# The effectiveness of library information literacy instructions given to undergraduate students at the University of Dar es Salaam

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## Abstract

The purpose of this study was to assess the effectiveness of library information literacy instructions offered at the University of Dar es Salaam. The study population consisted of undergraduate students and library staff at the Mwalimu Nyerere Campus. The study employed a mixed methods approach under which a survey design was used to collect data with the use of questionnaire, observation, and interviews methods. Whereas quantitative data were processed through Microsoft Excel program to simplify analysis, qualitative data were analysed using content analysis. The key findings of the study indicate that the library's information literacy instructions had moderately impact on majority of respondents' ability to articulate and locate information they require, use information ethically, and evaluate online information for credibility. Based on these findings, respondents recommend extension of library opening hours, integrating information literacy in the university's curricula, increasing the number of computers, and deploying more library staff to oversee information literacy instruction.

**Keywords**: Information competence, Information literacy, User satisfaction, UDSM Library, Undergraduate students.

## Introduction

Information Technology (IT) has continuously changed methods of information generation, processing, storage and dissemination, has resulted in the development of diverse forms of information resources. Internet development in particular, has enabled information sharing through the use of multiple media such as texts, images, graphics, audios and audio-visuals (Syamalamba, 2011). Access to relevant and quality information has become complex due to the existence of multiple and voluminous sources of information, especially in electronic format. This has posed a great challenge to academic libraries for they have to train their clients on how to search and retrieve information from different sources, a phenomenon that necessitates provision of information literacy training to users for lifelong learning (Lau, 2006). The Association of College and Research Libraries (2000) noted that information literacy empowers individuals to recognize when information is needed and, with time, increases the ability to locate, evaluate, and use the information acquired ethically and effectively. Every single day, information is growing extensively and so is realization that information literacy is a valuable tool for lifelong learners such as students and lecturers. It is due to this reason that Information Literacy programmes are conducted to impart information search and evaluation skills to library users. Users are trained in searching and retrieving literature from various local contents

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available and from Web-based resources through information literacy instructions during orientations and through workshops in order to enable them become self-reliant in finding solutions to problems they encounter when learning (Sasikala & Dhanraju, 2011). The reason mostly cited behind information literacy is abundance of sources of information available and growth in the number of interdisciplinary courses. Thus, librarians recognize the importance of teaching critical thinking skills to their clients to enable them evaluate and select the most relevant information for their needs (Dennis, 2004).

In the early 1990s, the University of Dar es Salaam (UDSM) Library started integrating information technology in library functions and services, a move that led to the introduction of new techniques and strategies for educating library users (Maro & Nawe, 2018). To date, the university library offers information literacy instructions to users so that they may be creative, analytical and efficient life-long learners. Through these instructions, users are made aware of the availability of information resources and techniques that should be applied in searching and accessing information. Over the years, there have been initiatives by the UDSM library to provide information literacy instructions to students, especially new comers at undergraduate and post-graduate levels. Since the Library has been providing information literacy instructions to its users, there was a dire need to gauge whether such trainings are yielding positive results. Hence, this study was conducted to assess the effectiveness of the information literacy instructions provided by this library to determine how users perceive them with a view of improving the provision of such instruction at the University. Specifically, the study sought to ascertain students' awareness of the information literacy instructions provided by the UDSM Library, determine the effectiveness of information literacy instructions as perceived by undergraduate students on some selected aspects, and identify constraints to effective utilization of knowledge and skills derived from information literacy instructions and views of students on how information literacy instructions could be improved.

## Literature review

Review of literature related to the problem under the study was done. The literature reviewed highlights strengths and weaknesses of information literacy instructions, what has been accomplished, and gaps in knowledge.

### *Students' awareness of information literacy instruction*

According to Osinulu, Adekunmisi, Okewale and Oyewusi (2018), in their study entitled marketing strategies used by librarians in a state university, Nigeria, to market the university library's products and services to user communities, academic librarians purchase highly relevant and current books, improve borrowing privileges, and render interlibrary loan services. Also, the researchers point out strategies such as the use of print and digital media and events as useful for marketing their information products and services. These findings served in comparing methods through which students became aware of information literacy training with what is suggested in literature. Bamigbola (2013) observed that in Nigerian university libraries, users are made aware of IL instructions through word of mouth during departmental/faculty meetings, mail messages, demonstrations, users' orientation, exhibitions, displays, telephone, library websites, and selective packaging of relevant information for users. Silva and Olinto (2016) in their study

conducted in Rio de Janeiro on gender differences in ICT use and information literacy, observed that there was predominance of male in the usage of libraries and information literacy.

### *Impact of information literacy instructions to students*

Information and communication technologies (ICTs) leverage the creation of abundant and unfiltered information. Information literacy skills and knowledge obtained through instructions enable learners to have greater control of their learning and to be self-directed. Thus, in order for students to have content evaluation skills and determine the authenticity, validity and reliability of information; they need information literacy instructions (Maro & Nawe, 2018). Jessy, Bhat and Rao (2016)'s study found out that majority of respondents at their study area indicated that information literacy instructions provided were effective for they had boosted their search skills.

Blake, Bowles-Terry, Pearson and Szentkiralyi (2017) observed that grade point average of first year students whose courses had information literacy instructions integrated were higher than those of students whose courses did not incorporate information literacy. Also, they examined the impact of information literacy instruction on students by comparing the academic grade point averages outcome measures and retention of students who had undergone library instruction as part of their course's curriculum with those who did not. However, these studies did not go deep to ascertain aspects in which those first year students qualified. In contrast, this study has tried to determine aspects in which students became competent after receiving information literacy instructions and to what extent.

Moreover, Okki and Asiru (2011) identified barriers to using electronic information resources such as slow internet connectivity and lack of information literacy skills. These authors suggested expansion of network bandwidth, ensuring the availability of uninterrupted power supply, and setting out information literacy instructions. Although the setting and focus of the study by Okki and Asiru (2011) are different from of those of this one, its results have enabled the researcher to investigate whether these barriers are also experienced by undergraduate students at the University of Dar es Salaam Library. Other studies such Balasubramanian, Catherin and Suthakar (2014) and Adeleke and Emeahara (2016) dealt with information literacy but their focus was postgraduate students while this study has focused on undergraduate students. Nevertheless, their methodology in which both qualitative and quantitative data were collected using questionnaires, interviews and observations has been adopted by this study. Chandrakumar (2009) found that search strategies like Boolean operators or phrase searching were rarely used by library users. This study shaded light on some aspects to which users demonstrated mastery of information literacy instructions. For instance, in this study, respondents were asked to indicate whether they were able to use Boolean operators to broaden and narrow down searches.

Kavulya (2003) investigated among other things, how effective information literacy programmes offered in some selected university libraries in Kenya were. However, the focus of the study was on the effectiveness of forms of information literacy delivery mechanisms such as library orientations and individual instructions rather than on determining skills attained by users after attending training. This study aimed at determining knowledge level of undergraduate students after been imparted with knowledge and skills on how to access information through information literacy instructions. The Association of College and Research Libraries (ACRL) (2001) set competency standards for libraries that conduct information literacy instructions.

These standards are distinct and numerous. They include ability to identify a variety of types and formats of potential sources of information, access to needed information effectively and efficiently, construct and implement effectively designed search strategies, construct a search strategy using appropriate commands, use various search systems to retrieve information in a variety of formats et cetera. Some of these standards such as the ability to accurately access information required were used to measure the effectiveness of information literacy instructions delivered by the University of Dar es Salaam Library to undergraduate students.

### User satisfaction with information literacy instruction

A study by Jayasundara (2008) examined perceptions of postgraduate students at the University of Colombo of the e-information literacy training conducted by the library. A semi-structured questionnaire was used for data collection by this study. The study's findings show that overall students were satisfied with the quality of the information literacy programme. Generally, Jayasundara's (2008) study was an impetus to this study and its method of collecting data; a semi-structured questionnaire; was adapted to suit this study. Okuonghae and Ogiamien (2016) examined information literacy skills as correlates of library user satisfaction among undergraduates in some university libraries in Nigeria. A descriptive survey design it used has been adopted by this study. The study's findings indicate that students' satisfaction with the library's resources is affected greatly by their level of competences in information literacy. Chanchinmawia and Verma (2017) in their study on Information Literacy Skills among Students of Academy of Integrated Christian Studies, Aizawl determined among other things the satisfaction of users with library information literacy programme. Their findings indicate that majority of respondents were satisfied with the programme. Joel and Mungwabi (2016) observed that youngsters are catalyst of innovativeness in learning and teaching through use of new technologies. Therefore, in this study, young adults were expected to take advantage of information literacy instructions offered by the University of Dar es Salaam Library in order acquire or enhance their skills and knowledge on access and use of electronic resources.

### Factors impeding effective application of skills derived from information literacy instructions

Notwithstanding the advantage of information literacy programmes to users of the libraries, there have been a lot of challenges that are encountered during the process of charging or discharging them. These challenges are highlighted by various authors. Lwehabura (2008) for instance, identified constraints that hamper delivery of information literacy in Tanzanian higher learning institutions. These include lack of policy, time constraints, and failure to incorporate information literacy in the curriculum as a stand-alone course. Agyen - Gyasi (2008) in his study conducted at Kwame Nkrumah University of Science and Technology Library in Ghana, identified a number of challenges that hinder effective provision of information literacy education such as electricity failure, service charges for internet use, lack of personnel in libraries, training need of librarians, irregular internet connectivity, and financial constraints. However, it was observed that majority of the students were satisfied with information literacy instructions that were being delivered. Dadzie (2007) identified challenges that hindered the implementation of information

literacy at University of Cape Coast and University of Ghana. These include inadequate information about what information literacy is, unwillingness of departments to collaborate with each other in the provision of information literacy instructions, lack of administrators' commitment, unwillingness to accept curricula planning innovations, lack of computers, inadequate human and electronic resources.

Detlor, Julien, Wilson, Serenko and Lavalle (2011) investigated factors affecting learning outcomes of information literacy instruction at business schools. Information literacy competence skills of students were measured on aspects such as developing a research strategy, selection of search tools, searching, retrieving sources, evaluating sources and documenting sources. Data were collected using a standardized testing instrument. The results of the study indicate that all students performed well at evaluating sources of information but there were variations on aspects such as using finding tool feature, developing search strategy and documenting sources. Some of these competence skills were also measured in this study. These include evaluation of sources, retrieving sources and documenting sources. Lyakurwa and Luambano (2019) in their study conducted at the Central and Kibaha public libraries noted that although trainers possessed knowledge on information literacy, they lacked modern knowledge. They also observed that, inadequate teaching and learning facilities, inadequate management support and lack of awareness among users on the relevance of information literacy as key challenges that constrain the provision of information literacy.

### *Literature gap*

To sum up, the literature reviewed indicates that academic libraries use information literacy instructions to impart skills that enable users including students to pursue information that meet their needs. There are also studies on effectiveness of information literacy instructions conducted at various libraries in African countries. However, so far there is no study that specifically discusses effectiveness of the information literacy instructions provided by the UDSM library to undergraduate students in order to fulfill their information needs. It was due to this reason that the researcher intended to find out the effectiveness of information literacy instructions provided by the UDSM library to undergraduate students and the establish challenges experienced by users in applying the skills and knowledge rendered to them.

### Methodology

This study employed a mixed methods research approach in which survey method was employed. The University of Dar es Salaam has both undergraduate and postgraduate students. However, only the former constituted the population of this study because they join the university while their level of information literacy is still very low, especially that to do with access to and use of electronic resources compared to the latter. Hence, undergraduate students were considered suitable to indicate extent to which information literacy instructions have been effective in their academic life. The study comprised a total of 68 students and five librarians. These were deemed manageable numbers in collection and analysis of data. The sample size was largely determined by the ease of obtaining respondents. Two ways were used to select respondents for inclusion in this study. First, convenient sampling was used to select students

and librarians who could be accessed easily and available at the time data were being collected and who were willing to participate in the study. Students selected were only those who had been trained in information literacy at the Library and librarians included in the study were mainly those who offer information literacy training. Second, snowballing enabled participants to partake in identifying other respondents who could either fill in questionnaires or be interviewed.

A standardized questionnaire with closed and open-ended questions, interviews, and observation were used to collect qualitative and quantitative data. Observation method supplemented other methods since some respondents were found searching for information in the digital room at the library and volunteered to demonstrate how they formulate search strategies which enabled researcher to determine the authenticity of their answers in the questionnaires. By and large, these methods simplified gathering of detailed information on how far information literacy instructions provided by the UDSM library have been effective in helping undergraduate students to meet their information needs. Informed consent of the respondents was sought, and respondents were assured beforehand of the confidentiality and privacy of the information they would provide. Likewise, the researcher has acknowledged all scholarly work and data consulted, including journals and field data. Whereas quantitative data were manually processed using Microsoft Excel and later copied and pasted onto the Microsoft word for presentation, qualitative data were analysed through content analysis.

## Findings and discussion

### Respondents' characteristics

This section provides information about respondents' characteristics namely; age, gender and course of study. A total of 68 respondents were served with questionnaires at the Reference Department designated for online electronic information resources. Students who had not attended any information literacy instructions conducted at the UDSM Library were left out. The characteristics of the respondents were deemed important in determining respondents who took advantage of information literacy instructions delivered at the University of Dar es Salaam.

### Distribution of respondents by age groups

Respondents were asked to indicate their ages and the results are summarized in Table 1 as follows:

**Table 1:** Age groups of the respondents

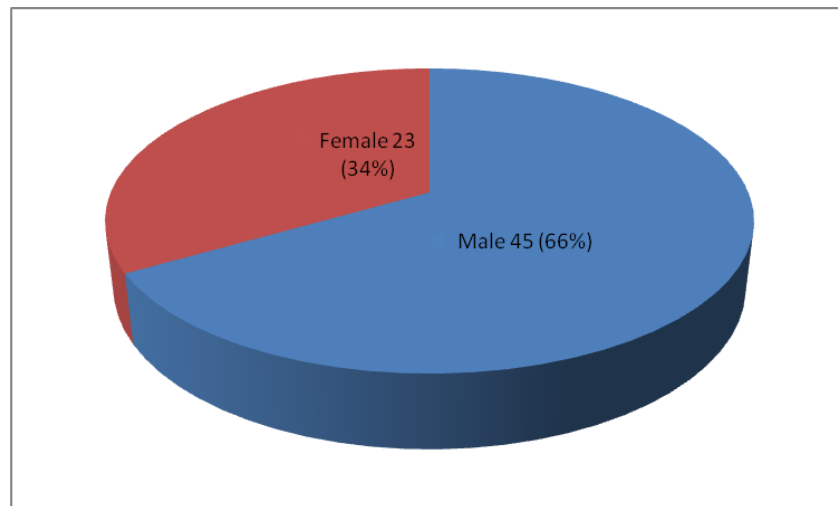| Category (n = 68) | Frequency | Percentage |
|---|---|---|
| 18-25 age group | 64 | 94 |
| 26-35 age group | 4 | 6 |
| **Total** | **68** | **100** |

**Source**: Field data, 2020

These findings show that ages of majority (64, 94%) of student-respondents fell in 18 to 25 years age category while those of only (4, 6%) of the respondents fell between 26 and 35 years. These results suggest that majority of students who attended information literacy instructions fall under youngsters age who like to use new technologies such as information technology and online electronic information resources as Gustafsson, Edmund, Delive and Hagberg (2003:1) put it:

*".…...are heavy users of technology and are often early adopters of technological advances".*

Moreover, Joel and Mungwabi (2016) also noted that youngsters act as change agents in the adoption and integration of new innovations in learning and teaching.

### *Distribution of respondents by sex*

Respondents were also asked to indicate their sex as this was also considered important data for the study. The distribution of respondents by sex is as shown in Figure 1:



**Figure 1:** Respondents by Sex (N=68)
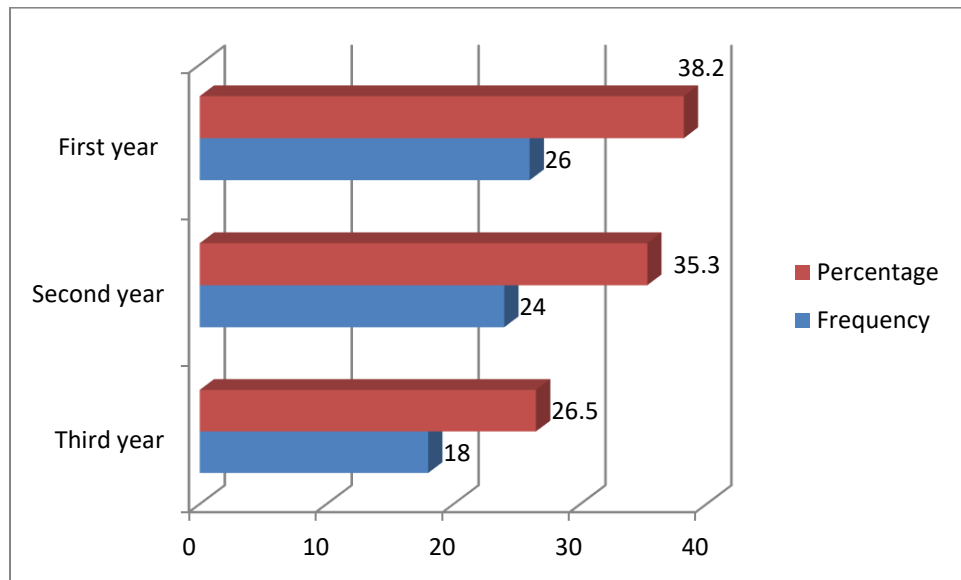**Source**: Field Data, 2020

These findings show that a majority 45 (66%) of the respondents are males while a few 13 (34%) are females. This distribution was not intentional since sex was not a key determinant for students' inclusion in the study, rather, the study focused on students that had attended information literacy trainings. Information literacy instructions at the University of Dar es Salaam are not compulsory for they are not integrated into the university's curricula. Thus, students who wish to be trained have to voluntarily register their names when UDSM library staffs at reference section are prepared to train. Therefore, it could not be established why more male undergraduate students appear to volunteer themselves for the training. In fact, this finding presents more questions than answers. For instance, could it be that females were not aware of such training? Were female undergraduates using the library and its resources available through its websites? If that was the case, perhaps they would have got information about information literacy instructions conducted at the library and attend them. On the other hand, this finding is not new as predominance of male in the usage of libraries was also noted in

Rio de Janeiro by Silva and Olinto (2016) in a gender differences in ICT use and Information literacy study.

### *Distribution of respondents by year of study*

The finding on the distribution of respondents by year of study shows that 26 (38%) respondents were in the first year of their studies, 24 (35%) were in their second year while 18 (26%) were in their third year. Figure 2 shows the results.



**Figure 2:** Distribution of the respondents by year of study
**Source**: Field data, 2020

By courses of study, respondents were categorized into three broad groups: Bachelor of Arts, Science, and Engineering. On this, the findings indicate that a majority 59 (87%) of the respondents were majoring in Bachelor of Arts, 5 (07%) were majoring in Bachelor of Science, and 4 (6%) majored in Engineering. Though there may be other factors, the location of the library buildings at the University of Dar es Salaam is such that the College of Engineering is furthest from the Library. The College of Science is relatively nearer to the library building compared to the College of Engineering. The College of Arts and College of Social Sciences as well as their lecture theaters are nearest to the Library building where information literacy trainings are usually conducted. Perhaps this finding reflects this fact, for proximity may mean easy access to the building where literacy instructions programs are conducted by the UDSM Library. Apparently, this factor can be associated with limiting students' awareness on when information literacy instructions are to be conducted.

### *Respondents awareness of the information literacy instructions provided by the UDSM Library*

Respondents were asked to indicate how they became aware of the information literacy instructions conducted at the UDSM Library. A checklist which includes library brochures, library staff, print announcements, library website and colleagues was provided on which they were to tick appropriate answers. The results show that just over two fifths of 28 (41%) of respondents indicated that they became aware of the instructions through library staff, 18 (26%) cited library websites, library brochures and print announcements were each mentioned by 10 (15%) respondents while 2 (3%) indicated colleagues. These findings are in line with Osinulu et al., (2018) who observed that print media and manual services are predominant in marketing library information services and that library websites and Web 2.0 technologies are used to limited extents. However, the results do not confirm Bamigbola (2013)'s study which revealed that e-mails, telephone, and library websites are prominent strategies used by librarians for this purpose. The findings also differ from ones from Lyakurwa and Luambano's (2019) study which revealed that a majority of library users knew about information literacy training through notice board announcements. By and large, these results indicate that the UDSM Library does not utilize modern methods of making students aware of information literacy instructions effectively. There is gross underutilization of brochures, websites, and print announcements. The researcher browsed the library's website looking for IL training announcements but was only able to find just one which was actually out of date.

### *The impact of information literacy training for students*

The researcher asked respondents to indicate the extent to which they perceived information literacy instruction to have enabled them to master various aspects of information access and use. The findings are indicated in table 2:

**Table 2:** Positive impact of information literacy instructions to respondents

| S/N | Category | To a large Extent | Moderately | To a small extent | Not at all | Total |
|---|---|---|---|---|---|---|
| 1 | Articulating information required accurately | 17(25%) | 43(63%) | 4(6%) | 4(6%) | 68(100%) |
| 2 | Locating online information materials accurately | 16(24%) | 38(56%) | 9(13%) | 5(7%) | 68(100%) |
| 3 | Evaluating online information for credibility | 14(21%) | 43(63%) | 6(9%) | 5(7%) | 68(100%) |
| 4 | Utilizing information ethically | 24(35%) | 25(37%) | 15(22%) | 4(9%) | 68(100%) |

**Source**: Field data, 2020

Table 2 shows that 17 (25%) respondents indicated that to a large extent, IL training enabled them to accurately articulate information needs, a majority (43, 63%) of them revealed that the training moderately impacted them in this respect, 4(6%) indicated that it did so to a small extent while 4(6%) said it had no such impact on them. Regarding locating online information resources, 16(24%) respondents indicated that the training greatly improved their ability to accurately locate online

information materials while a majority (43, 63%) of them revealed a moderate impact. On the same, 9 (13%) respondents revealed a small impact while 5(07%) indicated the training had no impact on their ability to locate materials online. These results differ from those of Jess et. al., (2016)'s study which revealed that majority (62%) of respondents opined that information literacy instructions were effective because it equipped them with basic search knowledge and skills.

Regarding the ability to evaluate online information for credibility, Table 2 indicates that only 14(21%)  respondents indicated that their ability to do so got improved to a great extent by the library's training while a majority (43, 63%) of them indicated that a moderate impact. Apart from that, 6(09%) respondents indicated that the training improved their information credibility evaluation skills to a small extent, and 5(7%) indicated that the training did not benefit them in this respect. The results further show that 24(35%) respondents indicated that their ethical usage of online information has improved to large extent with the help of the training in question while 25(37%) indicated that they were moderately impacted. On the same, 15(22%) said their ability to ethically utilize information was improved to a small extent by the training while 4(09%) said they were not impacted at all. The results suggest that information literacy instruction at the University of Dar es Salaam Library has more influence on search skills and evaluation for credibility though moderately than ethical use of information. An announcement which is still on website indicates that users were trained how to evaluate and cite electronic information. Perhaps some respondents had forgotten. Therefore, it is still important for trainers of information literacy instructions to train users on search skills, evaluation and ethical use of information.


### User satisfaction with contents of information literacy trainings provided

The study also aimed at ascertaining the extent to which respondents were satisfied with the contents of information literacy instructions provided by the UDSM Library. The results indicate that 25(37%) respondents indicated that they were satisfied to a large extent, 29 (43%) respondents indicated that they were moderately satisfied, 11(16%) indicated that they were satisfied to a small extent and 3(04%) indicated that they were not satisfied at all. These findings differ from that of Chanchinmawia and Verma (2017) who observed that majority (60%) of respondents were satisfied with the information literacy programme at the Academy of Integrated Christian Studies in Aizawl. On the other hand, all 68(100%) respondents in this study were satisfied with the knowledge possessed by trainers who had been delivering information literacy training. These findings show a sharp difference between university library trainers and their counterparts in public libraries, who Lyakurwa and Luambano (2019) observed that they had inadequate and out-dated information literacy knowledge.

Respondents were further asked to pinpoint areas which in their opinions should be incorporated in the training. Majority (45, 66%) respondents cited computer use skills, a significant number 41 (60%) of them cited using Online Public Access Catalogue (OPAC) and other library facilities to access materials, and 39(57%) cited evaluating online electronic resources including internet resources. The results further show that 39(57%) respondents cited networking, 20(29%) mentioned updating obsolete software, 19(28%) cited how to use Excel and other programs, 11(16%) mentioned how to use social media (instagram and Jamii forums), and 9(13%) respondents cited printing. It could not be established why respondents suggested OPAC and evaluation of online electronic information to be part of the information literacy training while the library's website had an announcement that indicated that these have been part of the training programme. Library staff, on the other hand,

indicated that these are normally covered during information literacy instructions as one commented thusly:

> If I show our past training schedules which are in the files you will certainly notice that we have been training them how to evaluate online information and search information using OPAC although not frequently.

The researcher confirmed the above librarian's statement for one information literacy training announcement that was still on the library's website indicated that the training content include OPAC usage and evaluation of information. The findings insinuate that either some students did not understand what they were trained on or had forgotten about it because information literacy trainings are not conducted frequently.

### Challenges that constrain students from effective application of information literacy skills

Undergraduate students were asked to identify the challenges that impede them from applying information literacy skills effectively upon completion of literacy instruction programs. The results are summarized below: A majority 52 (76%) of the respondents mentioned low bandwidth, followed by 34(50%) who mentioned shortage of desktop and laptop computers. Moreover, 30(44%) respondents mentioned inadequate hands-on time for practicing, 27(40%) mentioned library rules and regulations that limit the library's digital room opening hours. With regards to the digital room, the respondents said it is usually open when they are in classes and closed at the time when students are done with classes hence their inability to practice what they had learnt. The results further show that 19(28%) respondents mentioned language barrier while 15(22%) indicated that some materials are not well cited to be referred to. These findings indicate that constrains of information literacy are more or less the same across all levels of education in Tanzania. This view is supported by Maro and Nawe's (2018) study which identified that in secondary schools, inadequate IT facilities, failure to integrate information literacy in the curriculum, inability of students to evaluate internet information, and poor searching skills are the major challenges that constraint information literacy.

Respondents provided their views on how information literacy instructions may be improved. A majority (54, 79%) of them proposed information literacy instruction to be preceded by training on computer use. Results from interviews also show that some students use a computer for the first time in the university library as one librarian-respondent put it:

> Some of them use a computer for the first time after joining studies here. How do you expect them to cope with information literacy instruction while they do not even possess basic computer skills?

Results also show that 52 (76%) respondents suggested an increase in internet bandwidth, followed by 34(50%) that proposed purchase of laptop computers for students, 45(66%) that opined that libraries should be open throughout during weekends, 38(56%) that mentioned that the Library should increase the number of computers, and 35(51%) that were of the view that trainees should be categorized in different levels as one respondent expounded:

> During instructions, we treat them as if all are at the same level while in fact, there are some whose skills in computer use are more advanced.

The results further show that 30 (44%) respondents suggested that upon completion of instructions, trainees should be accorded more time for hands-on practicing and the same percent suggested increasing the number of desktop computers in the computer lab. Twenty seven (40%) respondents suggested lifting of library rules and regulations which bar trainees from using library computers for purposes other than accessing information, 19(28%) respondents suggested the use of Swahili language for training instead of English. All library staff on their part indicated that conducting information literacy training frequently was not possible due to shortage of staff and that if they were to integrate information literacy contents in the University's curricula, it could be even worse. Despite that, they indicated that there was a need to integrate information literacy instruction programme in the curriculum. In Kenya, for instance, communication skills course is integrated in the curriculum and is used to train students on information literacy (Kavulya, 2003). Therefore, if the library had adequate number of staff, information literacy could also be integrated in the curricula at the University of Dar es Salaam.

## Conclusions

It may be inferred that library staff, library website, and print announcements are the main methods used by the UDSM Library to inform students about imminent information literacy instructions. Library information literacy instructions that were being conducted from time to time, have had moderate impact on majority of students' ability to articulate and locate information they require, use information ethically, and evaluate online information for credibility. This may have been the reason the students' were moderately satisfied with the instructions, save for librarians themselves who were highly appreciated by the respondents. Furthermore, it may also be concluded that low bandwidth, shortage of desktop computers, lack of laptops, and inadequacy of hands-on experience time are major constrains that impede undergraduate students from utilizing knowledge and skills derived from information literacy instruction effectively. Therefore, although library staff who conduct information literacy training  like to learn that instructions they give to students yield positive results, the findings of this study show that outcomes on the ground leave a lot  to be desired yet.

## Recommendations

Based on the findings, the Library should initiate strategies on how best to reach out to students including devising good medium of marketing. Information literacy instructions need to be diversified to enable evaluation of online information, ethical use of information, computer skills and Online Public Access Catalogue topics to be fully covered. Furthermore, University and Library rules, regulations and policies changes are necessary to allot more time for students to learn and practice. This requires the Library to be open during late hours and weekends. It is also encouraged that information literacy instruction should be integrated in the University's curricula. Training should use a combination of Swahili and English languages so that all students can grasp instructions. Planning of instructions should accommodate different skill levels of students. Other huddles that impede the provision of information literacy may be solved with greater support from the University administration in terms of budgetary allocation for

resources for the University of Dar es Salaam Library including staffing. Currently, the UDSM Library conducts information literacy instructions without being given any funds from the parent organization or government of Tanzania.

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