

Management of Information Literacy Programmes in Selected Technical Training Institution Libraries in Nairobi County, Kenya

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Abstract

Technical Training Institution Libraries are facing the challenge of managing information literacy programs. Also, there are limited information literacy programmes in Technical Institution Libraries. This study, therefore, sought to determine the management of information literacy programmes in selected Technical Training Institution Libraries in Nairobi County. The objectives were to establish the implementation strategies of information literacy programmes in selected technical institutional libraries; to establish how frequent information literacy programmes are reviewed in selected technical institutional libraries; to determine the perceptions of the implemented information literacy programmes amongst users in selected technical institutional libraries; to identify the major challenges associated with the implementation of information literacy programmes in selected technical institutional libraries. This study adopted a descriptive survey design. A total of 333 respondents comprising 5 librarians, 190 teaching staff, and 138 students from five selected Technical Training Institutions constituted the subjects for this study. The study established that Technical Institution Libraries were implementing various forms of strategies for information literacy; information literacy programmes are reviewed after every orientation process using a feedback form; important skills are acquired by the library patrons during information literacy training, and librarians were facing several challenges as they implemented information literacy programmes.

Keywords: *Management, Information Literacy Programmes, Technical Training Institution Libraries*

1.0 Introduction

Information Literacy (IL) skills are crucial tools in problem-solving in the ever-changing social-economic phenomena in the world. Yet ignorance, poverty, and unemployment are on the rise as presented by several scholars who have highlighted the role, need, and challenges faced by Information Literacy programmes (ILPs) in promoting IL skills (Ahonem & Kinnunenin, 2015; Kuhlthau, 2017). The concept of information literacy has been redesigned and strengthened across Europe, America, and Asia to be recognized as the essential literacy for the twenty-first century (Hepworth, 2017). Information literacy is the ability to critically consider and make an informed decision regarding what one finds and utilizes, according to the Chartered Institute of Library and Information Professionals (CILIP) (2018). It includes abilities and skill sets that a person needs to tackle tasks that are associated with information.

It includes its identification, accessibility, understanding, assessment creation, management, dissemination, sharing, and storage. According to Wolff, Rod, and Schonfeld (2016), at the moment information literacy is among the most valuable and relevant services within libraries in technical institutions. This has been brought about by the increasing demand for information literacy programs. Information is currently expanding rapidly, especially in this information age. Therefore, creating challenges for students on identification, access, and use of this needed information.

Problem Statement

Libraries in technical institutions are thought to have a key role in helping users to improve their ability to recognize and define their information needs. Also, to know where to look for the information being sought, carry out their searches and finally determine the usefulness of the information retrieved (Omondi, 2015). Considering the remarkable upward trend in the enrollment of students in technical institutions in Kenya, coupled with an explosion of information. This has placed the information literacy program at the center of information access. Information literacy programmes allow learners to locate new approaches to rational, emerging knowledge and equip them with useful skills of employment necessary for lifelong learning.

This makes IL programs, a key aspect of technical institution libraries. Despite this, Kayulya (2018) has noted that several students in technical institutions are not exploiting library resources because they are not used to delving into discovering, and retrying all library information materials. They spent so much time perusing wrong sources and using tools of retrieval based on trial and error. Were (2019) further asserts so many students of universities do not have the requisite skills for exploring the potential ability of libraries in research and hence are challenged in using the library which leads to their underutilization of the available services. Although programmes of IL are considered a valuable element of technical institution libraries worldwide, these institutions are executing these programmes based on certain guidelines and standards. If this is availed to help patrons, then the IL programmes can become efficient and effective in the utilization of the services and resources available. The implementation of IL programmes, therefore, remains questionable (Were, 2019). Therefore, there is a need to research the management of IL programmes in technical institutional libraries. This is in pursuit to equip researchers and learners with relevant skills for research and innovation.

Objectives of the Study

- i. To establish the implementation strategies of information literacy programmes in selected technical institutional libraries.
- ii. To establish how frequent information literacy programmes are reviewed in selected technical institutional libraries.
- iii. To determine the perceptions of the implemented information literacy programmes amongst users in selected technical institutional libraries.
- iv. To identify the major challenges associated with the implementation of information literacy programmes in selected technical institutional libraries.

2.0 Literature Review

The Information Search Process (ISP) model developed by Kuhlthau (2017) served as the study's main framework. This information search model describes information behavior in activities that call for knowledge production. According to Kuhlthau et al. (2017), the definition

of information searching is that of a patron's behavior purposefully finding suitable information as they engage with systems of retrieving information. The ISP model was used to illustrate the implementation of ILPs in terms of perceptions, frequency of review, implementation strategies, and the major challenges to information service providers in implementing the information search process based on the ILPs adopted by selected technical institutional libraries.

This model was used to describe the independent variables by exploring the effects of external factors on the management of IL programmes to enhance the information search process. The users' attitude, competence, and awareness determined the perceptions of IL programs; the basic literacy, specific career needs, and service delivery determined the review of IL programs; while orientation, policy, and administration support determined the implementation strategies of IL programs. Due to challenges of information overload, available infrastructure, and the digital divide, the ISP model presents learning institutions with a dilemma, whereby several elements impacting their decision of ILP implementation methods were used in the process of searching for information, starting, assembly, choice, development and information outline. The selection, adoption, and use of the different information literacy programmes for technical institutional libraries were the basis for this study.

Information Literacy Programmes and Information Search Process

The Chartered Institute of Library and Information Professionals (CILIP) (2018) defines information literacy as the process of understanding when information is needed, why that information is needed, where it can be found, and how to evaluate, use, and ethically communicate information. Information literacy programs are tools used to produce information literate people who can retrieve and use information. Additionally, (Badke, 2016; Bowden, 2017) describes information literate persons as people equipped with relevant skills which can be applied during the Information Search Process (ISP) when navigating information resources in their work. This means that Information literacy complements the information search process, in conceptualizing and using information skills toward a problem-solving approach in learning and the workplace. However, according to Zuworki et al., (2018), most university libraries have put in place IL programmes to enhance information literacy yet some learners do not have all the information literacy tools that could be applied as learning techniques and using primary resources in molding information problems to solutions. This study aims to find out whether the same challenge is experienced in technical institutions.

While studying the behavior of library users in higher learning institutions, Hall (2015) delved into the expected behavior and character of libraries that provide successful information literacy programs. He pointed out that the user should be proficient in the subject matter, possess research abilities, be self-motivated, and take more responsibility for their education. However, he did not investigate the implementation of IL programmes used in the institution. Mugambi (2018) supported the findings adding that other vital skills that library users should garner from a library information literacy program include awareness of the available and needed information, potential sources of such information, skills in the retrieval of such information, and knowledge on the eventual use of the information. He did not investigate the situation of IL programmes adopted by the libraries.

Botham et al. (2014) evaluated information literacy programmes by university staff and noted the staff had high capabilities of realizing the needed information, locating information, and assessing and utilizing it yet they did not evaluate how the IL programmes could be implemented in libraries. According to Zhang, Majid, and Foo (2014), the possession of IL

skills by students leads to information literacy. However, American Library Association (2015) contends that the availability of information is not enough to confer students' information literacy; they have to master the content and expand their investigative skills. A comprehensive description of an information literate student and programme was offered by Botham et al. (2014) to include recognizing the need for accurate and complete information, formulating questions based on the need, identifying potential sources of information, and developing the requisite search strategies. Though existing literature confirms that literacy programmes have taken root in various Kenyan universities, their implementation is in doubt because of several constraints.

Implementation Strategies of Information Literacy Programmes

Development, adoption, and implementation of Information Literacy Programmes is a complex undertaking that requires elaborate strategies to make it a success and also ensure sustainability, ease of use, acceptability, and productivity. This was reported by Idiodi (2015) adding that making information literacy a strategic issue for an institution was the starting point strategy that enables institutions of learning and transformative teaching to produce students who are independent information users. The study will seek to establish if technical institution libraries incorporate implementation strategies as suggested by authorities and findings of empirical research.

According to Levey (2016), Onsorinde, Adekiya and Adyemo (2017) and Maina (2014) found out that equipping library users with information literacy, retrieval, and computer skills was an important start strategy depending on the need, capability, and preference of the library adding that the information should be on paper or in electronic form provided there is proper library use hence making the content relevant to the environment, dynamics and needs of users. However, they also noted that most of the information literacy content was developed for the environment in Europe and America and thus far removed from the realities in Africa. Tiluwade, Myers, and Andrade (2019) noted that an effective strategy for rolling out an information literacy program in a library should be supported by effective policies, especially on the use of ICT facilities. Cats and Lau (2018) advise that the guiding strategy should be making students literate in reception, storage, transmission, and use of information.

Pejora (2016) was of the view that teaching information skills in the curricula should be the necessary support strategy in a library literacy program. Grassia and Kaplowitz (2019) found that the teaching of bibliographic information by librarians should be simplified and other pertinent user information added. These added skills have been noted to include searching and evaluating information for quality from different sources and establishing the manner of utilizing the information (Moje, 2012). Kingori (2015) contributed to the emerging strategies by libraries in implementing information literacy programmes in a study that found that successful libraries are moving away from the conventional card catalogues and transitioning to the use of digital resources and teaching users how to use search engines. This strategy was supported by Bernard (2019) who observed that libraries should avail old information in new formats while suggesting the use of databases.

Frequency of Reviewing Information Literacy Programmes

A review of the programme is a procedure for measuring accomplishment that stresses basic programme efficiency. Bracke, Maybee, and Weiner (2016) argue that reviewing normally incorporates more strategies of evaluation and is focused on the likely results of the program. Therefore, it needs to incorporate progress measurement of achieving the goals of the program; and evaluation of the blending with the course, curricula, and evaluation of accreditation and

institution (ACRL, 2012). In regards to IL programmes in the library, Marzal (2015) describes review as a procedure for betterment and enhancement. Therefore, it needs to be associated with quality; and it needs the prerequisite strategies to assess the qualification process (Marzal, 2015).

Additionally, he argued that when an organization creates and executes an IL program, it must have a mechanism for evaluating and monitoring it to determine its efficacy. The explanation of Kendra (2018) is that reviewing efforts of information literacy in the library are on a practical level offering an essential chance to guarantee that those participating in literacy instructions, together with the administrator of universities and the library, are well positioned to strengthen the multitude of factors that culminate into the accomplishment of a data literacy programme. Evaluation is a crucial element that exemplifies the program's best practices, according to the Institute for Information Literacy of the Association of College and Research Libraries (ACRE), which supports Kendra (2018) assessment of programs related to IL. It has been emphasized also by the Australian and New Zealand Institute for Information Literacy (2016) that the review of the existing IL programmes goes a long way in the ongoing process of enhancing these programs, directly measuring progress in establishing if its objectives and goals are being met, blending with the assessment of the curriculum and with courses together with the evaluation of the institution and implement several strategies and review purposes.

Perceptions of the Implemented Information Literacy Programmes

In their research on the perceptions of implemented Information Literacy Programmes (ILPs), Delora et al. (2011) revealed those instructions that are passive are not a style that is effective in teaching and resulting in positive benet, behavioral and psychological outcomes. Instructions that are active instead yield positive effects. Essentially, the level of active information literacy instructions provided does not matter; one particular session of instructional learning can be enough to result in a substantial outcome in student learning. This is certainly inviting information for those practicing IL working in environments of higher education that are constrained by resources contrary to technical institutions which are rather technical and smaller.

Blau (2016) produced several key findings in his study on the information literacy concept: whereby forty percent of members of faculty in the universities of the study were not aware of what IL meant though almost all considered the expertise to be quite essential; members of faculty in those universities believed IL to be conducted through unofficial means and are not a way of collaborating with librarians; in as much as they preferred classes of library orientation, several participants accepted the involvement of librarians and trusted that IL needed to be conducted through collaborative means including the librarians and the lecturers; having identified restriction of time as being among key challenges in achieving collaboration, this they could still overcome. From these studies, there is a need to find out if the recommendations to have collaboration and integration have been used to achieve the promotion of IL in technical institutions as highlighted in universities.

Challenges in the Implementation of Information Literacy Programmes

The implementation of Information Literacy Programs (ILPs) among different types of libraries has suffered differing challenges and this study will investigate if libraries at the selected technical institutions in Nairobi are afflicted by the challenges which also affect the general performance of libraries. Although ILPs ought to be a major component of library existence, Darch and Underwood (2017) found that the growth of information literacy programmes in African universities was being hampered by the poor network infrastructure, inadequate

computers, reluctance to accept new technologies, and over-reliance on recorded texts by the libraries. Additionally, libraries in Africa failed to keep pace with the necessities to keep improving ILPs. For example, Snarley (2018) found that libraries failed to integrate information literacy as part of mainstream education. This study will interrogate these challenges in relation to technical institutional libraries and propose recommendations.

Dadzie (2019) found a few obstacles to the successful adoption of ILPs in Ghanaian university libraries. These issues included a lack of management support for ILPs initiatives, a dearth of sufficient information about IL, and staff and departments who were unwilling to administer ILPs. Sitima-Ndau (2015) conducted a similar study to see whether ILPs offered at the University of Malawi's Chancellor College were sufficient for giving students the necessary abilities. The study demonstrated that the degree of IL provided to university students was insufficient and did not do enough to give pupils the necessary computer skills or data searching abilities. While scholars report inadequacies in the implementation of IL programmes in addition to curricular and financial challenges, electricity failure, and high internet charges among university libraries; this study will evaluate challenges to the implementation of ILP in the management of IL programmes in selected technical institutional libraries.

Studies by Maina (2014) reported some challenges facing information literacy programmes as work overload for the library staff, lack of proper coordination among the librarians and faculty, limited support from the administration, inadequate teaching and learning resources, and perception of students towards the programs. According to a study by Reed, Kinder, and Cecile (2017), there is a manifest lack of linkages between ILPs and curriculum development. The same study was extended to the day-to-day teaching and learning activities whereby assignment development, in-class teaching, and assessment were not linked to the information literacy training. West (2013) found that the lack of collaboration between the educators and the librarians was extended to failure to visit each other and in planning, budgeting, and provision of resources. From this finding, most of the challenges in the implementation of ILP was a result of resource inadequacy adding that many libraries have shortages of textbooks, journal, databases, interactive videos, ICT infrastructure, internet bandwidths, and multi-media systems (Olubayi, 2015; Jelagat, 2015).

3.0 Methodology

This research study adopted a descriptive survey design. The total sample size was obtained using a formula developed by Yamane. A total of 333 respondents comprising 5 librarians, 190 teaching staff, and 138 students from five selected Technical Training Institutions (TTIs) constituted the subjects for this study. Questionnaires and interview schedules were used to collect data. The Statistical Package for the Social Sciences (SPSS) version 23 was used to descriptively examine the data. Thematic analysis was used to assess qualitative data, which was then presented through written narratives.

4.0 Results and Discussion

Implementation Strategies of Information Literacy Programmes

A Likert scale was used in a series of statements to enable elicit responses about the implementation strategies of information literacy programs in selected technical institutional libraries. Table 1 shows the outcome.

Table 1: Implementation Strategies of Information Literacy Programmes (ILPs)

Statement	Strongly Agree	%	Agree	%	Not Sure	%	Disagree	%	Strongly Disagree	%
The library has some form of an information literacy program in place.	10	3.6	253	91	4	1.4	6	2.2	5	1.8
Students undergo library orientation at the beginning of their course.	25	9	240	86.3	2	0.7	6	2.2	5	1.8
User education is provided by the library.	32	11.5	221	79.5	2	0.7	12	4.3	11	4
Library patrons are provided with library tours to help them familiarize themselves with the library, its resources, and its services.	7	2.5	209	75.2	10	3.6	27	9.7	25	9
Library staff provides personalized training on the use of library resources.	18	6.5	231	83.1	7	2.5	11	4	11	4
The library has been conducting sessions on search strategies.	5	1.8	192	69.1	13	4.7	28	10.1	40	14.4

Source: Researcher (2022)

Forms of Information Literacy Programmes

The respondents were asked if the library has some forms of Information Literacy Programmes (ILPs) in place. The findings in table 1 show that 253 (91%) had agreed, 10 (3.6%) had strongly agreed, 6 (2.2%) had disagreed, 5 (1.8%) had strongly disagreed and 4 (1.4%) were not sure. The majority of the respondents 253 (91%) agreed that the library has some form of an information literacy program in place. This indicates that the libraries in selected institutions have some form of ILPs. This is supported by the study by Agufana et al. (2018) who established that libraries within technical training institutions in Kenya had put in place some form of ILPs as a way of enabling students to take advantage of the services provided by the library. This indicates that libraries within technical training institutions were implementing at least some form of information literacy programmes.

During the interview sessions, all the 3 librarians were asked to describe the forms of Information Literacy Programmes (ILPs) in place within their libraries. One of the librarians (L1) indicated that “*our library has a lot to offer in terms of information literacy programs. We have instituted several programmes that are currently running. These include taking students through library orientation, and monthly user education programs*” while (L2) stated that “*the library apart from providing orientation to our new patrons, also offers classroom-based information literacy education. This is a new concept that we have just developed*” and librarian (L3) quoted that “*of the course students once they join the institution are taken through library*

orientation. This is mandatory. Then we also provide user education targeting individual course units that we fill can be integrated with information literacy to reach a larger audience. And we have just started on providing information literacy as part of an examinable unit that students take”.

Library Orientation

The respondents were asked if the students undergo library orientation at the beginning of their course. The findings show that 240 (86.3%) had agreed, 25 (9%) had strongly agreed, 6 (2.2%) had disagreed, 5 (1.8%) had strongly disagreed and 2 (0.7%) were not sure. The findings in Table 1 reveal that majority of the participants 240 (86.3%) had agreed that students undergo library orientation at the beginning of their course. This indicates that libraries in Technical Training Institutions (TTIs) were conducting library orientation for students to help them familiarize themselves with the library and its services. These results are in tandem with the findings of Mukundi and Njuki (2019) who established that indeed library orientation was being conducted in TTIs. This can be perceived to mean that libraries in these institutions were keen on taking new students through library orientation as a form of information literacy.

In the interview sessions with the librarians, the librarians were asked if students undergo library orientation at the beginning of their course. One of the librarians (L1) indicated that “*orientation is offered at the beginning of every semester, targeting new students since that is when we admit new students to the institution*” while (L2) stated that “*new students are always provided with an opportunity to be oriented to the library once admitted for their studies. This takes place at the beginning of the semester*” and (L3) noted that “*orientation of the library is a process that takes place when the new semester starts. This is a program that targets newly admitted students at their point of entry into the program*”.

User Education Provided by the Library

The respondents were asked if user education is provided by the library. The findings show that 221 (79.5%) of the participants had agreed, 32 (11.5%) had strongly agreed, 12 (4.3%) had disagreed, 11 (4%) had strongly disagreed and 2 (0.7%) were not sure. Table 1 indicates that most of the respondents 221 (79.5%) had agreed that user education is provided by the library. These findings indicate that libraries in TTIs were keen on providing information literacy as shown by the implementation of user education. This is revealed by the results of a study by Mukundi and Njuki (2019) which found that user education was a key component of information literacy being practiced by libraries in TTIs. The study however noted that user education was not being practiced by all TTIs in Kenya. This means that user education was being practiced by libraries in TTIs even though not by all institutions.

Library Tours for Patrons

The respondents were asked if library patrons are provided with library tours to help them familiarize themselves with the library, its resources, and its services. The findings show that 209 (75.2%) had agreed, 27 (9.7%) had disagreed, 25 (9%) had strongly disagreed, 10 (3.6%) were not sure and 7 (2.5%) had strongly agreed. Table 1 indicates that most of the respondents agreed that library patrons are provided with library tours to help them familiarize themselves with the library, its resources, and its services. These findings indicate that libraries in technical training institutions were taking their patrons through library tours. This was being done as a means of familiarizing them with its various resources and services. These findings are supported by a study by Agufana et al. (2018) who found that libraries in TTIs have taken up library tours as a strategy for enhancing library usage. The library tours were adopted as

libraries in technical training institutions realized a lack of usage of the library. These findings, mean that library tours can be strategically used by libraries as a form of information literacy.

Provision of Personalized Training

The respondents were asked if the library provides personalized training on the use of library resources. Findings show that 231 (83.1%) had agreed, 18 (6.5%) had strongly agreed, 11 (4%) had disagreed, 11 (4%) had strongly disagreed and 7 (2.5%) were not sure. Table 1 reveals that most of the participants 231 (83.1%) had agreed that the library staff provides personalized training on the use of the library resources. This means that personalized training was a strategy that libraries in TTIs can employ as a way of providing information literacy. This is in tandem with a study conducted by Mukundi and Njuki (2019) and Agufana et al. (2018) who found out that libraries in TTIs were starting to appreciate the value of personalized training of patrons to enable them to optimize the usage of their resources.

Conducting Sessions on Search Strategies

The respondents were also asked if the library has been conducting sessions on search strategies. The findings show that 192 (69.1%) had agreed, 40 (14.4%) had strongly disagreed, 28 (10.1%) had disagreed, 13 (4.7%) were not sure and 5 (1.8%) had strongly agreed. Table 1 shows that majority of the participants 192 (69.1%) had agreed that the library has been conducting sessions on search strategies. This indicates that sessions of search strategies were being undertaken with library patrons as a way of making their information literate. Search strategies assist users in identifying and choosing suitable and sufficient information resources. According to Njuki and Mukundi (2019), the information explosion has presented library patrons with a challenge of getting relevant information and therefore libraries such as those in Technical Training Institutions were taking their users through search strategy sessions to provide them with skills to maneuver through this situation.

Frequency of Reviewing Information Literacy Programmes

A Likert scale was used in a series of statements to enable elicit responses about how frequently Information Literacy programs (ILPs) are reviewed. The responses are in Table 2.

Table 2: Frequency of Reviewing Information Literacy Programmes (ILPs)

Statement	Strongly Agree	%	Agree	%	Not Sure	%	Disagree	%	Strongly Disagree	%
The IL programmes are reviewed after every orientation process using a feedback form.	6	2.2	5	1.8	4	1.4	253	91	10	3.6
Every semester, the IL programmes are reviewed to meet the needs of the users.	5	1.8	6	2.2	2	0.7	240	86.3	25	9
Every month, students received an online link used for assessing information literacy programs.	13	4.7	5	1.8	28	10.1	192	69.1	40	14.4

At the end of the user education, the library was keen on finding out if it was helpful.	13	4.7	5	1.8	28	10.1	192	69.1	40	14.4
Library patrons could at any time provide information regarding the suitability of its information literacy programs.	12	4.3	11	4	2	0.7	221	79.5	32	11.5
The library reviews the IL programmes based on the users' training.	10	3.6	27	9.7	7	2.5	209	75.2	25	9

Information Literacy Programmes Reviewed using Feedback Forms

The respondents were asked if the IL programs are reviewed after every orientation process using a feedback form. The findings show that 253 (91%) had strongly disagreed, 10 (3.6%) had strongly disagreed, 6 (2.2%) had strongly agreed, 5 (1.8%) had agreed and 4 (1.4%) were not sure. Table 2 indicates that most of the participants 253 (91%) disagreed that the Information Literacy Programmes were being reviewed after every orientation process. This means that orientation was a method being used by the library in imparting IL skills, though it was not being assessed to determine its appropriateness or effects in imparting IL skills. These results are in line with those of Maro (2018), who found that even though orientation is the most widely utilized approach for teaching students' information literacy skills; it was rarely assessed by many libraries due to the large number of users being taken through the orientation process at any given time.

The Information Literacy Programmes Reviewed to Meet User Needs

The respondents were asked if, every semester, the ILPs were reviewed to meet the users' needs. Findings in table 2 show that 240 (86.3%) had disagreed, 25 (9%) had strongly disagreed, 6 (2.2%) agreed, 5 (1.8%) strongly agreed and 2 (0.7%) were not sure. The findings reveal that majority of the respondents 240 (86.3%) disagreed that information literacy programmes were being reviewed every semester to meet user needs. This indicates the lack of assessment of ILPs in TTI libraries every semester. As expressed by Maro (2018), who conducted a study of TTIs, and found out the libraries had not put a proper mechanism to assess these programmes on a semester basis despite putting efforts to train students on IL every semester.

In the interview sessions, the librarians were asked how often the information literacy programs were reviewed. One of the librarians (L1) quoted that *"I wouldn't say that we review information literacy programs as such, but we once in a while just change the content we teach when taking our patrons through library orientation on the basis the services we provide"* another one (L2) was of the view that *"we review the content that is incorporated in the information literacy program. So, I believe that's one way of reviewing the program"* while the other librarian (L3) said that *"I can't remember the last time we reviewed the information literacy program. Maybe now we should"*.

Online Link Sent to Students Every Month

The respondents were asked if every month, students received an online link used for assessing information literacy programs (ILPs). The findings show that 192 (69.1%) had disagreed, 40 (14.4%) had strongly disagreed, 28 (10.1%) were not sure, 13 (4.7%) strongly agreed, and 5 (1.8%) had agreed. Table 2 reveals that most of the respondents 192 (69.1%) disagreed that online links were being sent to students every month to assess information literacy programmes. This indicates that the library was not keen on using online links as a channel for assessing IL programs. It can also be perceived to mean that online links were not effective in assessing ILPs. This is supported by findings from Breakstone et al. (2019) who found out that despite TTI students having certain competencies only a few of them were capable of evaluating ILPs online.

Usefulness of Post Evaluation of User Education

The respondents were asked if, at the end of the user education, the library was keen on finding out if it was helpful. The findings show that 192 (69.1%) had disagreed, 40 (14.1%) had strongly disagreed, 28 (10.1%) were not sure, 13 (4.7%) had strongly agreed and 5 (1.8%) had agreed. Table 2 reveals that the majority of the participants 192 (69.1%) had disagreed that at the end of the user education, the library was keen on finding out if it was helpful. This indicates that TTI libraries were not evaluating user education at the end of the user education to establish their usefulness as an information literacy program review session. Liu et al. (2019) conducted a study and established that user education had a constructive impact on the learning outcomes of students within TTIs. However, no TTI library was keen on evaluating the outcomes of user education hence missing out on key information on its effectiveness.

Patrons Provided Information on Suitability of IL Programmes

The respondents were asked if the library patrons could at any time provide information regarding the suitability of its ILPs. The findings show that 221 (79.5%) had disagreed, 32 (11.5%) had strongly disagreed, 12 (4.3%) had strongly agreed, 11 (4%) had agreed and 2 (0.7%) were not sure. The findings in table 2 show that majority of the respondents 79.5% disagreed that the patrons could at any time provide information on the suitability of IL programs. This indicates that TTI libraries were not keen on evaluating IL programmes based on the perceptions of their user. This would greatly hamper their ability to know the effectiveness of the ILPs. According to Tshuma and Chiganda (2018), despite an increase in interest in providing information literacy programs, academic libraries have however not been so keen on evaluating. This is perhaps captured in these findings.

Library Reviews ILPs based on the Users' Training

The respondents were asked if the library reviews the IL programs based on the users' training. The findings show that 209 (75.2%) had disagreed, 27 (9.7%) had agreed, 25 (9%) had strongly disagreed, 10 (3.6%) had strongly agreed and 7 (2.5%) were not sure. The findings in Table 2 show that most of the participants 209 (75.2%) disagreed that the library reviews the ILPs based on the users it has trained. These results indicate that TTI libraries are not evaluating the effectiveness of IL programmes since those trained are not reviewed. Jessey et al. (2016) conducted a study on pre and post-IL assessment and established the findings of this study that academic libraries were not keen on post-evaluation of IL programmes once they have trained users.

In the interview sessions, the librarians were asked how they would describe the way information literacy programmes are reviewed. One of the Librarian (L1) interviewed was of

the view that “we have not been able to review our information literacy programmes in a while, though we keep on providing them to our patrons” while another (L2) indicated that “the idea of reviewing information literacy programmes is a good one, though we feel we do not have the capacity of conducting such an exercise given that we only do orientation and the numbers we get are so huge” and librarian (L3) noted that “we have tried reviewing the ILPs in the past without much success, therefore, our information literacy programmes are rarely reviewed. We work on the assumption that they are effective and continue providing them to our patrons”.

Perceptions of the Implemented Information Literacy Programmes

A Likert scale was used in a series of statements to enable elicit responses about the perceptions of the implemented Information Literacy Programmes (ILPs) amongst users.

Table 3: Perceptions of the Implemented Information Literacy Programmes (ILPs)

Statement	Strongly Agree	%	Agree	%	Not Sure	%	Disagree	%	Strongly Disagree	%
Information literacy is a good way of creating awareness of library resources and services.	25	9	240	86.3	2	0.7	6	2.2	5	1.8
Important skills are acquired by library patrons during IL training.	10	3.6	253	91	4	1.4	6	2.2	5	1.8
A better understanding of the library is acquired by users when ILPs are implemented.	18	6.5	231	83.1	7	2.5	11	4	11	4
Information literacy programmes are improving the attitude of library patrons in using library resources.	32	11.5	221	79.5	2	0.7	12	4.3	11	4
The skills acquired during information literacy sessions allow the users to make better use of the library.	7	2.5	209	75.2	10	3.6	27	9.7	25	9
The library patrons get to appreciate the various services provided by the library after being taken through information literacy programs	25	9	240	86.3	2	0.7	6	2.2	5	1.8

Information Literacy as a way of Creating Awareness of the Library

The respondents were asked if information literacy is a good way of creating awareness of library resources and services. The findings show that 240 (86.3%) had agreed, 25 (9%) had strongly agreed, 6 (2.2%) had disagreed, 5 (1.8%) had strongly disagreed and 2 (0.7%) were not sure. Table 3 shows that the majority of the respondents 240 (86.3%) had agreed that information literacy is a good way of creating awareness of library resources and services. These results are supported by findings from Jelagat (2016) who established those academic libraries were using various channels and methods to create awareness of ILPs among their users. This was to enable users to effectively access and utilize its services and resources.

Important Skills are Acquired by the Library Patrons during IL Training

The respondents were asked if important skills are acquired by library patrons during information literacy training. The findings show that 253 (91%) had agreed, 10 (3.6%) had strongly agreed, 6 (2.2%) had disagreed, 5 (1.8%) had strongly disagreed, and 4 (1.4%) were not sure. The findings indicate that a greater number of the participants 253 (91%) had agreed that important skills are acquired by the library patrons during information literacy training. This indicates that IL training is an effective means of imparting library patrons important skills. A study by Moyi and Muya (2017) supports this finding when they opined that information literacy was a key program that was required by all academic libraries. This was because of its ability to equip library users with abilities and skills key to accessing and using relevant information effectively.

User understanding after Implementation of Information Literacy Programmes

The respondents were asked if a better understanding of the library is acquired by users when Information Literacy Programs (ILPs) are implemented. The findings show that 231 (83.1%) had agreed, 18 (6.5%) had strongly agreed, 11 (4%) had disagreed, 11 (4%) had strongly disagreed and 7 (2.5%) were not sure. The findings show that majority of the participants 231 (83.1%) had agreed that a better understanding of the library is acquired by users when information literacy programmes are implemented. This indicates that information literacy is perceived positively by the users because of the benefits they get after being taken through the program. These findings are in tandem with those of a study by Karm et al. 2021 who established that young people in TTIs were considering ILPs to be having a positive effect on their ability to access information services.

Improvement of User Attitude

The respondents were asked if information literacy programs are improving the attitude of library patrons in using library resources. The findings show that 221 (79.5%) had agreed, 32 (11.5%) had strongly agreed, 12 (4.3%) had disagreed, 11 (4%) had strongly disagreed and 2 (0.7%) were not sure. The results show that most of the respondents 221 (79.5%) had agreed that information literacy programmes are improving the attitude of library patrons in using library resources. This suggests that patrons' perceptions of ILPs as an instrument for allowing them to use library resources have changed. These results are in line with earlier research by Nikou et al. (2018) and Nikou et al. 2019 which found that customers' attitudes toward using library resources were considerably improved by their perception of information literacy.

Information Literacy Skills Enabling Better Use of the Library

The respondents were asked if the skills acquired during information literacy sessions allow the users to maximize the use of the library. The findings show that 209 (75.2%) had agreed, 27 (9.7%) had disagreed, 25 (9%) had strongly disagreed, 10 (3.6%) were not sure and 7 (2.5%)

had strongly agreed. The findings indicate that majority of the participants 209 (75.2%) had agreed that the skills acquired during information literacy sessions allow the users to better use the library and its resources. This indicates that users positively perceive Information Literacy (IL) sessions given that they consider them as enabling them to acquire skills that make it better for them to utilize the library. Karim et al. (2021) established that patrons' judgment of information sources, as a result of IL, greatly influences their ability to obtain and make use of information.

Patrons Appreciate Library Services after IL Training

The respondents were asked if the library patrons get to appreciate the various services provided by the library after being taken through information literacy programs. The finding shows that 240 (86.3%) had agreed, 25 (9%) had strongly agreed, 6 (2.2%) had disagreed, 5 (1.8%) had strongly disagreed and 2 (0.7%) were not sure. The findings reveal that majority of the participants 240 (86.3%) agreed that library patrons get to appreciate the various services provided by the library after being taken through IL programs. This indicates that the patrons perceive information literacy as important in making them appreciate the various services provided by the library. This is supported by Karim et al. (2021) who established that services provided by the library were increasingly being sought by patrons after undertaking information literacy training since they had become aware of their availability and benefits.

In the interview sessions, the librarians were asked to describe the patrons' perceptions regarding the information literacy programs being provided in the library. A particular librarian (L1) stated that *"the library patrons seem to be appreciative of it because they show up in large numbers and are inquisitive in their interactions during the sessions"*. Another librarian (L2) said that *"the information literacy sessions are very interactive and practical hence are liked by the users as they become familiar with the library services and information sources available"* and a librarian (L3) indicated that *"the reception of patrons in regards to information literacy has been positive so far, going by the attendance and questions asked"*.

Major Challenges Associated with the Implementation of Information Literacy Programmes

A Likert scale was used in a series of statements to enable elicit responses in relation to the major challenges associated with the implementation of information literacy programs.

Table 4: Major Challenges Associated with the Implementation of Information Literacy Programmes (ILPs)

Statement	Strongly Agree	%	Agree	%	Not Sure	%	Disagree	%	Strongly Disagree	%
The library is not receiving sufficient support to enable it to implement information literacy programs.	18	6.5	231	83.1	7	2.5	11	4	11	4
The library staff has a lot of work on their hands hence not being able to implement information literacy programs.	5	1.8	192	69.1	13	4.7	28	10.1	40	14.4

Library users have a poor perception of the library.	25	9	240	86.3	2	0.7	6	2.2	5	1.8
Lecturers were not referring students to the library as part of teaching hence not seeing the need to use library resources.	10	3.6	253	91	4	1.4	6	2.2	5	1.8
There is a lack of collaboration between librarians and lecturers in providing information literacy programs.	18	6.5	231	83.1	7	2.5	11	4	11	4

Lack of Sufficient Support in Implementing Information Literacy Programmes

The respondents were asked if the library was receiving sufficient support to enable it to implement Information Literacy Programs (ILPs). The findings show that 231 (83.1%) had agreed 18 (6.5%) had strongly agreed, 11 (4%) had disagreed, 11 (4%) had strongly disagreed and 2.5% were not sure. The findings in Table 4 reveal that majority of the respondents 231 (83.1%) had agreed that the library is not receiving sufficient support to enable it to implement IL programs. This indicates that the implementation of literacy programmes was negatively suffering from a lack of sufficient support. This finding is in tandem with the study by Varlejs and Stecs (2014) which has found a lack of support for information literacy programs as a challenge affecting their implementation and sustainability.

Work Overload Hindering Implementation of Information Literacy Programs

The respondents were asked if library staff were experiencing work overload hence not being able to implement information literacy programs (ILPs). The findings show that 192 (69.1%) had agreed, 40 (14.4%) had strongly disagreed, 28 (10.1%) had disagreed, 13 (4.7%) were not sure and 5 (1.8%) had strongly agreed. The results indicate that majority of the participants 192 (69.1%) agreed that the library staff was struggling with work overload and hence were not able to effectively implement ILPs. This indicates that ILPs were suffering from the many other services being provided by library staff as most of their time and energy was being spent delivering such services.

Poor Attitude by Library Users

The respondents were asked if the library users have a poor perception of the library. The findings show that 240 (86.3%) had agreed, 25 (9%) had strongly agreed, 6 (2.2%) had disagreed, 5 (1.8%) had strongly disagreed and 2 (0.7%) were not sure. The results show that majority of the participants 240 (86.3%) had agreed that the library users had a poor perception of the library. These findings indicate that the library was poorly perceived by the patrons. This is supported by Namugera (2018) who established that students in TTIs were lacking awareness in relation to services and resources provided in their libraries hence making them have negative perceptions about the library and not consider visiting the library.

Lack of Library Referrals by Lecturers

The respondents were asked if the lecturers were not referring students to the library as part of teaching hence not seeing the need to use library resources. The findings show that 253 (91%) had agreed, 10 (3.6%) had strongly agreed, 6 (2.2%) had disagreed, 5 (1.8%) had strongly

disagreed and 4 (1.4%) were not sure. The results reveal that majority of the participants 253 (91%) had agreed that the lecturers were not referring students to the library as part of teaching, hence not seeing the need to use library resources. This reveals that teachers were not supporting the utilization of library services. This was because they were not directing students to access relevant resources in the library as part of the library marketing strategy. This finding tallies with that of Obinyan and Udem (2018) who noted that the biggest challenge to implementing information literacy was the lack of utilization of library services which was partly occasioned by lecturers not referring students to the library resources as part of their course study.

Lack of Collaboration between Librarians and Lecturers

The respondents were asked if there is a lack of collaboration between librarians and lecturers in providing information literacy programmes (ILPs). The findings show that 231 (83.1%) had agreed, 18 (6.5%) had strongly agreed, 11 (4%) had disagreed, 11 (4%) had strongly disagreed and 7 (2.5%) were not sure. These findings show that majority of participants 231 (83.1%) had agreed that there is a lack of collaboration between librarians and lecturers in providing ILPs. This indicates that the lack of collaboration between librarians and lecturers was hindering the implementation of ILPs. According to Obinyan and Udem (2018) accomplishing the task of providing information literacy (IL) cannot be left to librarians alone. This requires the collaborative efforts of both the lecturers and librarians. This however is not the case as each is not so much concerned with what the other is doing, hence hampering the effective provision of IL.

In the interview sessions, the librarians were asked to describe some of the challenges they experienced in the implementation of ILPs. A certain librarian (L1) added that *“our library is facing a lot of implementation issues relating to information literacy. Owing to the numbers being registered for library orientation, there is a need to redirect more manpower towards the realization of effective information literacy programme”* another one (L2) said that *“there are a lot of financial constraints that are affecting the provision of information literacy programs. Funds are required to purchase the required IT infrastructure which can be used in implementing these programmes”*. Also coming from another librarian (L3) was a view that *“information literacy programmes, cannot be provided solely by librarians. Its implementation requires bringing on board others like lecturers, to direct students to use library resources and also to sensitize patrons on the availability of such resources”*.

5.0 Conclusion

It was established that the Technical Training Institution (TTI) libraries were implementing various forms of information literacy programmes. The TTI libraries had instituted several programmes that were currently running. These include taking students through library orientation, and monthly user education programmes. Others included familiarizing the users through library tours, personal training on resources, and conducting search strategy sessions. If these programmes are well utilized, technical training institutions will be able to equip researchers and learners with relevant skills for research and innovation.

The study established that the ILPs are reviewed after every orientation process using a feedback form. The IL reviews were being done to meet the diverse user needs. However, other forms of review such as the use of online links and post-user education feedback were not considered. The review however was based on the IL training it provided to its users. Technical Training Institutions need to up their efforts and include the use of online links and post user

education feedback among other ILP reviewing methods to ensure they meet their diverse user needs.

The study concluded that IL is a good way of creating awareness about the library, its resources, and its services. The study established those important skills are acquired by the library patrons during information literacy training. The users, perceive information literacy programmes to be necessary for providing a better understanding to them and therefore advocating for their implementation. The study concluded that information literacy programmes are improving the attitude of library patrons in using library resources. This is because the skills acquired during information literacy sessions allow the users to up the use of the library. This has made most library patrons appreciate the various services offered by the library after being taken through ILPs. Therefore, libraries should continue offering IL to improve their user perceptions and also attract more users to their libraries.

The findings led to the conclusion that libraries were experiencing several setbacks as they implemented ILPs. These bottlenecks include: not receiving sufficient support to enable it to implement IL programs; the library staff having a lot of work on their hands hence not being able to implement information literacy programmes; the lecturers not referring students to the library as part of teaching hence not able to find a use for the available library resources; and lack of collaboration between librarians and lecturers in providing ILPs. For ILPs to be effective all stakeholders must be brought on board. The management should provide adequate funding to support the programs as well as provide a conducive environment for collaboration between the librarians and the teaching staff to share ideas and experience in identifying the existing gaps in the implementation of ILPs and how to fill the gaps to provide sustainable library services to their users.

6.0 Recommendations

Technical Training Institution (TTI) libraries need to identify various information literacy programmes that can work for them and customize them according to their users. The different information literacy programmes appeal to different library users and hence will manage to capture the varying needs of various users in Technical Training Institutions (TTIs). This can be achieved through the evaluation of the currently available information literacy programmes to identify where they are falling short and ways of improving them so that they can have a big impact.

The information needs of users keep changing with time and are dynamic. This means that information literacy programmes cannot be implemented the same way they have been implemented in years past. The libraries in TTIs need to adopt ways of continuously evaluating the impact of the information literacy programmes to do away with those that are not impactful and adopt those that are effective. Also, to continue making better the information literacy programmes that are effective to make them have a bigger and longer impact on the information users.

The TTI libraries need to focus more on the users than on the service when implementing information literacy programmes. By being more user-centered, the information literacy programmes will end up being more appealing to the users and be able to have a lot of impact on the users.

Cooperation and collaboration are required if the information literacy programmes are to be properly implemented. All stakeholders; librarians, lecturers, administrators, and students need to cooperate and at times collaborate in the implementation of ILPs. Cooperation among

different players will bring them together and make them own the process of developing and implementing IL programs.

References

- Agufana, P. B., Too, J. K. & Mukwa, C. W. (2018). Assessment of perceived ease of use and instructional use of ICT by lecturers in Technical Training Institutions in Kenya. *African Journal of Education, Science, and Technology*, 5(1), 150-154.
- Ahonen, A.K., & Kinnunen, P. (2015). How do students value the importance of twenty-first-century skills? *Scandinavian Journal of Educational Research*, 59(4), 395 – 412.
- American Library Association. (2015). *Information Literacy Competency Standards for Higher Education*. Available at: <http://www.ala.org/acrl/>.
- Badke, W. (2016). Foundations of information literacy: Learning from Paul Zurkowski. *Journal of information literacy*, 34(1), 48-50.
- Blau, C. (2016). Information literacy programmes and research: an international review. *The Australian Library Journal*, 49(3), 209-2018.
- Bothma, T. et al., (2014). Navigating information literature: Your information society survival toolkit (4th Ed.). Cape Town: Pearson Holdings South Africa.
- Bracke, E., Maybee, Y. & BWeiner, C. (2016). Information technology and productivity a review of the literature. *Advance in Computers, Academic Press*, 43(3) 179-214.
- Cats, R. & Lau, J. (2018). *Towards Information Literacy Indicators*. Paris: UNESCO. Chattered Institute of Library and Information Professionals. Information Literacy.
- Dadzie, P. (2019). Information literacy in higher education: an overview of initiatives at two Ghanaian universities. *African Journal of Library, Archives & Information Science*, 19(2), 165-175.
- Delora, B., Julien, H., Willson, R., Serenko, A. and Lavallee, M. (2011), Learning outcomes of information literacy instruction at business schools. *Journal of the American Society for Information Science and Technology*, 62: 572-585. <https://doi.org/10.1002/asi.21474>
- Hall, B. (2015). Information Literacy, Young Learners and the Role of the Teacher Librarian, *Journal of the Australian Library and Information Association*, 68(3), 225-235, DOI: 10.1080/24750158.2019.1649795
- Hepworth, M. (2017). Approaches to providing information Literacy Training in Higher Education for Librarians. *Tylor and Francis Group*, 6(5) 21-34.
- Idiodi, E. A. (2015). Approaches to information literacy acquisition in Nigeria". *Library Review*, 54(4), 223 – 230.
- Jelagat, A. (2015). Analysis of the influence of teaching and learning resources on students' performance in public secondary schools in Marakwet West Sub-County, Elgeyo County. [Thesis] Nairobi: Marist International University College.
- Karim, M. K., Nikou, S. & Widen, G. (2021). The role of youths' perceived information literacy in their assessment of youth information and counseling services. *Information Research*, 26(2), 25-33.
- Kavulya, J. M. (2018). Challenges facing Information literacy efforts in Kenya: A case study of selected University libraries in Kenya. *Library Management*. 24(4/5), 216 – 222.

- Kendra, V. C. (2018). *The Self-Study as an Information Literacy Program Assessment Tool, College & Undergraduate Libraries*.
- Kingori, G. M. (2015). *Re-engineering information literacy programmes of Nairobi – based public and private universities in Kenya*. Presented at SCECSAL XXth Conference hosted by KLA.
- Kuhlthau, C. C. (2017). *Seeking meaning. A process approach to library and information services* (2nd Ed.). Westport, Conn: Libraries Unlimited.
- Levey, R. (2016). A historical reflection on literacy, gender, and opportunity: implications for the teaching of literacy in early childhood education. *International Journal of Early Years Education*, 24(3), 279-293, DOI: 10.1080/09669760.2016.1165652
- Maina, S. (2014). *Implementation of Information Literacy programmes in Public Libraries: A Case Study of Kenya National Library Service Headquarter*. The University of Nairobi.
- Maro, Z. H. (2018). The state of information literacy in selected private secondary schools in Dar es Salaam region, Tanzania. *University of Dar es Salaam Library Journal*, 13(2), 97-113.
- Marzal, M. A. (2015). *Evaluation of Information Literacy programmes in Higher Education: Strategies and Tools: Information and Digital Competencies in Higher Education*” [online monograph]. *Revista de Universidad y Sociedad del Conocimiento (RUSC)*. 7(2).
- Moje, E. (2012). Re-framing adolescent literacy research for new times: studying youth as a resource, reading research and instruction. *Journal of information literacy*, 41(3), 20-21.
- Moyi, M. A. & Muya, J. (2017). Development of information literacy skills for persons with special needs in secondary schools library in Kenya. *African Journal of Education and Human Development*, 3(1), 21-30.
- Mugambi, N. (2018). Exploring reading habits and academic success in rural Kenya. *International Federation of Library Association and Institutions*, 41(4), 353-363.
- Namugera, L. (2018). Users’ awareness, perceptions, and usage of Makerere library services in the main and selected branch libraries. *Qualitative and Quantitative Methods in Libraries*, 3(5), 741-758.
- Obinyan, M. O. & Udem, O. K. (2018). NCE students’ perceptions on the use of library courses as an aid to the use of library resources in South-West Nigeria. *Library philosophy and Practice*. <http://digitalcommons.unl.edu/libphilprac/1877>
- Olubayi, C. N. (2015). *Factors influencing pupil’s academic performance in public primary schools in Ang’urai Location, Busia County*. [Thesis] Nairobi: Marist International University College.
- Omondi E. O. (2015). *Role of Information Literacy programmes in Enhancing Information Access in Private Institutions of Higher Learning: A Case of Marist International University College*. Degree of Master of Library and Information Science, Department of Library and Information Science, University of Nairobi.
- Onsorinde, J. N., Adekiya, S. & Adyemo, T. (2017). Information literacy in the workplace. *Information Outlook*, 5(6), 732-733.

- Pejora, Z. (2016). *Information Literacy: An Issue which Requests Urgent Action in Developing Countries and Countries in Transition*. Paper presented at the UNESCO, the U.S National Commission on Libraries and Information Science, and the National Forum on Information Literacy, for use at the Information Literacy Meeting of Experts
- Reed, M. J., Kinder, D. & Cecile, F. (2017). Collaboration between Librarians and Teaching Faculty to Teach Information Literacy at One Ontario University: Experiences and Outcomes. *Journal of Information Literacy*, 1(3) 29–46.
- Sitima-Ndau, L. (2015). Global education goals, technology, and information literacy in higher Education. London: New Directions for Teaching and Learning.
- Snarley (2018). L. (2008). *Global education goals, technology, and information literacy in higher Education*. London: New Directions for Teaching and Learning.
- Tiluwade, A., Myers, S. & Andrade, C. (2019). *Conceptual frameworks for bibliographic education: Theory to Practice*. Littleton Colorado: Libraries Unlimited Inc.
- Were, S. (2019). Conceptions of Information Literacy: New Perspectives and Implications.” *Journal of Information Science*, 26(6): 381–97.
- West, Q. (2013) Information literacy cooperation by design Review of a guided collaboration between teaching and library faculty.
- Wolf, E. C., Rod, A. B. & Schonfeld, R. C. (2016, April 4). *Ithaka S+R US faculty survey 2015*. <https://doi.org/10.18665/sr.277685>. <https://sr.ithaka.org/publications/ithaka-sr-us-faculty-survey-2015/>
- Zhang, X, Majid, S. & Foo, S. (2014). Information literacy in this age. *Journal of Information Science*, 36(6), 719–732.