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# University Students' Motives and Challenges in Utilising Institutional Repository Resources

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## **Abstract**

*One of the core functions of an academic institution is to generate knowledge, disseminate to the intended audiences and preserve it for future use. Academic institutions are now establishing Institutional Repositories (IRs) to collect produced resources to facilitate accessibility, dissemination, utilisation and management of intellectual materials that are produced within an institution. The purpose of this study was to assess postgraduate students' motives for utilising IR resources and also the challenges they encounter when utilising IR resources at the University of Dar es Salaam. This study was conducted using a descriptive study design whereby it used both qualitative and quantitative research approaches. The population of this study comprised postgraduate students, librarians and ICT personnel from the University of Dar es Salaam. A sample of 102 respondents was drawn conveniently and purposively for this study. Data were collected through questionnaire, interview, as well as a review of documentary sources. Quantitative data were analysed through a Version 16 Statistics Package for Social Science (SPSS) and qualitative data were analysed using content analysis. The findings indicate that access to full-text documents, the relevance of IR resources and easy searching of the materials in the repository system motivate the utilisation of IR resources. However, several challenges impede the utilisation of these resources including unreliable internet access, inaccessibility of full-text and lack of guiding policy have been revealed as the major challenges toward utilisation of IRs resources. The study recommends training postgraduate students on the general use of IRs. Also,*

*the University management should develop an IR policy that will guide the utilisation IR resources.*

**Keywords:** Repository, Institutional Repository, scholarly resources

## **Introduction**

The utilisation of information material mostly depends on how it is displayed, presented, or marketed to the intended group to ensure its use (Omeluzor, 2014). The need for scholarly and other informational resources among postgraduate students is indispensable as far as learning and research are concerned (Kaggwa & Sekiwu, 2017). The emergence of IRs has been significant in facilitating access, dissemination, utilisation and management of scholarly information (Omeluzor, 2014). Academic institutions through their libraries have been increasingly establishing institutional repositories to support the utilisation of scholarly informational materials generated by researchers in the respective institutions (Saini, 2018). Therefore, the purpose of establishing institutional repositories is to foster the utilisation of scholarly materials produced by members within an academic and research institution (Russell & Day, 2010). The establishment of institutional repositories has been amplified by the advent of Information and Communication Technology (ICT). The rapid advancement of internet technology and the adoption of open access movement have influenced changes on how researchers conduct and share their research findings locally and internationally (Tandi Lwoga & Questier, 2014). Institutional Repository (IR) refers to an online database used to archive important educational and research works (Ukachi, 2018).

## **Background to the Problem**

In the past few decades, scholarly output generated by institutional members and students were just kept in university libraries which were made accessible only by patrons who visit the library hence, limiting their utilisation (Wangui, 2018). The advancement of the World Wide Web coupled with Open Science (OS) initiatives has led to the establishment of systems such as repository software which are used by academic and research institutions to harvest and disseminate locally produced intellectual materials. Digital copies of research materials produced by students including theses and dissertations are made available through institutional repositories to enhance their visibility hence, utilisation (Kato, Steinhauer, Kisangiri, & Kaijage, 2021). However, literature has indicated that the utilisation of IR resources is still low. For example, the statistics of the University of Dar es Salaam (UDSM) library repository that was pulled between November

2020 and April 2021 indicated that usage statistics for six months show that only 479 materials from business school abstracts were viewed while 787 from the college of social science, 637 from the school of education to mention the few (UDSM research repository, 2021). Comparing the population of the UDSM, the numbers of views are extremely low.

It is an undeniable fact that before the advent of Information and Communication Technology (ICT), access to scholarly materials was limited. As a result, users encountered difficulties in accessing scholarly materials, which lead to under-utilisation of the contents (Mnzava & Chirwa, 2018).

The establishment of IRs in higher learning institutions' libraries was believed to mitigate the problem of access and utilisation of locally produced informational materials of an academic institution. According to Muneja and Ndenje-Sichalwe (2016), the adoption and use of repositories in Tanzania can be traced back to 2008 when the initiatives of establishing IRs began through sensitising librarians and information professionals to establish IRs in the country whereby the first IR was launched in 2012 by the Open University of Tanzania (OUT), followed by Ifakara Health Institute (IHI) in 2012. Other repositories followed were hosted by Muhimbili University Health and Allied Science (MUHAS) in 2012, Aga Khan University 2013, Sokoine University of Agriculture (SUA) in 2015 and UDSM in 2016. By 2020, Tanzania had registered 14 IRs on Sherpa Romeo <https://v2.sherpa.ac.uk/romeo/>. The drive for establishment of IRs in Tanzania was influenced by the need to accessing locally produced scholarly contents. Not only that but also it was triggered by the need of preserving massive informational resources produced by members of the institution as well as repositories being considered as an avenue for supplying the research community with scholarly materials (Isibika & Kavishe, 2018).

Other materials archived in the repositories include but are not limited to meeting proceedings, course materials, knowledge management tool, research assessments and showcasing an institution's research output (Fasae, Esew, & Holmner, 2017). However, with all the effort made to operationalise repositories, evidence shows that they are still underutilised. In the study conducted by Makori, Njiraine and Talam (2015) on the practical implementation of institutional repositories at the University of Nairobi, research output produced in Africa are underutilised compared to those from developed countries. Also, in their study usage of SUA IRs among academic staff showed that many repositories in higher learning institutions like SUA IRs had not succeeded in terms of the utilisation of its

available local scholarly resources. Therefore, it is important to assess the utilisation of institutional repository resources.

Literature shows that many academic institutions are adopting and maintaining IRs to archive, preserve and share scholarly and other informational materials among researchers and students (Mnzava & Chirwa, 2018). Similarly, the UDSM established an IR for the same purpose of sharing/disseminating scholarly materials to the global research community. With all the efforts and strategies to establish and adopt IRs in academic institutions, literature has revealed low utilisation of IR resources among academics and researchers in higher learning institutions. Considering IRs as one of the very important tools for facilitating access to scholarly materials, this shows that it has not yet played the expected role in facilitating the access and utilisation of scholarly content at the UDSM. This study, therefore, uncovers the factors that motivate postgraduates to use the repository and the obstacles the users may face while utilising the IRs.

### **Objectives of the Study**

The general objective of this study was to assess the utilisation of IRs scholarly resources by postgraduate students at the UDSM. Specifically, the study intended to:

- i. To find out the factors motivating the utilisation of IR resources among Postgraduate students at UDSM
- ii. To identify challenges facing postgraduate students' utilisation of IR resources.

For users to effectively utilise IR resources, several factors need to be considered including making users aware of their availability, types and mode of uploaded information materials to facilitate their academic and research activities (Kodua-Ntim & Fombad, 2020).

### **Literature Review**

#### ***Factors that motivate utilising Institutional Repository resources***

The purpose of establishing an IR is to meet the demands of users. However, there are several factors that motivate users to use utilise IRs. Different scholars have studied motivational factors for the utilisation of IRs from an empirical and theoretical point of view. Rifai and Hasan (2016) conducted their study using the Unified Theory of Acceptance and Use of Technology (UTAUT) model. They came up with a conclusion that the fulfilment of expected results in utilising an IRs is one of the motivational factors for utilising them. The UTAUT model,

when a user is able to access the available IR resources, she/he gets motivated and for this case, the user will continue utilising the repository (Puspitasari, Firdaus, Haris, & Setyadi, 2019).

A study conducted by Gunasekera (2017) on motivational factors for researchers' contribution to IRs and their awareness of open access publishing revealed that factors such as consistent assurance of remote access and availability of full-text content motivated the utilisation of IR resources. A study conducted by Abdelrahman (2017) on the use of University of Khartoum IRs by postgraduate students reveals that regular sensitisation of IRs motivated users to utilise IRs that has led to libraries in respective institutions to implement the sensitising programmes to ensure continuity of IR utilisation.

A study conducted by Mnzava and Chirwa (2018) on the usage of SUA IRs in Tanzania reveals that the availability of reviewed local scholarly information from known reputable scholars is a factor that motivates users to utilise IR resources. Furthermore, findings documented by Shuhaiber (2016) revealed that free access to information has been one of the factors that motivate students to use scholarly resources including those available in their respective repositories. The study about IRs adoption and use in higher learning institutions in Tanzania found that good and enriched scholarly information which fulfils academic needs motivates users to utilise IR resources (Nunda & Elia 2019). Observations made in the reviewed literature suggest that there are different factors that motivate users to utilise IR resources. The literature has revealed such factors as access to scholarly materials especially full-text documents, availability of materials in the IRs from renowned authors and publishers, free access to IR materials and timely training. All factors are important in facilitating the utilisation of IRs.

### ***Challenges facing postgraduate students' utilisation of IR resources***

Despite the importance of IR scholarly resources in facilitating teaching, learning and research, there are observed challenges in accessing and utilising such IR scholarly resources as poor advocacy of librarians towards users, failure of lectures to assign students direct to repository resources, wrong perception towards repository materials, insufficient information searching skills and poor internet connection. In that regard, Adedapo (2020) revealed that the access process of the IR scholarly resources is hindered by the lack of sufficient information about IR scholarly resources, inadequate ICT infrastructure,

copyright breaching issues and media deterioration which in one way or another lowers effort towards effective use of IR scholarly resources.

Vardakosta and Kapidakis (2017) argue that accessibility to IR scholarly resources by postgraduate students is affected by housed collections and poor technical support facilitates access to resources. Jabbar, Saqib and Muhammad (2020) studied awareness and use of open-access resources among the library users of Cochin University of Science and Technology (CUSAT). They found that library users including postgraduate students face challenges in accessing IR scholarly resources. The challenges include difficulties in repositories' interface resolutions, lack of enough instructional programmes and lack of training as well as poor searching skills. Swanepoel and Scott (2018) carried out a study about Canadian and South African scholars' use of IRs, ResearchGate and Academia.edu. They revealed that few scholars, postgraduate students inclusive, actively need to access IR scholarly resources because they had little knowledge, inadequate time and copyright infringement issues have been challenging.

Furthermore, Samir (2017) researched about open repository in Algeria, Morocco and Tunisia. The author indicated that inadequate knowledge on the presence of IR scholarly resources among students is attributed to the lack of informed ideas about access to scholarly information due to the lack of policies that guide access to scholarly resources and open publishing in general. A study by Yonah (2014) indicated that the pace for the adoption and use of IR materials in Tanzania is still not satisfactory since it is reported to be low as compared to the number of institutions that have repositories due to poor advocacy of information professionals in raising awareness towards users. Nunda and Elia (2019) did a study about adoption and usage of IRs in developing countries and found that, among others factors, poor searching skills and poor internet connectivity were highly observed as delay to IR resources utilisation. They further noted that the lack of awareness of the offered services, limited technical expertise as well as lack of enough resources hindered the utilisation of IRs.

Joo, Hofman and Kim (2018) examined challenges in academic IRs based on a survey of academic librarians and found that inadequate budget and staff and poor management support were the challenges to the full utilisation of IRs. Abrizah *et al.* (2015) examined motivating and impending factors in IRs based on a survey of 47 library and information science faculty who had prior experience contributing resources to an IR. Findings show that the lack of guidance policy



and signed agreement or permission to use research outputs of its students and institutional members led to fear of being held accountable or charged for uploading them to repositories for access.

Ukwoma and Ngulube (2019) assessed the obstacles to the utilisation of IRs by academics in higher education in Nigeria. The findings showed that the key barriers to the utilisation of IRs which were the lack of enough infrastructure, lack of institutional repository scholarly resources knowledge and lack of frequent sensitisation programmes. In a similar context, Ashraf and Haneefa (2017) indicated the scholarly use of open-access resources by research scholars such as postgraduate students due to the inadequate hand on support as well as dominant knowledge of IR scholarly resources.

On a further note, (Kotoroi, 2018) revealed that postgraduate students' the lack of intention to share the research output has also been a challenge towards the utilisation of IR scholarly resources. Since the presented challenges are more institutional-based, this study further examined postgraduate students' challenges towards the utilisation of IR scholarly resources. Revealing users' challenges assist in balancing the contributing factor to challenges facing the utilisation of resources in most IRs.

The above reviewed literature presented different challenges that hinder intensive utilisation of IRs such as for advocacy of information providers in creating awareness, wrong perception towards IR, unwelcoming internet availability and speed revealing that it is more institutional challenges than users'.

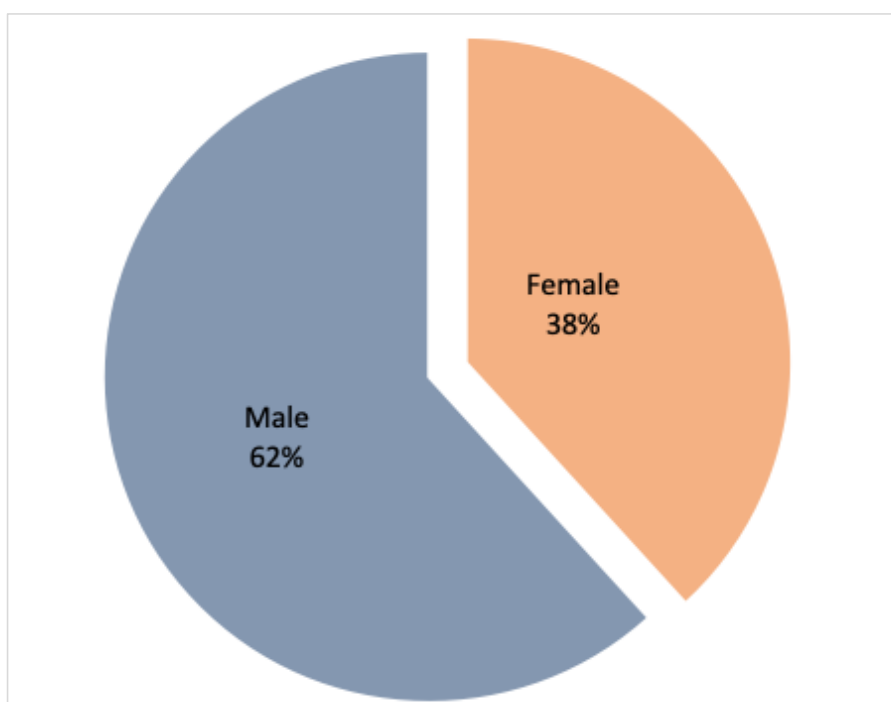
## **Methodology**

This study used a descriptive study design whereby both qualitative and quantitative research approaches were used. The population of this study comprised postgraduate students, librarians and ICT personnel from the UDSM. A sample of 102 respondents was drawn conveniently and purposively for this study. Primary data were collected using self-administered semi-structured copies of questionnaire which were distributed and collected data from ninety-six (96) postgraduate students at the UDSM main campus. Interviews were conducted with six (6) UDSM staff, namely four library staff and two ICT personnel. Interviews were conducted with the selected individuals since they are key informants to the study and therefore, they provided detailed insight into the study variables. Secondary data were collected through reviews of information including but not limited to articles, journals, policies and reports.

Qualitative data were arranged thematically and analysed using content analysis while quantitative data were analysed quantitatively through the aid of Statistical Product and Service Solution (SPSS) version 23. Analysed data were presented using tables, figures and graphs in which frequencies and percentages were shown.

### **Results and Interpretation**

This section presents the findings based on demographic data and the objective of the study that investigated motivating factors for utilising IR resources and the challenges faced by postgraduates students for that purpose. The findings are interpreted followed by the discussion in the subsequent section. Demographic information of the respondents is presented based on gender, age, education level and school/college where the respondent is affiliated. The findings in Figure 1 reveal that majority of 63 (61.8%) respondents were male whereas female were 39 (38.2%) respondents.



**Figure 1: Distribution of respondents by gender (n=102)**

**Source: Researchers Field Data (2022)**

The findings show that there were more male postgraduate students compared to female. The findings correspond Adebayo, Ahmed and Adeniran (2019) who also had more male postgraduate students (75 %) than female. Adedapo (2020) observed that male students have more chances to pursue postgraduate studies

compared to female students. Findings indicate that students who manage to climb the radar of education up to postgraduate level are mostly male students compared to female ones. This can generally be explained by the fact that gender roles and responsibilities influence the participation into postgraduate studies.

### ***Distribution of respondents by age***

Respondents were requested to indicate their age ranging from 20 years old to 50 years and above. The findings as indicated in Table 1 show that majority of respondents 48 (47.1%) were in the age group of 30 to 39 years. They were followed by 29 (28.4%) of respondents who were in the age group of 20 to 29 years, 23 (22.5%) respondents were in the age group of 40 to 49 years, while only 2 (2%) of respondents were in the age group of 50 years and above.

**Table 1: Distribution of Respondents by Age (n=102)**

Category	Freq.	%
20 - 29 years	23	22.5
30 - 39 years	48	47.1
40 – 49 years	29	28.4
50 and above	2	2
Total	102	100

**Source: Researchers Field Data, 2022**

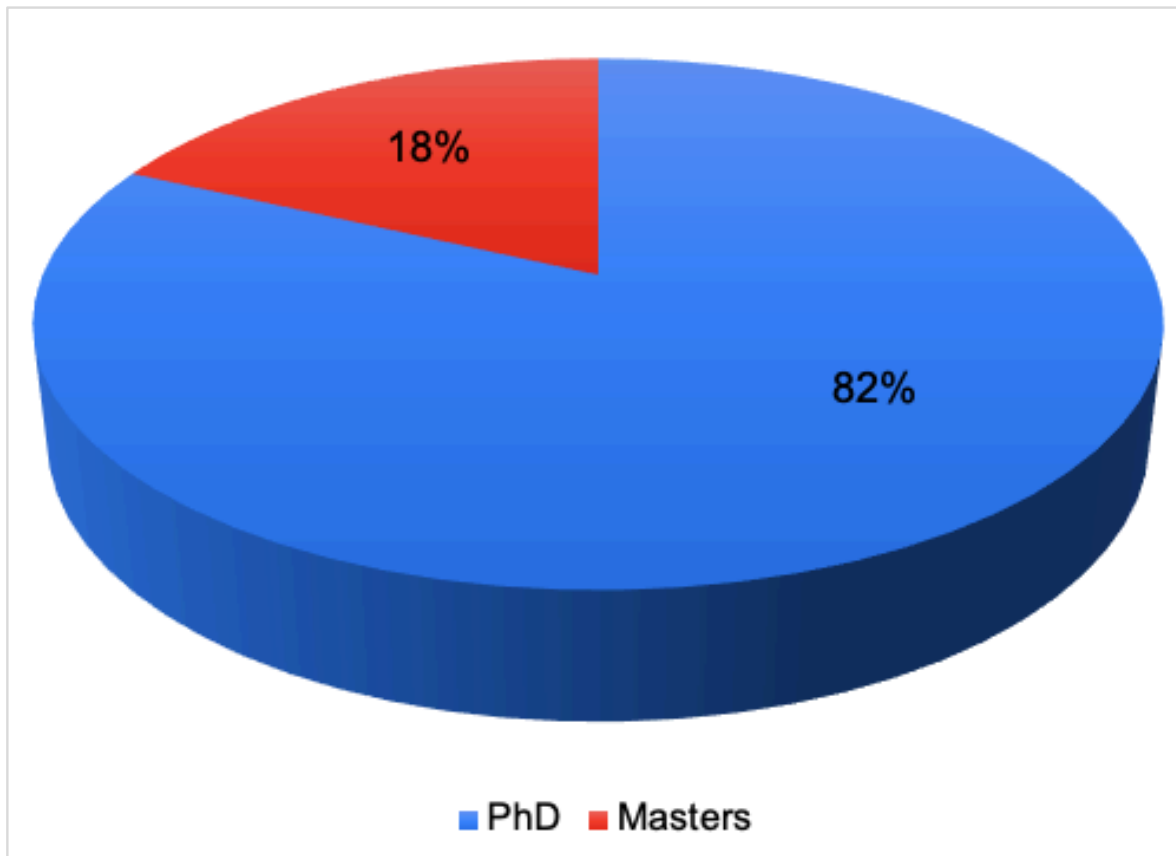
Findings in Table 1 reveal that most of the postgraduate students involved in this study were youths below 40 years. These findings can be justified with the education in Tanzania whereby the formal schooling system requires students aged around 25 years old to be enrolled in the University education in which 3 to 5 years training period is required to accomplish bachelor studies before they join postgraduate studies at an age of around 30 years (Weaver, 2011). However, it is not surprising to see that there are a few who may join postgraduate studies in their 50s as it is difficult to get permission from most employers to undertake long term studies as the remained age for serving in that particular institution is much less and therefore the output of needed postgraduate education cannot be realised (Napathorn, 2021).

### ***Distribution of respondents by level of education***

Since this study involved postgraduate students, it was important to identify the specific level of postgraduate studies to which each respondent belonged. The

Findings reveal that the majority (82%) respondents were pursuing a Master's Degree while only (18%) of respondents were pursuing a PhD, as presented in Figure 3.

**Figure 2: Distribution of respondents by level of study (n=102)**



**Source: Researchers Field Data (2022)**

The findings in Figure 2 indicate that most respondents were in the master's level and only few were PhD students. This could be because most postgraduate students who pursue their studies at the master's level at the UDSM undertake their studies both in coursework and dissertation. Therefore, they are readily available at the University premises as opposed to PhD candidate's studies who pursue their degrees by thesis which allows them to be on campus occasionally. On another note, the number of PhD students corresponds to the education pyramid that the higher study level you go, the smaller number of students it becomes. This could also be aligned to what Fasae *et al.* (2017) established that financial constraints, lack of qualifications, lack of access to mentor-ship and appropriate support are some of the factors that determine PhD studies.

### ***Motivating factors for utilising IR resources***

This study intended to find out motivating factors that determines utilisation of IR resources among postgraduate students at the UDSM. The respondents were requested to indicate the motivating factors for the utilisation of repository resources. The findings show that 86 (84.3%) respondents indicated that access to full-text materials from the repository was one among factors that mostly motivated the utilisation of repository resources. The findings are similar to what interviewee R3 said:

*In our Institutional Repository, we upload abstracts only since the rules do not allow us to upload full text. This has been disturbing students when they search and find good documents but only available in abstract forcing them to come to East Africana physically to search for that document in hard-copy.*

In addition, 86 (84.3%) respondents felt that relevance of IR materials to their studies is one of the motivational factors on utilisation of IR resources. This is supported by the interviewee number (R3) who said:

*Our repository contains relevant materials which reflect the study topics offered by the University and therefore whenever the postgraduate students search for scholarly information materials, they find related materials to the study topic although no full text content. Therefore, relevant material plays the big roles in supporting utilisation of repository resources.*

Apart from that, 80 (78.4%) respondents indicated accessing IR materials off-campus/remotely as a factor that motivates them to utilise them. Furthermore, 83 (81.4%) the respondents mentioned easy searching and retrieval of the scholarly content as the factor motivating the utilisation of repository resources. Besides, 75 (73.5%) respondents mentioned regular updates of new materials for reference as the factor motivating utilisation of repository resources. Furthermore, 73 (71.6%) respondents mentioned user friendliness as the factor motivating the utilisation of repository resources as indicated in Table 2.

**Table 2: Factors influencing utilisation of IR resources (n=102)**

Factors	Frequency		Frequency	
	Yes	%	No	%
Access to full-texts IR materials	86	84.3	16	15.7
Relevance of IR resources to postgraduate studies	86	84.3	16	15.7
Easy searching and retrieval of the scholarly contents	83	81.4	19	18.6
Accessing IR resources off-campus/remotely	80	78.4	22	21.6
Regular updates of new IR materials	75	73.5	17	22.5
Repository user friendliness	73	71.6	29	28.4

**Source:** Field Data (2021)

***Rating the factors that influence utilisation of UDSM IR resources***

Respondents were asked to respond to the five statements on how they apply to them in the course of interacting with UDSM repository: I get access to full-texts from IR, I access to IR resources remotely, IR materials are relevance to my studies, there is easy searching and retrieval and the resources are regularly updated. Reactions to the statement were rated using Likert scale from 1. Strongly agree to 5. Strongly disagree as indicated in Table 3. The findings show that 67 (65.7%) respondents disagreed that they had access to full-text materials from the repository. Accessing IR remotely could not get much popularity as it was rated below average on either those who agreed or disagreed. Over half of all respondents that is 52 (51.0%) agreed that the content accessed through the IRs was relevant to their studies while 58 (56.9%) respondents disagreed that searching for IR materials was easy and user friendly. Furthermore, 61 (59.9%) respondents disagreed that IR materials were regularly updated.

**Table 3: Rating the factors that influence utilisation of UDSM IR resources (n=102)**

Factor	Strongly agree		Agree		Neutral		Disagree		Strongly disagree	
	F	%	F	%	F	%	F	%	F	%
I get access to full-texts from IR	6	5.9	25	24.5	4	3.9	37	36	30	29.4
I access to IR resources remotely	9	8.8	36	35.3	13	12.7	21	21	23	22.5
IR materials are relevance to my studies	12	11.8	40	39.2	10	9.8	24	24	16	15.7
There is easy searching and retrieval	7	6.9	22	21.6	15	14.7	33	32	25	24.5
The resources are regularly updated	9	8.8	17	16.7	8	7.8	15	15	53	51.9

**Source: Field Data (2021)**

### *Challenges of utilisation of IRs*

The respondents were requested to identify the challenges they face them when IR resources. The study findings shown in Table 4 reveal that 82 (82.8%) respondents indicated that the UDSM internet was slow. Besides, 82 (82.8%) of the respondents said that they could not get full text documents. At the same time, 70 (70.7%) respondents indicated that they had little knowledge on how to retrieve repository resources, whereas 70 (70.7%) respondents indicated that resources took long time to open. Moreover 59 (59.6%) respondents said that they had never came across any repository policy at the UDSM whereas 44 (44.4%) respondents indicated that materials were not relevant to their studies.

**Table 4: Challenges facing utilisation of IR resources (n=102)**

Challenges	Frequency		Frequency	
	Yes	%	No	%
The internet is always slow	82	82.8	20	17.2
I don't get full-text document	82	82.8	20	17.2
I have little knowledge on how to retrieve IR resources	70	70.7	32	29.3
The resources take long time to open	70	70.7	32	29.3
Lack of IR policy	59	59.6	43	40.4
Materials are not relevant to my study	44	44.4	58	55.6

**Source: Researchers Field Data (2022)**

Unreliable internet connectivity was also cited by an interviewed librarian (R4) who said:

*Internet problem has been on and off each working time and sometimes it is embarrassing every time students face us asking for internet solution. There is a serious need to improve the availability and speed of internet towards effective the*

*utilization of repository resources and other online services as the current internet is not always available and not speedy as well.*

The lack of access to full-text in the repository was also a concern of R4 who said:

*The absence of full texts documents in the UDSM IRs has been a challenging issue to most users as they get disturbance to make physical visits to the library (East Africana) to find the same materials which were seen as an abstract in the digital repository.*

### ***Ways of overcoming IR resources utilisation challenges***

The respondents were requested to indicate ways that could be used to overcome challenges for the utilisation of repository resources. The findings as indicated in Table 6 show that the majority 95 (94.1%) respondents mentioned training on how to access repositories, 91 (90.1%) respondents mentioned improving internet availability, while 89 (88.1%) respondents mentioned link to repository should be displayed openly. On the other hand, 81 (80.2%) respondents mentioned the provision of trainer guides could remedy the problem of the utilisation of IR resources.

**Table 5: Ways of overcoming IR resources utilisation challenges (n=102)**

Proposed Issues	Frequency		Frequency	
	Yes	%	No	%
Training on how to access IRs	95	94.1	7	5.9
Improve internet availability	91	90.1	11	9.9
Links to repository should be displayed openly	89	88.1	13	11.9
Trainer guides	81	80.2	21	19.8

**Source: Researchers Field Data (2022)**

The findings indicate the lack of IR sensitisation programmes that the building capacity of postgraduate students to equip them with skills to effectively interact with IR systems. The findings were also similar to R3 who said:

*Training on how to access repository resources could be of much help among the UDSM users as for current we have no programmed sessions that we can teach users on the appropriate utilisation of repository resources except during new year's orientation time only. The orientation training on available resources is not ideal time to teach students on information resources especially Institutional Repository resources since during that period they are new to university life and*



*has not settled for studies it become difficult for them to understand and capture the training of such new terms.*

## **Discussion**

This study has revealed that access to full-text documents, relevancy of IR resources to postgraduates' studies and ease of searching materials in the repository were perceived to be the major factors that influence the utilisation of IR resources. However, other factors such as accessing IR resources remotely, accessing regularly updated repository materials and user-friendliness of the repository system were also considered important. The need for accessing full-text materials by postgraduate students in the repository indicates their curiosity to explore information which can be useful in their studies. The findings are similar to Armstrong (2014) who observed that one of the factors that motivate users to utilise IRs is the access to full texts as opposed to the provision of metadata only which inhibits users' active the utilisation of repository resources. A study conducted by Robinson (2019) revealed that access to full text attracts more users in utilising IR resources, while the opposite disappoints them.

Having materials in IRs which are relevant to a specific group of researchers is also important. Postgraduate students would probably wish to access research materials vital in their own areas of specialisation. In this study, respondents cited the relevance of repository resources as their motivational factor for the utilisation of repository resources. This is relevant to Shiweda (2018) who assessed the usability of institutional repositories by postgraduate students in Namibia and observed that the relevance of IR materials motivates postgraduate students to use those resources. Likewise, Ogenga (2015) indicated that the relevance of institutional repository is organised according to the courses offered. Therefore, it is an intuitive factor for the utilisation of the respective repository. This is true to Wangui (2014) who found increased usage of IRs by postgraduate students at St. Paul's University as the materials they accessed were useful to their studies.

On a similar note, easy searching and retrieval of scholarly content have been noted as another important factor for the utilisation of repository resources. This has something to do with the way the IR system organises its contents hence making it easy to search and retrieve contents from the repository. The findings are in support of Isibika and Kavishe (2018) who observed that easiness of access to local scholarly resources has been a motivating factor for the utilisation of repository resources among users. This is in line with the findings that reveal that

accessing IR materials while off-campus motivates users to utilise repository resources. The findings imply that the nature of studies that postgraduates undertake requires accessing IR resources remotely as it is convenient in utilising the information regardless of the geographical location at any time as long as they are connected to the internet. Findings are consistent with Nyakwebwa (2016) who revealed that University students including postgraduates are motivated with accessing electronic resources including repository materials while off-campus and therefore fostering the utilisation of such resources. It further shows that accessing repository resources remotely is preferred by postgraduate students as they are not bound to be stationed at the University's main campus to access them. Generally, there are several factors that motivate postgraduate students to utilise IR resources. This calls for decision-makers to pay attention to these factors to design repository systems which are responsive to the required services by postgraduate students and other users to optimise the utilisation and impact of IR resources.

The findings have further revealed several challenges that hinder the effective utilisation of IR resources including unreliable internet networks, inability to access full-text and lack of repository policy as major obstacles that hinder effective utilisation of IR resources. Unreliable internet connectivity has been cited as the most challenging issue that affects the utilisation of IR resources. The study about challenges in access and retrieval of electronic resources at UDSM by Mbwana (2019) revealed low internet connectivity that accounts for 2 megabytes per second dedicated to users that cannot accommodate a massive number of available students at the University. On a similar note, Samzugwi (2019) conducted research on information users' preference for the use of print and electronic resources in selected Universities in Tanzania and noticed that poor internet connectivity was among the challenges in the utilisation of electronic resources.

The inability to access full text is one of the challenges that postgraduate students face when accessing IR resources. This is because most of the available materials only have abstracts, hence impeding their urge for the materials they need. The provision of abstract only demotivate users to the utilize repository resources. The lack of a repository policy that guides the implementation of IR was said to be one of the factors impeding the utilisation of IR resources at UDSM scholars. The findings have indicated a lack of IR policy or if it is there it is not well-communicated to users. As a result, rules and conditions for utilising IR resources remain unknown. Samzugwi (2019) documented a similar observation, who

observed the lack of IR policy at UDSM. Therefore, the lack of a repository policy is the issue that the University needs to address to make its repository useful to users including postgraduate students.

### **Conclusions and Recommendations**

This study has revealed various factors that motivate users to utilise IR resources including access to full-text, the relevance of IR resources and easy searching and retrieval of the materials. However, several challenges impeding utilisation of IR resources; they include unreliable internet access, access to full text and lack of guiding policy. These have been revealed as the major factors. The sensitisation of how users including postgraduate students can effectively utilise IR resources is inevitable. The creation of a mechanism to facilitate access to full-text IR resources is considered to be one of the solutions. Also, the University ought to increase and improve internet access to optimise the utilisation of IR resources. Furthermore, the establishment of an IR policy will provide guidelines on the implementation and use of the repository making it useful to all users at the University and beyond.

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