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Critical Information Literacy Approaches in Delivery Reference Resource

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ABSTRACT

Critical Information Literacy (CIL) questions efficiency of Information Literacy, interrupts unfair systems, and builds student-driven IL instruction. This study investigated adoption of CIL practices in reference resources and explored how they can improve access to resources by students in selected university libraries in Kenya. This study used mix method. The researcher used inclusion and exclusion criteria table to identify the universities, students and librarians. The researcher adopted a census approach to involve all the 445 respondents comprising of 431 students and 14 university librarians. Quantitative and qualitative data was collected using questionnaires and interviews respectively. Quantitative and qualitative data was analyzed using SPSS and Atlas Ti respectively. The study found that the references resources had several shortcomings such as budgetary restrictions, inadequate support, complicated reference requests, inadequate resources, time constraints, technological challenges, lack of confidence in using reference resources, information overload, negative attitude towards reference services, underuse of tools and poor communication. The study made the following are recommendations: awareness creation on reference resources, improvement of reference resources, enhancing student's ICT skills, faculty and library collaboration, establishment of feedback mechanism and that universities librarians should offer support to users by holding regular seminars, conferences, and workshops that bring together students and librarians.

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1. INTRODUCTION

A review on reference resources established that university libraries use several forms of reference such as face to face, email, virtual soft wares and chat platforms (Abubakar, 2021; Ashiq et al., 2022; Mawhinney, 2020; Nduka et al., 2021). However, the authors suggest that there is still room for improvement on existing forms of reference resources.

Reference resources facilitate the students to access information resources in the library (Huda et al., 2018). This implies that reference resources complement Information Literacy (IL). Reference resources and services entails guiding users on access to information resources, offering guidance on library resources and supporting users in accessing information resources (Mwiinga et al., 2020). The Kenyan Commission for University Education (CUE) requires that a university library will offer reference resources to its users (CUE, 2014). In adherence to this policy, university libraries in Kenya offer reference resources through physical and virtual modes.

Application of Critical Information Literacy (CIL) approaches in reference resources has redesigned the traditional library reference that were based on the question and response approach to a collaborative exercise that involves the user and the librarian (Adetayo, 2021). For instance, critical reference encourages users to raise thoughtful interrogations about their research topics (Barr-Walker & Sharifi, 2019). Librarians should use feminist principle of care when offering reference service by treating library patrons with human face and kindness (Douglas, 2020). This can be done by asking users opinions on the enquiry they are seeking. Librarians can also improve reference resources by engaging users during the reference service. This contrasts to the traditional reference services that focus on question and response approach.

CIL refers to user's capacity to acquire, analyze and comprehend information in order to make educated decisions about information access, production, and consumption and to take appropriate action (Didiharyono & Qur'ani, 2019). The necessity of redefining the idea of information, addressing different types of oppression, opposing prevailing mechanisms of information production, and highlighting the role of education in promoting social change are some of the major concerns in Critical Information Literacy (CIL). This is essential given that university libraries have undergone several changes. For instance, libraries have embraced the electronic based information resources such as electronic books and journals. This is according to research by (Rafiq et al., 2021) who established that the majority of libraries all over the world have embraced electronic resources. This shows that students have to adopt to the new changes.

University students have acquired new skills to cope with changes in the library environment. The extensive development of information in various formats has provided new avenues for the user such as remote access and information sharing (Head et al., 2019). The current students are technology savvy. Current students increasingly rely on smartphones and tend to access information while off-campus. They actively engage with social media platforms and participate in collaborative learning communities to share and obtain academic information (Majidah et al., 2025; Susilana et al., 2024). Consequently, reference services must adapt to reflect the evolving nature of libraries, library users, and information resources in the digital age.

Additionally, stressed is the significance of enabling students to become engaged learners capable of opposing these repressive structures (Drabinski, 2019). Librarians should also go beyond providing access to information and identify forms of unfairness in Libraries (Barr-Walker & Sharifi, 2019). For instance, librarians should ensure that the reference resources

are interactive and easy to use. Ultimately, librarian should ensure that students are independent and can use reference resources on their own.

Universities offer wide range of reference services such as face to face, emails, instant message and use of commercial software's (Abubakar, 2021). Reference resources play an essential role facilitating access to information resources. In spite of critical role played by reference service in retrieval of information, library users do not maximally utilize these services (Büttcher et al., 2016). This is in line with research by (Radford et al., 2021) who established that majority of reference services in universities are underutilized. Students rarely visit the reference desks and as a result most libraries have deployed reference librarians to other desks (Hervieux & Wheatley, 2021).

CIL empowers library users to interrogate the library services and resources (Drabinski, 2019). For instance, the library users can interrogate the adequacy and appropriateness of reference services. CIL therefore empowers students to question dominant narratives and perspectives such as the relevance of face-to-face service in the wake of digital reference services. CIL is important in university libraries because it helps students, faculty, and staff to become more discerning users of information (Tewell, 2018). By developing the skills necessary to access, evaluate, and use information effectively, individuals are better placed to engage with the research and scholarship that forms the basis of their studies and work (Anthonysamy et al., 2020).

CIL helps to promote a culture of intellectual curiosity and engagement, encouraging individuals to question assumptions, seek multiple perspectives, and pursue a deeper understanding of the world around them. In this way, CIL plays a vital role in supporting the mission of the university library and the broader academic community (Alexander et al., 2019). CIL is therefore timely because physical environment in libraries is now a location to engage with cutting-edge technology, and independent learning (Koltay, 2016). This shows that traditional services such as book shelving, issuance of books and face-to-face reference work are eroding with time. Academic librarians are encouraged to integrate technology in all face-to-face services (Soni et al., 2020). One of the key role of CIL is empowering students by making them confident of self-efficacy. Application of CIL therefore leads to self-reliant students who are confident and responsive to changes in information environment (Grafstein, 2017; Tewell, 2018).

Adoption of CIL in reference resources requires librarians to interrogate the qualities of reference service (Caffrey et al., 2024). For instance, librarians should train students on correct use of the reference resources. The library environment should also be conducive for reference resources (Xu et al., 2022). For instance, the library should have good internet connection and adequate computers that facilitate access to digital services. Reference resources should also be easy to use, available and easy to use (Joo & Choi, 2015). Ultimately, students should have capacity to use reference resources on their own. Adoption of CIL in service involves interrogating the current reference approaches to determine their strengths and weaknesses (Dandar & Lacey, 2021).

Librarians should employ CIL approaches to address the issues of underutilization of reference services (Jones et al., 2023). CIL is therefore essential in modern times as it encourages librarian to continually improve reference resources. CIL approaches are beneficial to the librarians in response issues including pandemics, change of information formats, and even change of the user characteristics (Withorn et al., 2021). The research established application of CIL approaches in delivery of reference resources in selected university libraries in Kenya.

2. METHODS

This study used Mixed Method Research Design (MMRD). MMRD provides rigorous methods such as data collection, data analyses and data interpretation for both qualitative and quantitative data (Creswell & Creswell, 2017). This approach provides an opportunity to compare different perspectives drawn from quantitative and qualitative approaches (Creswell & Creswell, 2017). This implies that by gathering and analysing qualitative data first, and then delivering the instruments to a sample, the researcher will be able to apply better-contextualised research tools (Dawadi et al., 2021).

The data collections tools for this study were structured questionnaire and structured interview schedule for the students and university librarians respectively. The researcher used purposive sampling that involved use of inclusion and exclusion criteria in table 1. The pilot study was conducted at Moi University. Moi University met the inclusion criteria stipulated in table 1 but was not sampled for study. Piloting the research instruments provided data that can ascertain validity and reliability of the data generated by the tool. Piloting also provided feedback on effectiveness of the research questions.

Table 1. Inclusion and exclusion criteria.

Criteria type	Inclusion	Exclusion
Universities		
Subscription to electronic information resources	Evidence of subscription to resources	Universities that have not subscribed to electronic resources
ICT Infrastructure	Universities that have adopted ICT resources and infrastructure such as KENET internet, ICT equipment's such as computers	Universities that have not acquired ICT sources such as KENET and ICT resources
ICT Librarian Reference Librarian	Universities that have engaged ICT and Reference Librarian	Universities that have not employed ICT and Reference Librarians
Students		
Status	Registered Students	Non-registered
Level of study	Fourth year	First, second and third years
Number of students who have graduated from the Bachelor and Masters in Information Science programs	Bachelor and Masters in Information Science programs that have graduated students in the last three years	Bachelor and Masters in Information Science programs that have not graduated students
Mode of study	Full time	Part time, Open
Library staff		
	University Librarians	Other staff other like reprographics staff

The population of the study was 445 as shown on the Table 2. The researcher used a census approach to involve all the 445 respondents in this study because the target population of students and staff that met the criteria was not large. The data collections tools for this study were two structured questionnaires and one interview schedule.

Table 2. Population of the study.

University	Undergraduate	Postgraduate	University Librarians	N
Egerton University	22	25	1	48
University of Nairobi	43	15	1	59
Kenya Methodist University	8	4	1	13
Technical University of Kenya	36	25	1	62
Kabianga University	15	0	1	16
Kenya Highlands University	8	0	1	9
Jomo Kenyatta University	0	13	1	14
Rongo University	27	0	1	28
Tharaka University	4	8	1	13
Meru University	20	0	1	21
Karatina University	37	0	1	38
Kisii University	42	4	1	47
Chuka University	45	0	1	46
Masai Mara University	30	0	1	31
Total	337	94	14	445

3. RESULTS AND DISCUSSION

3.1 Qualities of Reference Services Offered in Selected University Libraries in Kenya

Students views on quality of Critical Reference Resources are summarized in Table 3. Table 3 shows the response (Agree) and (Disagree) of Students on several questions. On the question about the usage of face-to-face reference resources in their libraries, students who responded (Agree) were 306 (81%). Those who responded (Disagree) are on the same question were 70 (19%). On the question that face to face allows users to participate in reference service, the students who responded (Agree) were 306 (81%). The (Disagree) response on same question were 3 (19%). On the question that face to face take into account user opinion, the students who responded (Disagree) were 221 (59%). Those who responded (Agree) to the same question were 155 (41%). On the question that the that face to face is time saving, the students who responded (No) were 316 (84%). The (Disagree) responses on same question were 60 (16%).

Table 3. Students' responses on quality of critical reference resources.

Reference Service	Variable	Agree (Freq.)	Agree (%)	Disagree (Freq.)	Disagree (%)	Total (Freq.)
Face to face	Usage	306	81%	70	19%	376
	User participate in the reference service	306	81%	70	19%	376
	Take into account user opinion	155	41%	221	59%	376
	Time saving	60	16%	316	84%	376
Email	Usage	308	82%	68	18%	376
	User participate in the reference service	55	15%	321	85%	376
	Take into account user opinion	155	41%	221	59%	376
	Time saving	277	74%	99	26%	376
	Usage	34	9%	342	91%	376

Reference Service	Variable	Agree (Freq.)	Agree (%)	Disagree (Freq.)	Disagree (%)	Total (Freq.)
Virtual software	User participate in the reference service	54	14%	322	86%	376
	Take into account user opinion	171	45%	205	55%	376
	Time saving	72	19%	304	81%	376
Chat	Usage	18	5%	358	95%	376
	User participate in the reference service	18	5%	358	95%	376
	Take into account user opinion	22	6%	354	94%	376
	Time saving	96	26%	282	74%	376

On the question about the usage of email reference resources, the students who responded (Agree) were 308 (82%). The (Disagree) responses on same question were 68 (18%). On the question that email reference service allows user to participate in the reference service, the students who responded (Agree) were 321 (85%). The (Disagree) responses on the same question were 55 (15%). On the question that email take into account user opinion, the students who responded (Disagree) were 221 (59%). Those who responded (Agree) to the same statement were 155 (41 %). On the question about time saving, the students who responded (Agree) were 277 (74%). Those who responded no to the same question were 99 (26%).

On the statement about the usage of Virtual Commercial Software reference resources, the students who responded (Disagree) were 342 (91%). The (Agree) responses on same question were 9 (34%). On the question that virtual commercial software allows users to participate in the Reference service, the students who responded (Disagree) were 322 (86%). Those who responded (Agree) to the same question were 54 (14%). On the statement that Virtual commercial software takes into account user opinion, the student who responded (Disagree) were 205 (55%). The (Agree) responses on same statement were 171 (45%). On the question that the that Virtual commercial software is time saving, the students who responded (Disagree) were 304 (81%). The (Agree) responses on same question were 72 (19%).

On the question about the usage of Chat Instant Message Reference resources in their Libraries, the students who responded (Disagree) were 358 (95%). The (Agree) responses on same question were 18 (5%). On the question that Chat Instant Message is allows user to participate in the reference service, the students who responded (Disagree) were 358 (95%). The (Agree) responses on same question were 18 (5%) and 8 (29%). On the question that Chat Instant Message is time saving, the student who responded (Disagree) were 282 (74%). The (Agree) responses on same question were 96 (26%).

The findings in Table 3 on quality of reference resources indicate preference to face to face reference resources and use of email respectively. These findings indicate a gap in effectiveness of face to face and emails reference resources in facilitating access to information resources. The findings according to majority of the students and ICT/reference librarians indicated that the students do not use virtual reference resources and instant chat respectively. Virtual reference resources are the most convenient to the students because they can be accessed outside the campus and used by several users concurrently. More so, virtual reference provides platforms for interaction and saving reference responses. Therefore, inability to use virtual reference resources leads to denial of information. These findings can be attributed to the following two reasons. First, the librarians may need to view reference resources as means of facilitating information access. Second, librarians may need

to create awareness on use virtual reference resources.

One way of enhancing student's capacity on virtual reference resources, is collaborating with faculty on use of virtual reference platforms to submit student's assignment. In addition, the librarians could link the reference resources to Online Public Access Catalogue (OPAC) so that the students are prompted to use reference after using OPAC. A study by pointed out that majority of the students in university libraries prefer face to face reference as opposed to virtual reference because of its simplicity Williams et al. (2022). In spite of library investing heavily on virtual desks, face to face reference desks are usually crowded by students seeking various library services (Mehta & Wang, 2020; Trembach, 2019). The CIL approach could ensure both simplicity and standards for reference resources.

The findings depicted in Table 3 on various ways students engage in reference services, revealed that the most interactive reference service was the face to face. The findings also revealed that majority of students do not participate in the email, virtual and chat reference resources. These findings can be attributed to the following two reasons. First, the students may need to be sensitized on use of virtual reference resources. Second, the reference resources could be complex for students to use. One way of improving student's capacity on virtual reference by using virtual reference resources to offer CIL. The libraries can also use virtual reference resources to share important communications to the students such as arrival of new books. Majority of the students in universities prefer face to face reference resources because it allows collaboration (Mawhinney, 2020). The CIL approach could ensure that students are well trained to participate in the reference resources and that reference resources are simple and aligned to correct standards.

The findings depicted in Table 3 shows that that face to face, use of email, virtual software, instant chat messaging does not consider user's opinions. These findings can be attributed to the following two reasons. First, the students may need to be sensitized on how to interact with librarians on virtual reference resources. Second, the students could be lacking metaliteracy and ICT skills that are essential in use of reference resources. One way of improving students /librarians virtual reference interaction is offering trainings through virtual references. Librarians could also use virtual references to pass important information such as new library resources and library schedules to the students. This implies that reference service should not be one-way communication but an interactive session between user and the librarian. This will enable librarian to understand the level of the user and also and his perception towards library services. Librarian user interaction led to improvement of reference resources and enhanced user satisfaction. This implies that the librarian should understand that the level of the user. For instance, first year students might seek very basic enquiries. Critical reference approach should redesign the traditional library reference resources that were based on the question and response approach to a collaborative exercise that involves the user and the librarian (Bandyopadhyay & Boyd-Byrnes, 2016; Ifijeh & Yusuf, 2020).

The findings depicted in table 3 indicated that face to face and virtual reference take more time while email reference resources take shorter time. These findings can be attributed to the following two reasons. First, the students could be lacking skills on use of virtual reference resources. Second, the students could be lacking librarian support. One way of addressing this gap by establishing a collaborating between the faculty and the library. For instance, the faculty can instruct the students to use virtual resources in referencing assignments and term papers. The role of the library will be offering support and guidance on virtual reference resources.

3.2 Students Efficacy on Reference Resources in Selected University Libraries in Kenya

The responses in this section sought to establish the student's self-efficacy on critical reference services. The results are summarized on figure 1. The views of the students were captured in relation to students ability to use reference services. On the statements about students ability to use reference services, the response was; disagree 127 (34%), strongly disagree 107 (28%), not sure 86 (23%), agree 37 (10%), and strongly disagree 19 (5%). On the statements about the student's ability to identify strengths and weaknesses, the responses were; strongly disagree 194 (52%), disagree 85 (23%), not sure 54 (14%), agree 23 (6%), and strongly disagree 20 (5%).

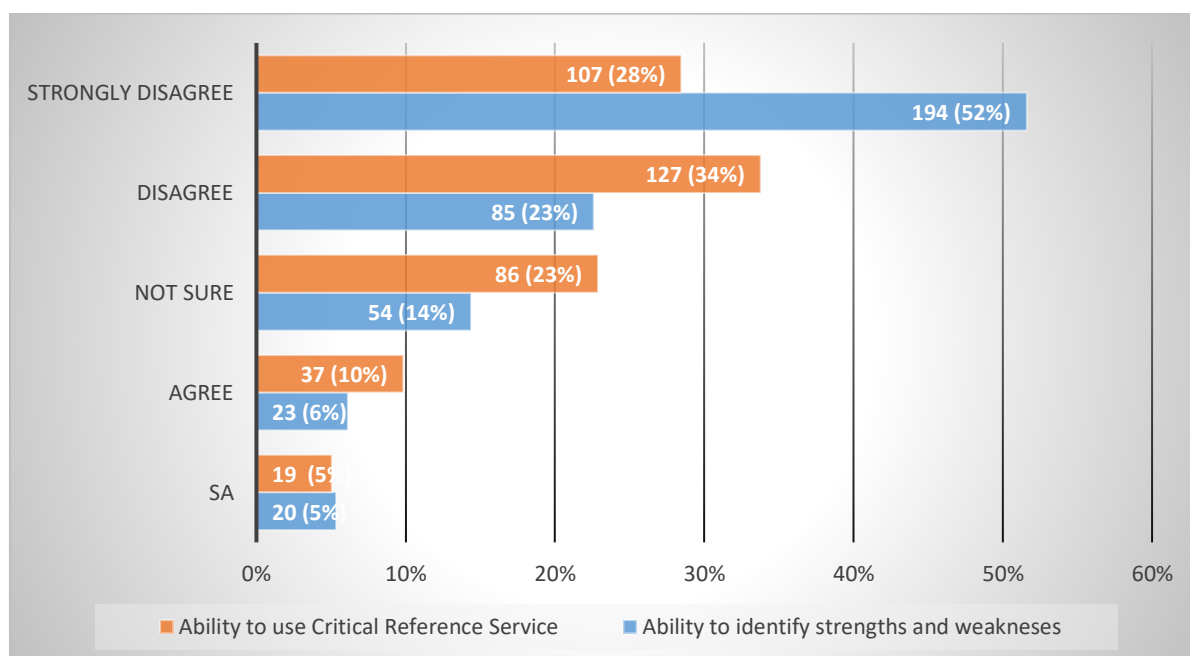


Figure 1. Students View on the Ability to use Reference Service.

The findings (see figure 1) on student efficacy in the use of reference established that, majority of the students do not have capacity on reference services. The findings reveal the need to develop efficacy amongst the students on the use of reference resources. One way of improving student's efficacy is by use of Problem Based Learning during CIL sessions. Secondly, librarians can provide feedback mechanisms that enable the students to provide suggestions on reference resources. Thirdly, the library can also use competitions such as essay/poetry writing to improve student's efficacy on use of reference. Majority of the students in Kenya do not give feedback on library resources because librarians have not provided appropriate feedback mechanisms where students can rate the quality of services (Merande, et al., 2021).

3.3 Critical Aspects References Resources in selected University Library in Kenya

The study sought to determine the critical features of the reference resources. The results are summarized in Figure 2. The views of the students were captured in relation to critical aspects of reference services. On the statement that reference resources are supported by librarians, the responses were strongly disagreeing 214 (57%), disagree 86 (26%), not sure 41

(12%), agree 26 (7%), and strongly disagree 9 (2%). On the statement that reference resources have embraced ICT, the responses were; strongly disagree 189 (50%), disagree 80 (21%), not sure 43 (11%), agree 9 (5%) and strongly agree 45 (12%).

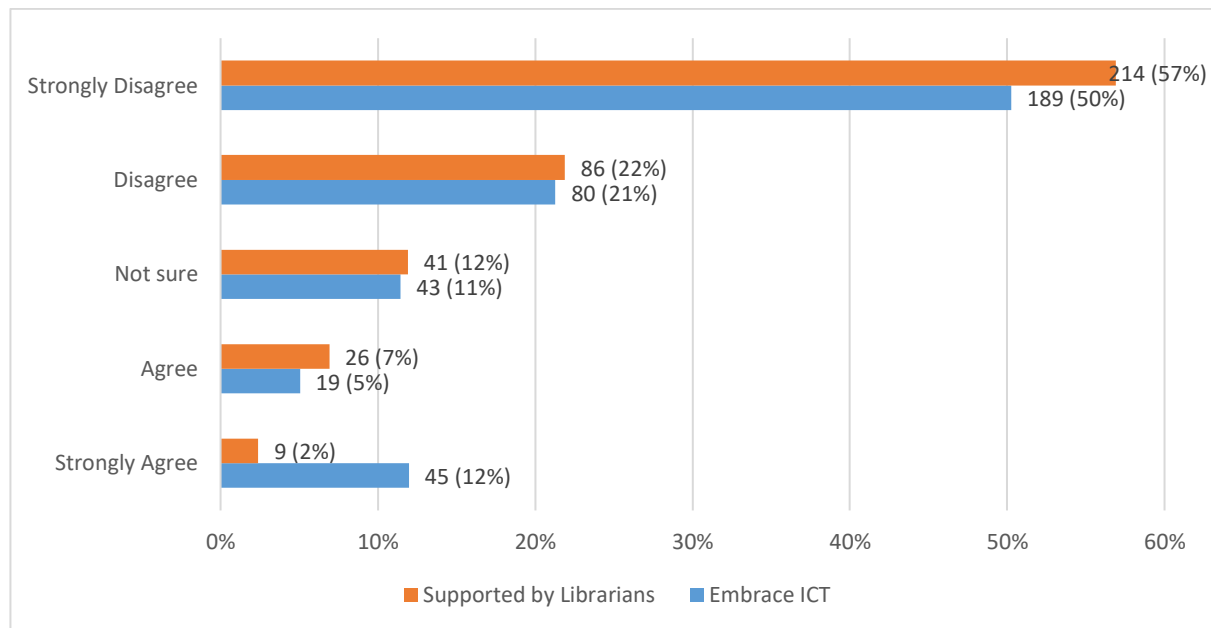


Figure 2. Critical Aspects of Reference Services.

The findings on critical aspects of reference resources (see figure 2) indicate that the reference resources lack critical qualities such as user interaction platforms and librarians support. This shows that the reference resources offered by the selected libraries are not appropriate in delivery of reference services. Lack of critical aspects on reference resources could be attributed to several reasons. First, the librarians could be using traditional reference resources such as face to face. Secondly, the librarians could be lacking capacities on establishing critical reference services. To enhance the critical aspects of reference resources, university libraries should consider benchmarking with other libraries and attending workshops to learn about raise critical aspects of reference services. Secondly, University librarians can also attend conferences on management of library resources. The CIL approach could ensure both students efficacy for reference resources.

Critical reference approach has redesigned the traditional library reference services that were based on the question and response approach to a collaborative exercise that involves the user and the librarian (Adetayo, 2021). Librarians should be retrained on the reference skills (Chawinga & Zinn, 2020). In addition, the librarians may need to adopt latest digital approaches in delivery of virtual reference resources. Universities could also provide adequate budget to support staff training and acquire appropriate resource. A study by pointed out the reference resources in the university libraries are not popular because students take a lot of time. Use of value-added services and library user satisfaction such as digital reference are key words in 21st century librarianship (Cassell & Hiremath 2018).

3.4 Challenges Affecting Reference Resources in Selected University Libraries in Kenya

University Librarians were asked to present their perceptions on challenges affecting reference services. Figure 3 is a network view on challenges affecting the references services.

The highest responses on the challenges that of reference services in selected university libraries were budgetary restrictions, inadequate support, complicated reference requests, inadequate resources, time constraints, technological challenges and lack of confidence in using Reference resources as revealed by the figures 18, 16, 14, and 13.

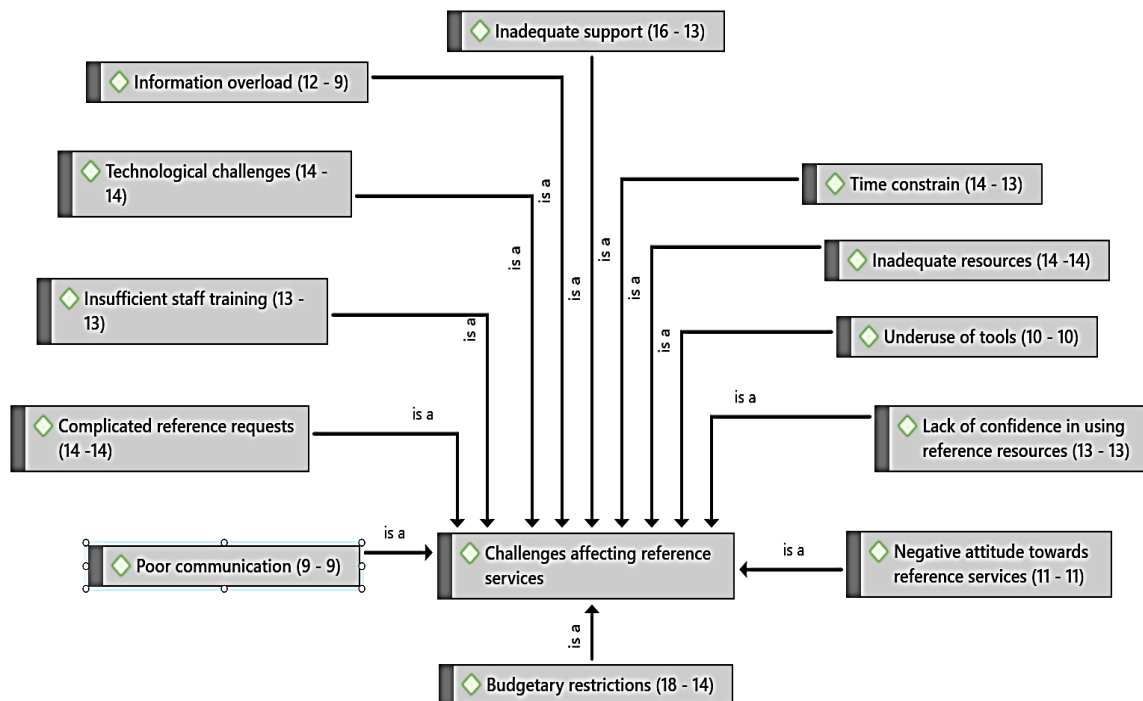


Figure 3. Challenges of reference services in selected university libraries in Kenya.

The other challenges that affect reference services were information overload, negative attitude towards reference services, underuse of tools and Poor communication as revealed by the figures 12, 11, 10 and 9. Some of the respondents verbatim are indicated below.

Lack of confidence in using reference resources

"Most of the students lack confidence in using reference services. They look at Reference Resources as complicated process and as results they are reluctant to learn to use Reference resources." [Librarian 11]

Complicated reference requests

"Majority of the students do not know how to formulate reference request. For instance, some students cut and paste the assignment without using narrow or broader terms." [Librarian 9]

Inadequate reference resources

"I do not have enough staff to run the library, so I do not allocate staff at the Reference Desks. My priority is to run the essential desks such as circulation desk and reprographics" [Librarian 6]

Information overload

"Information overload is a common problem for many library patrons who are faced with an abundance of sources, data, and perspectives on any given topic."

This is more common with Electronic Information Resources. It can cause confusion, frustration, and anxiety, and hinder the quality and efficiency of their research” [University Librarian 9]

The findings on challenges affecting reference services (Figure 3) revealed that universities libraries face several challenges in provision of reference services such as budgetary restrictions, inadequate support, complicated reference requests, inadequate resources, time constraints and technological challenges. These challenges reveal critical gaps on the quality of reference services. The challenges also show the need to improve references by addressing these challenges. One way of addressing these gaps is by providing adequate funds to the library so that they can acquire the latest reference tools. The gaps also show the need to carry out more sensitization to the students on use of reference resources. Majority of the University libraries are unable improve their resources due to financial constraints (Chuang et al, 2019; Hamad et al., 2022; Peacock, 2025).

4. CONCLUSION

The study concluded that the most utilized reference resource was face to face. The least utilized reference resources were email, virtual and chat reference resources. The study found that the references services had several shortcomings. For instance, face to face, use of email, virtual software and instant chat messaging does not consider user’s opinions during the reference service and face and virtual reference resources take more time to use. This research showed that majority of the students do not have capacity on reference services and that the reference resources lack critical qualities such user interaction platforms and librarians support. The recommendations of this research include awareness creation on reference resources, improvement of reference resources, enhancing student’s skills on use of reference and ICT skills, faculty and library collaboration, establishment of feedback mechanism on references resources and providing librarian support.

5. AUTHORS’ NOTE

The authors declare that there is no conflict of interest regarding the publication of this article. Authors confirmed that the paper was free of plagiarism.

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