria, *Library Philosophy and Practice* (ejournal). Available online at <http://digitalcommons.unl.edu/libphilprac/1407>. Retrieved on 9th June 2021.
- Delone, W., and Mclean, E. (2003). The Delone and Mclean model of information systems success: A ten-year update, *Journal of management of information system*, Volume 19(4): 9-30.
- De Rosa, C. et al., (2006). College students' perceptions of libraries and information resources. Available online at <http://www.oclc.org/us/en/reports/perceptionscollege.htm>. Retrieved on 10th September 2021.
- Dilevko, J., & Gottlieb, L. (2002). Print sources in an electronic age: A vital part of the research process for undergraduate students, *Journal of Academic Librarianship*, 28: 381-392.
- Edga, A. P. (2020). An assessment on the utilization of electronic resources bachelor of arts in mass communication at the university of Dar es salaam. University of Dar es salaam.
- Gardner, S., & Eng, S. (2005). What students want: Generation Y and the changing function of the academic library Portal, *Libraries and the Academy*, 5: 405-420.
- Gowda, V., and Shivalingaiah, D. (2009). Attitude of Research Scholars Towards Usage of Electronic Information Resources: A survey of University Libraries in Karnataka, *Journal of Library and Information Studies*, 56(36): 184-191.
- Habiba, U. and Chowdhury, S. (Use of electronic resources and its impact: A study of Dhaka university library users, *The Eastern Librarian*, 23(1): 74-90.
- Madondo, T., Sithole, N., & Takainganhamo Chisita, C. (2017). Use of Electronic Information Resources by Undergraduate Students in the Faculty of Management and Administration at Africa University, Mutare, Zimbabwe, *Asian Research Journal of Arts & Social Sciences*, 2(2): 1-12.
- Moncrieff, J., Macauley, P., & Epps, J. (2007). My universe is here: Implications for the future of academic libraries from the results of a survey of teachers. *Australian Academic & Research Libraries*, 38, 71-83. Retrieved from <http://alianet.alia.org.au/>
- Moyo, L. M. (2004). The virtual patron, *Science and Technology Libraries*, 25: 185-209.
- Moyo, L. M. (2008). The Virtual Patron, *Science and Technology Libraries*, 25 (1-2): 185-209.

- Mungwabi, H. (2008). Use of Information and Communication Technologies (ICT) in Learning by Undergraduate Students at the University of Dar es salaam Library in Tanzania. *The University of Dar es Salaam Library Journal*, 13(2): 49-64
- Mutani, V. (2016). Utilization of library resources at Saint Augustine University of Tanzania (main campus) Mzumbe University, Accessed online at <http://hdl.handle.net/11192/2068>. Retrieved on 25th October, 2021.
- Mwantomwa, K. and Elia E. (2017). Utilisations of e-resources to support teaching and research in higher learning institutions, Tanzania, *University of Dar es Salaam Library Journal*, 12(2): 98-123.
- Omeluzor, S. U., Akibu, A. A., and Akinwoye, O. A. (2016). Students' Perception, Use and Challenges of Electronic Information Resources in Federal University of Petroleum Resources Effurun Library in Nigeria, *Library Philosophy and Practice*. Accessed online at <http://digitalcommons.unl.edu/libphilprac/1428>. Retrieved on 2nd July 2021.
- Oyewo, R. O., and Bello, G. R. (2014). Students' Accessibility and Utilization of Electronic Information Resources in the Library: A Case Study of Selected Monotechnics in Oyo State, *Information Technologist (The)*, 11(1). Available online at <https://www.ajol.info/index.php/ict/article/view/109512>. Retrieved on 15th September, 2021.
- Parmar, S. (2019). Utilisation of E-resources and Databases in Agricultural and Veterinary Universities of Hisar, Haryana, *Library Philosophy and Practice (e-journal)*, Available online at <https://digitalcommons.unl.edu/libphilprac/2555>. Retrieved on 14th October 2021.
- Tlakula, P. and Fombad, M. (2017). The Use of Electronic Resources by Undergraduates of Venda. University of Venda, South Africa.
- Umar, J. F. (2015). Assessment on the use of electronic resources by Undergraduate of Library and Information Science students Ahmadu Bello University Zaria (doctoral dissertation, department of library and information science, faculty of education, Ahmadu bello university).
- Zarghani, M., Eskrootchi R., Hoseini A. F. Noorishadkam M, Golmohammadi A., and Mostaghaci M. (2015). Virtual Library: An Essential Component of Virtual Education, *Journal of Medical Education and Development*, 10(1): 36-46.