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Students' Perceptions of Information Literacy at two South African Universities

Mathew Moyo

NWU, mathew.moyo@nwu.ac.za

Ezra Ondari Okemwa Prof

Machakos University, eookemwa@yahoo.com

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Introduction

Information literacy, the ability to find and use information ethically, has been on the agenda of academic librarians for a very long time now. The driving force behind the information literacy agenda is the over-abundance of information, particularly online, as a result of rapid changes and developments in technology (Tosuncuoglu & Küçükler, 2019). There is a general shift in the publications industry, with increasingly more information being published online and this has resulted in an influx of information available to users in general and to students in particular. The current COVID-19 pandemic has added more impetus to the critical value of information literacy as fake news infodemic has risen to levels demanding high critical thinking skills (Durodolu & Ibenne, 2020; Guo & Huang, 2021). Seemingly, academic integrity has once again become a major issue on campus as students became overwhelmed by the sudden transition from contact teaching and learning, to the online modality which has enabled the continuation of the University's core business under the Coronavirus environment. From a practical experience, the authors have experienced a surge in instances of plagiarism resulting in punitive policies being invoked on offenders in order to help reduce the cases. Librarians, as custodians and facilitators of access to information of all kinds, have a huge role to play in ensuring that students acquire the necessary skills in order to properly handle information. The South African University System is usually classified into historically advantaged and historically disadvantaged. Students joining the historically advantaged institutions usually originate from the rich urban families while those attending the formerly disadvantaged institutions come from mostly rural based schools without access or with limited access to libraries and technology of all kinds. If our primary and secondary education system was adequately paying attention to learners' information handling skills including the entire digital skills spectrum, information literacy would not be a major concern at the higher education level. This background information which include the renewed need for information literacy education during the ongoing COVID-19 pandemic, motivated the researchers to rework and share this outcome from a study conducted some few years back.

Purpose of the study

The purpose of this study was to find out the perceptions of students on the information literacy intervention at two Universities in the Eastern Cape province of South Africa. Although the study was not comparative, the study of the two universities with different historical backgrounds, assisted in shedding some light on what students from across the classes of universities in South Africa thought about information literacy. The two universities used the same information literacy programme although the approach to delivery and assessment was different. The programme covered areas such as; need definition, finding information, evaluation of information, legal and ethical use of information and communication of information. The course was based on the Cape

Higher Education Consortium (CHEC) Information Literacy prototype and developed as an initiative of the South East Academic Libraries Systems (SEALS) Consortium Information literacy project to which both Universities, herein referred to as X and Y, belong as key members. Concerning delivery, University X, for example, delivered the programme to all first year students while University Y tended to concentrate more on the extended programme which accommodated students who hardly qualified to gain entry into the university.

While a lot has been written about information literacy, very little research has been conducted on the perceptions of students on the same (Julie, 2006), especially in South Africa.

Literature review

Studies in the form of journal articles and conference proceedings have been conducted and published on the information literacy theme but literature on students' perceptions about information literacy remains scanty especially in the South African context. Earlier studies related to perceptions about information literacy include one by Lebbin (2006) which confirmed that research studies providing assessment data was still lacking. On the contrary, Walsh (2009) in a study on information literacy assessment methods reveals that librarians mostly used among other tools; "essays, analysis of bibliographies, final grades, multiple choice, questionnaire, observation, portfolio, quiz/test, self-assessment and simulation". The author, however was quick to reveal that most studies make little attempt to check the reliability or validity of their test instruments in assessing information literacy skills.

On a more positive note, Lebbin's 2006 research study revealed that students perceived integrating information literacy into various courses as meaningful as it was easier for them to apply information literacy skills when the knowledge is still "fresh in their brains". The study further revealed that students liked information literacy components such as the ability to locate sources, finding items in the library, searching databases and navigating the Internet. Lebbin (2006) quotes one student participant of his study who said thus "you have an easier time in the rest of your years doing things on your own...you don't get stuck writing papers, not being able to find sources, which is a big thing...". In fact, information literacy skills help to alleviate library anxiety and increase a sense of confidence using library resources, and a willingness to seek assistance from the librarians (Paterson & Gamatso, 2017). Lebbin further gives positive feedback from students on areas such as citation methods and how to use resources of a much bigger library when compared to a high school library. A study by Ocholla, Mutsvunguma and Hadebe (2017) revealed that workshops on how to access e-resources and the use of Endnote were amongst the most attended workshops by library users. In a much earlier study, Morrison (1997) sought to find out perceptions of students on the four main information literacy skills namely; "recognizing a need for

information, locating information, evaluating information and effectively using information". Whilst Morrison noted different perceptions on whether or not recognizing a need for information constituted a skill, there was an agreement that locating information was a skill, particularly "today because of the recent technologies and the abundance of sources". In the study, students found the skill of evaluating information to be the most advanced of the four skills.

While most researchers believe that information literacy instruction should rest with the library, students in Morrison's study perceived evaluating and effectively using information as skills that would primarily be developed outside the library. The overall picture painted by Morrison is that students perceive the library as playing a key role in helping them develop the skill of locating information, a challenging skill, given today's dynamic information landscape as a result of increased technology. Maybee (2006) contends that "a relational approach should be employed to embed information literacy values into course curriculum that focuses on students conceptualizing information use in increasingly complex ways." Scholars such as Kim and Shumaker (2015); McCartin, Iannacchione and Evans (2017); and Paterson and Gamatso (2017) concur with the views of Maybee above when they say library instruction is helpful when "it is embedded in courses and when the skills are deployed immediately (or at the right time) to fulfill the requirements of an impending research task."

In the South African context, Hart and Davids (2010) discuss students' perceptions of the information literacy education where the findings revealed that students found the information skills to be very useful and that the students were able to use the databases on their own. Visser (2013) investigated the perceptions of students about the library's information literacy tutorials which were developed to support a credit bearing Information Skills programme at Stellenbosch University. Findings of that study revealed that "students were not aware of the availability of the screencasts online tutorials" and that "they wanted easier routes of finding information," (Visser, 2013). The later view is supported by Paterson and Gamatso (2017) whose study findings revealed that when students find research to be difficult and frustrating, they "take the perceived easy route of using unvetted Internet sources rather than peer-reviewed literature. However, usage statistics of the online tutorials on how to use databases such as Academic Search Premier and SA Media were fairly high although the study revealed that the students did not stay for long on those tutorials. In another study on students' perception regarding information literacy at the Walter Sisulu University, it is revealed that students found the programme to be helpful in information searching skills, how to apply computing and Internet skills, as well as improving students' knowledge about the use of databases such as ProQuest, EbscoHost and the Online Public Access Catalogue (Badi, 2013).

Challenges of Information Literacy

Like many other programmes offered at universities, information literacy has challenges that date back to the time of its inception. However, the current COVID-19 pandemic has in the words of Badke (2020) surfaced a problem that has always been there adding that this has also created a great opportunity for educators to recognize the infolit gap. Wiggins (1992) identifies three key challenges associated with information literacy at large universities and these challenges remain valid. The authors noted that “at the university level, it is much more difficult, if not impossible, to reach every student” hence the size of the student body was cited as one of the key challenges as the information literacy programme can only be tailor-made to meet the needs of a certain level of students such as undergraduate level, leaving graduate students out. Related to this problem is what Wiggins (1992) described as “insufficient staff”. Wiggins above, noted that “although librarians hope to reach out to every academic discipline, and some are approaching that goal, most simply run out of staff”. Most importantly, Wiggins further noted that it is difficult to coordinate a student’s work from one class to another and from year to year. He reckons that if librarians are expected to provide all of the instruction for information literacy, exhaustion and failure are guaranteed. The third challenge noted by Wiggins above is “coordination among different libraries” where different libraries could be running information literacy independently with no administrative coordination. Some universities do not have a common course that cuts across different faculties hence it would be difficult to have a unified approach to information literacy. Other researchers categorize challenges related to information literacy from various angles. Hepworth (2000) focuses on challenges associated with “attitudes, knowledge, infrastructure and finance.” On attitudes, Hepworth (2000) says that both faculty and librarians need to have distinct mind-sets that embrace change and willingness to learn new skills and roles. With particular reference to faculty, the author says it can be difficult to get faculty staff to give weight to information literacy and incorporate it into the curriculum because they are not necessarily well trained in information literacy themselves. Concerning knowledge, Hepworth believes that librarians need to acquire teaching and training skills so as to be able to develop and deliver content and learn assessment techniques particularly those that lend themselves to learning information literacy and encourage deep learning. However, Hepworth (2000) cites infrastructure as “one of the most challenging areas”, adding that “there is little significant increase in funds for the higher education especially for libraries. This makes it difficult to make the necessary infrastructural changes such as re-engineering of library space to create learning and knowledge commons. Coupled with the challenge of infrastructure, Hepworth (2000) writes about finance, which is required for additional staff, training and the acquisition of the teaching and learning aids. Furthermore, Cunningham and Lanning (2000) discuss challenges related to promoting information literacy. One such challenge is lack of collaboration among faculty, librarians and administration which Cunningham and Lanning (2000) refer to as the biggest impediment to the success of information literacy. To counter this challenge, Kelly (2019), encourages librarians to focus on

collaborate more with faculty, who rarely avail their students for library training. Other challenges include the ever-changing information technology environment which makes it difficult for stakeholders to keep pace in order that they stay current. As a result, users have different abilities (Zambri, 2014). Yet another challenge is the lack of clarity as to who should be responsible for the information literacy programme. Paton-Ash and Wilmot (2015) point out that “there is a limited understanding of information literacy and the role of the librarian in facilitating this”, including “lack of policy.” Therefore, integrating information literacy into courses across disciplines and assessing its impact will require the buy-in of all stakeholders which is difficult to secure.

Additional challenges identified by Cunningham and Lanning (2002) are perceptual in nature where librarians work in isolation from faculty while faculty maybe reluctant to seek help from the librarians or they may just perceive information literacy training as remedial while students may not be aware that they need help. Going into the Coronavirus pandemic environment, new forms of information literacy challenges have emerged. The challenges include insufficient planning time and inadequate resources to meet the needs of users, fighting misinformation (Guo & Huang, 2021), as well as access limitations relating to data and compatible gadgets.

Aspects of Information Literacy

According to Jiyane and Onyancha (2010), the content of information literacy programmes vary from one institution to the other depending on the emphasis placed on it by the institutional authorities. However, a study by Pattar and Kanamadi (2010) revealed that most institutions used “General introduction about library facilities and services and Introduction to Reference Sources”. Pattar and Kanamadi also revealed that some information literacy content had: library catalogue (manual and the Online Public Access Catalogue), methods and tools for searching information, information skills for searching resources on the Internet, CD-ROM databases, about using electronic –journals and online databases, locating library resources and introduction to multimedia materials. However, Patter and Kanamadi (2010) noted that none of the institutions surveyed had, as part of their content: understanding citations, bibliographic instructions and documenting research work. Hart and Davids (2010) identified similar issues in a study of challenges of information literacy education at the Cape Peninsula University of Technology (CPUT). The aspects included: formulating a search statement, knowledge of various types of documents, use of OPAC, use of full-text databases and ethical and legal use of information. Recent studies have included the aspect of fighting misinformation as a critical component of the information literacy education (Guo & Huang, 2021). This implies an emphasis on misinformation following the emergence of fake news during the current pandemic. However, misinformation has always been part of information evaluation component of the information literacy content.

Information literacy integration models

Information literacy programmes can either be offered as formal qualification or non-formal programmes (Jiyane & Onyancha, 2010). The information literacy programmes could be offered as stand-alone or embedded into other course curricula. Andretta (2005) argues that information literacy could be generic, where it is offered as extracurricular while in some cases, the programme could be parallel in which case, it will complement the curriculum. It could also be integrated, which implies classes and packages that are part of the curriculum. Others may be embedded, which implies a curriculum design in which students have ongoing interaction and reflection with information. Badke (2020) advocates for a curriculum-wide, long-term strategy to shape our students as information professionals. Bruce (1999) concedes that the embedded model is the most effective because it covers three crucial elements of learning involved in the information literacy process as follows:

- Experiencing information literacy (learning)
- Reflection on experience (being aware of learning); and,
- Application of experience to novel contexts (transfer of learning).

Doherty *et al.*... (1999) bemoan students' "lack of skills to apply what they have been taught. Doherty *et al.* ... therefore suggested three approaches to information literacy provision namely: "discipline specific", in which basic library instruction is given to support writing classes, "course specific instruction", which consists of advanced sessions on higher-level research concepts such as controlled vocabulary and citation techniques and "credit classes" which emphasize critical thinking and information literacy skills by in-calculating skills necessary for finding needed information and evaluating it for relevance. Andretta (2005) also argues that information literacy can be offered at the institutional level where it must be part of the institution's mission and goals, at the programme level to frame curriculum objectives, learning outcomes and assessment criteria, and at student level where it is expected to give learners an awareness of the importance of information literacy as the basis for lifelong learning.

Furthermore, information literacy skills must be integrated into the subject curriculum through catering appropriately for all kinds of learners at all the various levels of learning and having clear aims based on sound pedagogical foundations; having quality and feedback mechanisms built in and attempting to measure initial and final competence as a way to demonstrate impact (SCONUL, 1999). SCONUL (1999) further contends that the skills must be managed and delivered cost effectively and should make valid use of new technology and other innovations. SCONUL above draws from the Council for Higher Education's (1995) argument against a stand-alone course because "information literacy transcends disciplines, enabling students to transfer basic skills from one specific disciplinary concept to another." For information literacy to succeed, institution-wide collaboration among faculty staff, library staff and

IT staff who have each a critical role to play in the successful implementation of an information literacy programme, is needed (ACRL, 2000; Snavely, 2001). The support should be enlisted right from the top echelons of the institutions to the lower levels so as to get the buy-in of students. At the University of Botswana, information literacy is part of the approved teaching and learning strategy and is offered as a credit bearing course. The programme covers areas such as the concept of information (its characteristics; formats and sources of information); information organization; information access tools; reference sources; periodical literature; searching electronic databases; legal issues of information use and evaluation of information resources (Mologanyi, 2014).

Assessment in Information Literacy

Information literacy is a skill that is critical for students and as such, librarians need to measure it. Assessment determines the very character and quality of education (McMillan, 2013; Michalak, Rysavy and Wessel, 2017) and it seeks to gather information about student performance and gives feedback in order to contribute to student learning (Timmers & Veldkamp, 2010). It is important to establish mechanisms to assess how well our educational system is doing in providing students with information literacy skills and then hold educational leaders accountable for the results. In any case, assessment in information literacy helps librarians to demonstrate their value to the teaching and learning missions of their higher education missions (Belanger and Bliquez, 2011). Webber and Johnston (2000) propose that assessment practices in the area of information literacy should address the purposes of: “diagnostic testing, formative and summative feedback and quality assurance evaluation”. Diagnostic testing is believed to be a more effective method of integration, particularly at the undergraduate level of provision while both formative and summative assessment strategies are more appropriate at the postgraduate level.

Delivery methods of information literacy programmes

Studies on delivery methods of information literacy conducted by Edzan (2008); Patter and Kanamadi (2010), reveal that delivery methods of information literacy are just like delivery methods of other conventional courses. On the one hand, Edzan (2008) suggests six methods namely “lecture guided tour, instructional session, video presentation, exercises and multimedia”. On the other hand, Patter and Kanamadi (2010) cite 11 information literacy delivery methods. The differences in some of the delivery methods are a matter of diction. The 11 methods according to Pattar and Kanamadi are; “introductory briefing on the orientation programme, library tour, library guides/ handbooks, individualized instructions, small group interaction, demonstration, CD-ROM instruction, audio-video lectures, online instructions, web-based instructions and scheduled workshops in the library”. From the survey conducted by Pattar and

Kanamadi, not all of the mentioned delivery methods are in use in all the cases. In a much recent study, Khailova (2017) writes about flipped library information literacy sessions, which require students to “complete the lecture before a face-to-face class meeting by utilising digital technologies, with the majority of the class time devoted to the practice of the material through carefully planned interactive activities”. This method is a flip side of the lecture method and is gaining popularity in information literacy instruction, particularly in the developed countries. This augurs well with an earlier study by Detlor *et al...* (2012), who revealed that “traditional approaches to the teaching of information literacy skills where students are passive recipients of the information they receive are challenged”.

Research Methodology

The researchers investigated perceptions of students on the contribution of information literacy to their academic success at two Universities, who for need of confidentiality, have been referred to as X and Y in this article. To achieve the study aim, respondents were asked to indicate if (1) information literacy was relevant to them and whether it made any contribution to their academic success and (2) whether there were any challenges associated with the content, delivery and assessment methods of the information literacy programme. Among other questions which were asked are:

- Which aspects of the information literacy skills are covered by your university library?
- Which methods of instruction are used by your university library?
- Please indicate the assessment methods used in your information literacy programme
- Are there any challenges encountered when undertaking information literacy skills training?

Follow up questions mostly related to ranking of selected aspects. The last question was open ended and sought to find out if respondents had anything else that they would want to bring to the attention of the researchers with regards to information literacy content and its relevance to student needs. Interview questions with Information Librarians sought to find out who the programme developers were and whether the programme was a stand-alone or embedded into some other courses.

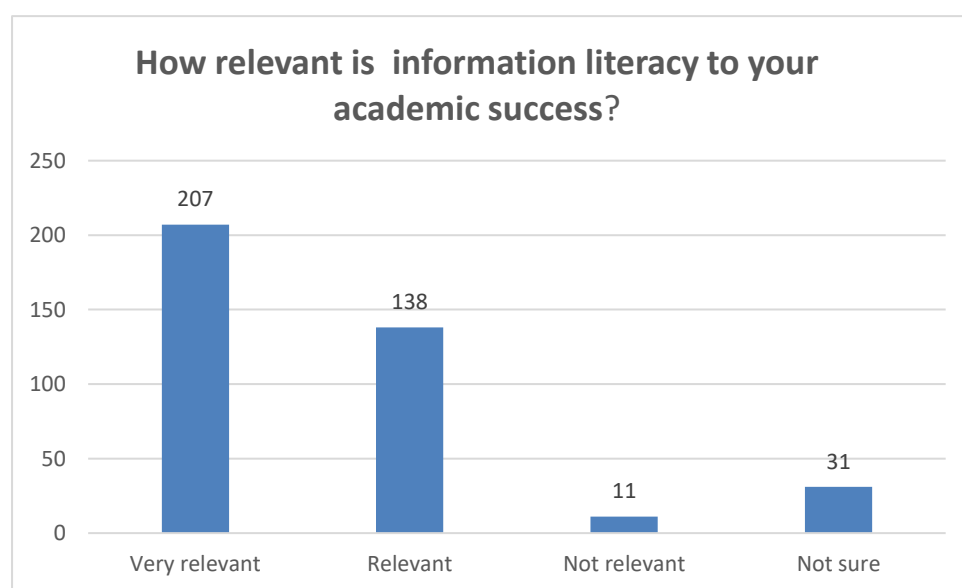
The researchers adopted a survey research methodology in which both questionnaires and semi-structured interviews were used to gather data about how students perceived information literacy in relation to its contribution to improved academic performance. The data gathered through questionnaires were quantitatively analysed while the data from the interviews were qualitatively analysed. The sample size for the study was 387, calculated from a combined student population of 14 393. The researchers adopted a non-proportional quota sampling technique to determine the number of respondents from both Universities X and Y. In addition, a sample of 10 Information Librarians was also included in the study using purposive sampling

technique. The study took a leaf from the ACRL (2000) information literacy standards as revised in 2014 and adopted in 2016, among other models that are available.

Findings

Respondents were asked about how they perceived information literacy and its contribution to their academic work. Fig 1 below indicates the answers given by the respondents:

Fig 1: Relevance of information literacy



A total of 207 (53.3%) indicated that information literacy was very relevant, with 138 (35.7%) indicating that it was relevant. This is in agreement with Bangani, *et al* (2019) research findings were students regarded IL as very valuable for their studies, in addition to Molepo and Bopape (2021) as well as Kirker and Stonebraker (2019) who found out that students' information handling skills improved significantly after participating in IL education. On the contrary, 11 (2.8%) indicated that it was not relevant, while 31 (8.0%) were not sure about the contribution of information literacy to their academic work. In as much as it may be a relief to information librarians noticing a high number of respondents acknowledging the importance of information literacy, it may still be worrying to observe that there are some sections of the university student body who still do not believe or are not sure about the importance of information literacy.

Global discourse on students' perceptions of information literacy is mostly centered on whether content addresses students' needs. This augurs very well with the current study whose focus was on students' perceptions of information literacy regarding its contribution to academic success. The findings of this study to a larger extent

confirmed that information literacy has a positive impact on students' academic success although literature also described negative attitudes by some students on the subject (Orr & Cribb, 2003). However, a much earlier study by Morrison (1997) indicate that students positively perceived at least four main aspects of information literacy. These were:

- Recognizing a need for information;
- Locating information;
- Evaluating information; and
- Effectively using information.

In that particular study, the students found evaluating and using information as skills that could be developed outside the library. However, evaluation of information usually comes after finding the information and as such, separating the two may be even more confusing to the learner. Guo and Huang (2021) encourage librarians to help students fight misinformation and this weighs on the aspect of evaluation of information. Dixon (2021) concedes that librarians have the tools to help students fight misinformation both in their studies and daily lives. Lebbin (2006) also portrays a positive image of information literacy by students who appreciated the skills they obtained in areas such as citation, searching databases, and navigating the Internet. According to McCartin, Iannacchione and Evans (2017), information literacy has a positive impact on student retention and improved both library skills and attitudes toward the academic library.

An analysis of the information literacy programme available at University X library website, including interviews with Faculty / Information librarians revealed a wide coverage of areas that were also noted by Morrison way back in 1997. More specifically, respondents revealed that they covered aspects such as orientation to the library, reference sources, interpreting a reading list, information searching skills, the Online Public Access Catalogue (OPAC), evaluation of information sources, how to use information, collating and communicating the information, plagiarism and copyright (ethical and legal use of information), databases (of e-books and e-journals) and setting up of off-campus access. There was a noticeable gap though on the use of computers as indicated by some respondents to the questionnaires who felt that they needed to be taught some computer skills for them to be able to appreciate information literacy better. The lack of computer skills was also corroborated by some interviewees who revealed that it was difficult to impart information literacy skills to students who were not computer literate. This challenge is made worse by the digital divide which still exist in the South Africa (Fourie & Krauss 2010). The researchers, had, during interaction with students for the purpose of information literacy, discovered that students who were not computer literate always lagged behind particularly when

undertaking practical lessons. This hindered the smooth progress of such sessions, resulting in very little work covered during the allocated session time.

On a follow up open ended question about the contribution of information literacy to academic success, one interviewee suggested that the information literacy programme offered to the extended programme mostly in the case of University Y, was worthwhile and suggested that the programme could be extended to all students. This may suggest that the librarians got positive feedback from those trained on the benefits of information literacy to students' academic success. Yet another suggestion was the marketing of the information literacy programme with a view to get buy-in from students. In this regard, the researchers assume that if the content is properly crafted with students in mind, then the programme will market itself. In addition, instruction librarians wanted also to have access to students' scripts and results for assessment purpose. One interviewee revealed that more time was needed to be spent on the area of formulating searches and using research databases. This implies that there was feedback or observed need to that effect. Another interviewee bemoaned the lack of school libraries as students were found to be lacking basic library skills such as the use of OPAC. One respondent implored the researchers to take note of the given challenges and make recommendations on how they could be solved.

On methods of instruction, the study findings revealed that the librarians employed a number of methods of instruction which respondents to the questionnaire were asked to indicate. Among those that were rated highly by the respondents include library orientation, library workshops, small group instruction, demonstrations, classroom instruction, online instruction and printed guides. These methods were well supported in the literature surveyed for this study by scholars such as Doherty, 2005; Edzan, 2010; Patter and Kanamadi, 2010. Concerning assessment methods, the study findings revealed that tests, quizzes, examinations, individual and group assignments were among the methods used to assess information literacy at both Universities X and Y. According to Leung, Mok and Wong (2008), assessment influences how students approach their learning, and this has influence on students' perception of the subject.

With regards to challenges, it has to be pointed out that the conduct of information literacy as revealed in the surveyed literature comes with some challenges for the library and faculty fraternity to deal with. The findings of this study indicate that all the interviewees (100%) concurred that there were challenges of various types. They ranged from lack of cooperation by students and faculties since the programme was not credit-bearing and also not on the university time table, to challenges associated with bandwidth and Internet connectivity issues that impacted negatively on the information literacy programmes at both Universities X and Y. With a total student

population of plus or minus 21 489 for the two institutions according to statistics obtained from the registries, and a dedicated instruction librarian component of 12 for both institutions, it was difficult to reach all the students with the programme. This view is supported by Wiggins (1992) who found out that it was difficult to coordinate a student's work from one class to another and from year to year as that would easily result in exhaustion and failure.

Discussions with instruction librarians during interviews revealed that the main focus of the information literacy programme at both Universities X and Y was on first year students but still they could not reach everyone at that level of study. Reaching other levels was haphazard, usually at the concern and arrangement of supportive academics. Chances therefore, were high that some students would complete their programmes without receiving any information literacy training, thereby compromising their independence and lifelong learning capabilities.

The findings of this study further revealed that only librarians were responsible for the development of information literacy content which in itself caused challenges for its promotion to academics and students. This is supported by Cunningham and Lanning, 2000; and Hepworth, 2000, who argue that it would be difficult to get faculty staff to give weight to information literacy and incorporate it into the curriculum because of lack of understanding of the programme. If they were indeed involved in the development of the content, they would appreciate the concept fully and perceive it positively. With regards to attitudes, Hepworth (2000) argues that both faculty and librarians needed to change their mindsets and start working together.

Another view which supports the findings of this study is that if there is no course which cuts across faculties, then it would be difficult to have a unified approach to information literacy (Hepworth, 2000). With respect to integration of information literacy into courses across disciplines, Cunningham and Lanning (2000) noted that it required the buy-in of all stakeholders comprising faculties, librarians and administrators.

Findings further revealed that some students were not computer literate as already alluded to, which made it difficult for instruction librarians to conduct information literacy training to them without having to first teach them computer literacy. The problem of computer illiteracy emanates from lack of support at the primary and high school levels of the education system where the learner's information literacy needs are not adequately addressed, as revealed by the interviewees. In most cases, students will have no prior library experience (Woods & Marsh, 2007; Lwehabura & Stilwell, 2008; Hart & Davids, 2010; Jiyane & Onyancha, 2010). It was further observed that lack of computer skills affects information literacy class attendance as those that lack confidence in themselves will shy away (Stoffberg & Blignaut, 2008; Jiyane & Onyancha, 2010).

Yet another challenge emanating from the study findings was the lack of clear-cut information literacy policies as also noted in Paton-Ash and Wilmot's 2015 study. Interviewees to the study revealed that they were not aware of any policy to guide or inform their practice over and above the available information literacy module. This compares well with the findings of Lwehabura and Stilwell (2008) who underlined the lack of information literacy policy at some universities in Tanzania as the stumbling block for the effective development and provision of information literacy. Another challenge raised by the interviewees related to lack of feedback of assessed assignments in cases where there was lecturer-librarian collaboration. This left the librarian without any knowledge of areas which required more attention. Feedback provided after writing assignments also helps librarians to determine students' perceptions of IL (McCartin, Evers, & Markowski, 2019).

Conclusions and recommendations

The study concludes that the efforts of instruction librarians at both Universities X and Y were appreciated by some section of the student body even though they did not reach everyone. There was evidence in both the literature surveyed and the study findings that students received training on how to access database packages of eBooks and e-journals. The student respondents acknowledged that the information literacy programme on offer, helped them a lot in their studies and this portrays positive perceptions of information literacy. This however differ from earlier study results such as Julie's 2006 findings, which indicated that although librarians agree that information literacy was crucial for students' success, there was very little evidence to support this view. However, in spite of all the positive evidence, the study still concludes that the assessment mechanisms that were in place did not help the instruction librarians much as they did not have access to the final results. The results would assist the instruction librarians to address any weaknesses in the system, with a view to improve service delivery to students and their perceptions of the information literacy programme.

The library authorities at both X and Y Universities should engage with faculty, the teaching and learning development units and senior university administrators for the purpose of crafting a sustainable policy that will pave way for course design and its delivery mechanisms. The content of a programme of instruction needs to be developed with key stakeholder participation, if it is to be sustainable and acceptable. It is further recommended that a sub-committee of the senate which will also include students' representatives and the quality assurance unit should be established to champion the development and delivery of information literacy programmes. It is also recommended that the information literacy programmes be integrated into university courses which cut across all disciplines as applicable.

It is further recommended that content of information literacy should differ according to level of study to cater for basic through to advanced needs of students. Furthermore, it is also recommended that delivery methods of information literacy should be adjusted accordingly and should be transferred to academics (Sajdak, 2012) while the library is left to focus more on the practical component of the course content.

The researchers recommend further research in the following areas:

- A comprehensive investigation of the perceptions of academics at higher education institutions towards information literacy, given their close proximity to students whom they can easily influence for the benefit of their studies.
- A comprehensive assessment of information literacy practices of each of the universities considered for this study with a view to address individual content, culture and institutional needs.

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