

The Evolving role of Kenyan University Librarians in the age of ICT

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ABSTRACT

University education in Kenya is undergoing rapid transformation, driven largely by advancements in Information and Communication Technology (ICT). In response, university libraries are evolving to meet the changing demands of academic environments. This study investigates the shifting role of librarians in delivering ICT-enabled library services and identifies the ICT competencies required to effectively support patrons in this dynamic context. Using a case study survey design and a concurrent triangulation mixed-method approach, the research was conducted across three Kenyan universities: University of Nairobi (UoN), Egerton University (EU), and Kabarak University (KABU). Quantitative data were collected from a random sample of 154 fourth-year undergraduate students via structured questionnaires. Qualitative insights were gathered from key informants, including three professional librarians, six university deans/directors, and representatives from the Commission for University Education (CUE) and the Ministry of Education, Science and Technology (MOEST). Findings reveal that while library staff possess foundational ICT skills, there is a pressing need for continuous upskilling to remain relevant in a rapidly digitizing academic landscape. The study underscores the importance of visionary leadership, ongoing professional development, and innovation in redefining librarianship for the future. It contributes to the discourse on the evolving role of librarians in Kenyan higher education and offers strategic insights for policy and capacity-building initiatives.

(Key words: *academic libraries; ICT-based library services; university education; academic librarians; Kenya.*)

I. INTRODUCTION

University education has been undergoing a global transformation since World War II, subsequently leading to the transformation of the institutions' libraries. This is a phenomenon that several observers refer to as a new paradigm shift (Virkus & Metsar, 2004; Blessinger, Reshef & Sengupta, 2018; Dhahri et al., 2020). The paradigm shifts may happen relatively quickly (in a revolutionary way), relatively slowly (in an evolutionary way), or in both ways. In the case where both occur, it may involve a change that takes place over a long period, punctuated by periodic revolutions (Blessinger, Reshef & Sengupta, 2018).

The main impetus for change in education has been attributed to rapid advancement in Information and Communication Technology (ICT), evolution of the education system, changing user needs, the emergence of social media, and changes in scholarly communication (Jain, 2013). This transformation has been associated with or interchanged with emerging educational trends by some authors. Kaufmann (nd) identifies some of these as

global competition for students, interdisciplinarity, the continued growth of online learning, and the demand for accountability.

The study approaches the trends in higher education and academic libraries in relation to the theory of disruptive innovation. The theory describes a process by which a product or service takes root initially in simple applications at the bottom of a market and then relentlessly moves up the market, eventually displacing established competitors (Christensen, Raynor & McDonald, 2015). The theory approaches the paradigm shift in education by looking at the present setup and innovations while envisioning the future. The theory teaches managers (Librarians) to disrupt themselves instead of waiting for external disruptive forces to define the libraries. Adekoya and Adedimeji (2021) noted that few studies in Africa have been conducted on the performance of libraries in relation to disruptive innovations.

Academic libraries have been participants in the educational transformation. Bundy (2003) earlier

emphasised that libraries and librarians should be proactive participants in the evolution of the 21st-century educational paradigm. The library is expected to contribute to the teaching, research, and service missions of the university (Kaufmann, n.d.; Chiware, 2010). In this regard, Chiware (2010: 392) emphasizes that “the African university library must remain relevant to supporting the academic projects with scholarly information, i.e., position itself to respond to the changing higher education.” The arguments suggest that the library and librarians continually make deliberate efforts to evolve their services, resources, and interactions to match the prevailing educational trends. Chiware (2010) observes that library sources, services, and operations have been influenced by rapid technological innovations over the years. Based on the argument that university education is increasingly integrating technology (Chiware, 2010; Ifijeh & Yusuf, 2020), it follows that those libraries should also be commensurate with the level of university expectations through the harnessing of appropriate technologies.

Global changes in university education continue to impact the way librarians administer ICT-based services. However, university libraries in developing countries have moved at a slower pace towards catering for the technological needs of the changing nature of users, thereby making little impact on the educational revolution. It is observed that where technology exists, most libraries in Africa do not use it to its full potential (Palumbo, 2014; McGillis, 2016). This, to a large extent, indicates that librarians in African universities, and Kenya in particular, are not adapting in tandem with emerging educational and technological trends.

Kenyan university libraries are faced with the reality of these global educational trends. This paper presents a case study of the libraries of three universities in Kenya. These are Kabarak University, Egerton University, and the University of Nairobi. The paper explores the role of librarians in the provision of ICT-based library services within a changing university education environment. The paper further explores the desired ICT competencies for library staff in serving patrons.

The changing university education landscape and the future role of librarianship

University education remains in a state of rapid transformation. The changes appear to be igniting a keen interest and concern for both the faculty and information professionals. Virkus & Metsar (2004) identify the key causes of the shifting ground as technology, globalization, and competition. These changes have also

been identified by Gwyer (2015) as policy, technology, pedagogy, and student behaviour.

The 21st century witnessed the emergence of new methods of teaching and learning. Jain (2013) identifies some of these as Open and Distance Learning (ODL), learning management systems, M-learning, online education ventures, virtual campus, and Flipped Classrooms. It is also viewed that there is uncertainty about the future outlook of the higher education sector (Hurst, 2013). The outlook may be dictated by unprecedented events, such as the periodic revolution brought about by the outbreak of COVID-19 in 2020. Alam, M. et al. (2022) view that the outbreak of COVID-19 further led to a forced transition in the education system worldwide, creating alternatives to face-to-face teaching and learning, such as flexi-learning, e-learning, and blended learning.

The evolving nature of university education and its impact on the operations of university libraries call for a paradigm shift to meet the current and future needs of library users. This includes skill requirements to spur such actions. Chiware (2010) observes that the role of the university library in higher education in Africa is not well-documented. Therefore, he opines that its role should be continuously researched, evaluated, and documented, and services designed to respond to Africa’s unique higher education needs. This is made possible through the study of various information resources, such as journal articles, books, and other documents that are relevant to the research topic and thematic areas.

The future role of libraries and librarianship has therefore been an area of discussion. Jain (2013) identifies two schools of thought. The first believes that librarianship is a dying profession in the 21st century due to its negative association and the existence of other competitors. The second believes that librarianship is a dynamic profession and that the library as a career is still viable and provides many opportunities and challenges. While reacting to an article that appeared in an American newspaper, USA Today, the School of Information Studies at Syracuse University stressed that librarianship is far from a “dead-end field” or a “dying profession”. The article listed librarianship as one of the eight jobs that won’t exist in 2030 (Syracuse University, 2017). The profession is, however, seen to be changing and rapidly evolving. Thus, Syracuse University (2017) identifies training and innovation as key to the future existence of the profession. Tait, Martzoukou & Reid (2016: 2) are of the view that “libraries have evolved continually and the role of the librarian has also developed in line with the process of change”.

The future role of libraries also seems to depend on the ability of librarians to adapt to change. Feret & Marcinek (1999: 101) conclude that “the vision of the library of the future cannot be complete without the vision of the librarian of the future. His/her knowledge and experience, characteristics and image will, all in all, decide the future of the library”. In support of this, Oyedokun et al. (2018: 3) stress that “the quality of any academic library depends on the quality of its workforce, who can transform even the poorest library into an excellent performing library.” In the context of an academic institution, librarians play the role of researchers and educators, besides the regular teaching staff (Chigwada & Chisita, 2021). In this context, Claro et al. (2018) quip that when teachers (in this case, librarians) possess ICT/digital literacy, they can lead their learners to higher thinking skills and prepare them to deal with the ongoing technological change.

The current generation of users seeks solutions to their problems with the aid of technology. They do not see the need to interact with the librarians when their needs are satisfied. The librarian acts as a facilitator by finding out the needs of library users and ensuring that these needs are met with minimal challenges. After playing this role, the librarian steps aside to give room to the user to exploit the opportunities available to them. This is emphasized by Eysenbach (2018), who notes that the adoption of ICT has revolutionized and challenged the state of intermediary services by librarians. Therefore, the academic librarian has to move from the central position of standing between users and information to that of standing by and supporting the users as they seek information (Nakitare et al., 2020). Academic librarians are getting more involved as partners in the teaching and research life cycle of their academic colleagues, such as consultancy, service provision, and connection (Liau, 2018). Some of the outstanding roles identified by Adekoya and Adedimeji (2021) include “creating metadata, teaching information literacy, making available quality learning spaces, offering real-time reference services, selecting resources and managing licenses, gathering and digitising archival materials, and sustaining digital repositories.”

The way librarians change with technological advancements largely influences the way ICT is harnessed and utilised by libraries. Academic librarians have been challenged to evolve and be early adopters of ICT due to the rapidly emerging technologies and ever-shifting educational landscapes (Gore, 2014). While quoting Narasappa & Kumar (2016), Oyedokun et al. (2018, p. 2) stressed that “ICT plays a significant role in shaping and revamping information service delivery of libraries, and this calls for the need for LIS professionals

to acquire core ICT competency and skills that will enable them to overcome the threat of becoming obsolete in the face of competition in today digital environment where libraries operate.”

In terms of ICT skill requirements of library staff, there is a vast amount of literature that discusses the ICT competency requirements for academic librarians (such as East, 2007; Nkuebe & Raju, 2020; Otiye & Barat, 2021; Oyedokun et al., 2018). East (2007) observes that ICT skills remain the most desirable and important among various desired skills and competencies required for an academic librarian. It is, however, noted that the types of ICT skills required in developing countries may differ in some aspects from those required in developed countries (Oyedokun et al., 2018).

Some of the commonly identified skills summarised by Oyedokun et al. (2018, p. 10) include, but are not limited to:

- knowledge of the operating system,
- software packages,
- programming language,
- online services,
- project management,
- searching skills (OPAC and search engines),
- database management,
- web design and development,
- metadata skills,
- word processing,
- spreadsheet,
- electronic presentation,
- web navigation,
- email,
- information
- packaging,
- brokerage,
- internet and networking, etc

II. METHODOLOGY

This study took a case study survey using a mixed-method approach. Specifically, a concurrent triangulation design was adopted whereby both quantitative and qualitative data were collected at the same time. Quantitative data gathered from the users of ICT resources measures the collective reactions of a larger population of students, while qualitative data helps to understand trends and situations underlying the usage of ICT by university libraries in support of the educational role of the parent institution. Three universities were

identified to participate in the survey. These were the University of Nairobi (UoN), Egerton University (EU), and Kabarak University (KABU). These constituted one private and two public universities respectively. One institution was located in an urban setting, and two institutions were situated in a rural setting. The three institutions provided technological insights that were considered relevant to the study.

The universities selected for study delivered their programmes through various modes of study, including regular or on-campus, school-based, evening/weekend, and online learning. To enrich previous studies on the needs of online learners, institutions that offered the mode of learning were considered in the study.

Table 1: Sample population

<i>Name of University</i>	<i>Students</i>				<i>Deans / Directors</i>	<i>Librarians</i>
	<i>Campus Population</i>	<i>BCOM Students</i>	<i>4th Year BCOM Students</i>	<i>Sample</i>		
<i>Egerton</i>	2,086	260	74	62	2	1
<i>Kabarak</i>	6,305	275	66	56	2	1
<i>UoN¹</i>	7,478	778	42	36	2	1
<i>TOTAL</i>	15,869	1,313	182	154	6	3

The major education stakeholders in these institutions, that is, students, deans, directors of online education, and professional librarians, constituted the study population. A total of 154 final-year students undertaking a Bachelor of Commerce (As shown in Table 1) were sampled to participate in the study. The course was commonly offered in the three institutions. The final-year students were more likely to have more experience using library services than students in their lower years of study. This assumption is supported by a study conducted by Whitmore (2001) as quoted by Nwezeh (2010), which showed that the students' use of the library and ICT increased during each successive year of study. A combination of stratified and purposive sampling was used to select the fourth-year class out of the total student population, followed by random sampling of respondents within the selected category of fourth-year students. In addition, representatives from the Commission for University Education (CUE) and the Ministry of Education (MoE) were incorporated as informants of the study.

The sample size for the student population was based on the table of recommended sample sizes for a finite population, according to Krejcie & Morgan (1970). Purposive sampling was used to obtain responses from

professional librarians, especially those who were charged with overseeing user services and ICT services.

The survey used a questionnaire method for students and interviews for informants. In each case, a combination of open and closed-ended questions was employed. Some of the questionnaires were sent to respondents who were not available on campus via email (using Google Forms), especially those undertaking online or part-time programmes or studying off-campus due to the COVID-19 pandemic. The list of their names and email addresses was obtained from their respective departments. The researcher also used the collective administration method to distribute the printed questionnaires to students with the assistance of class representatives.

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III. STUDY RESULTS

Out of a total of 154 questionnaires distributed to students in the three institutions, 112 were returned. This constituted a response rate of 72.7% (see Table 2). Most of the questionnaires were distributed before the closure of learning institutions in March 2020, when COVID-19 was reported in Kenya. The use of a collective

administration method to distribute the questionnaires was instrumental in achieving a high response rate. This was largely successful owing to the assistance of class representatives and lecturers who made personal follow-ups to collect the completed questionnaires. However, the response rate during the COVID-19 pandemic was very low due to the inconsistent learning schedules.

Table 2: Response rate of the target population

<i>Subjects</i>	<i>Distributed/sampled (N=165)</i>	<i>Responded</i>	<i>Percentage (%)</i>
<i>Students</i>	<i>154</i>	<i>112</i>	<i>72.7</i>
<i>Deans and Directors</i>	<i>6</i>	<i>4</i>	<i>66.6</i>
<i>Library staff</i>	<i>3</i>	<i>3</i>	<i>100</i>
<i>MoE² Representative</i>	<i>1</i>	<i>1</i>	<i>100</i>
<i>CUE³ Representative</i>	<i>1</i>	<i>1</i>	<i>100</i>
<i>Total</i>	<i>165</i>	<i>119</i>	<i>72.1</i>

Among the student respondents, the majority (N=87) were studying full time, followed at a distance by school-based mode (N=16); part-time/evening (N=5), and online mode (N=3) respectively. The majority of student respondents (76%) fell under the age bracket of 21 – 25 years, followed distantly by the age bracket of under 21 (11%). This age group constitutes the digital natives, commonly called Gen Z.

The deans and directors had utilized library services and were in a position to comment about the library's ICT

services. In addition, they also regularly referred their students to use the library services.

Emerging educational trends that affect the nature of library ICT services

Student respondents were given a guided list of possible educational trends that have an impact on the nature of ICT services for effective library services. These were based on opinions gathered from the existing literature. Their level of agreement is summarised in the Table 3.

² Ministry of Education

³ Commission for University Education

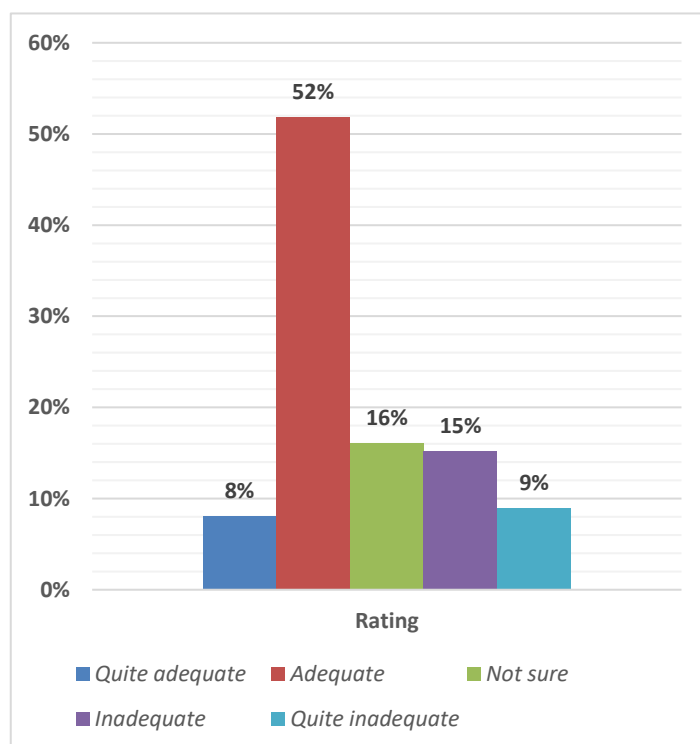
Table 3: Educational trends that affect the nature of library ICT services

<i>S/N</i>	<i>Statement</i>	<i>Strongly disagree</i>	<i>Disagree</i>	<i>Neutral</i>	<i>Agree</i>	<i>Strongly agree</i>
1	Competition for student enrolment in Kenyan Universities	8	5	17	37	42
2	Uncertainty in the way university education will look in the future	11	11	15	40	33
3	Increased demand for university education	12	12	11	39	35
4	ICTs will increasingly be used to support university education	7	2	8	38	54
5	The Universities will likely offer diverse modes of study in future to meet the diverse student needs/ lifestyles	4	8	12	55	31
6	Kenya will experience an increase in the establishment of online education	6	4	14	50	3
7	Developments in ICTs will continue to determine how educational content is delivered and shared	6	1	17	46	40

Most respondents either agreed or strongly agreed with the given statements. The student respondents agreed with the trends in university education as documented in the literature. The most notable trends highlighted were the increased use of ICTs to support university education, competition for student enrolment, and the impact of developments in ICTs on the delivery and sharing of educational content. This suggests that universities need to consider and respond to these trends to remain competitive. The university library, therefore, innovates in line with the strategies adopted by the parent institution. When asked about the most preferred mode of learning, respondents chose the blended mode of study, with a preference for on-campus sessions mostly during exam periods.

Skills and competencies of library staff

Respondents were asked to rate the adequacy of skills and competencies of library staff in providing the required ICT services. An overwhelming majority of the student respondents opined that they were adequate, as shown in Figure 1.

Figure 1: Adequacy of ICT skills among library staff (n=112)

Two of the librarians interviewed opined that the skills possessed by library staff were inadequate, while one rated their skills as good. Many of the ICT-related tasks in the library were left to the systems librarian. However, respondents generally expected all library staff to be tech-savvy.

ICT skill requirements for library staff

Respondents were also asked to rate some statements concerning the various skills and competencies the library staff should possess for effective services. Their answers have been summarised in Table 4.

Table 4: ICT skill requirements for library staff (n=112)

<i>Skills and competencies</i>	<i>Not responded</i>	<i>Strongly agree</i>	<i>Agree</i>	<i>Undecided</i>	<i>Disagree</i>	<i>Strongly disagree</i>
<i>Searching skills, e.g. web, online catalogue, databases</i>	9 (8%)	11 (9.8%)	64 (57.1%)	16 (14.3%)	8 (7.1%)	4 (3.6%)
<i>Use of communication media, e.g. social media</i>	12 (10.7%)	15 (13.4%)	47 (42%)	28 (25%)	2 (1.8%)	8 (7.1%)
<i>Hardware troubleshooting, e.g. network, computers</i>	12 (10.7%)	11 (9.8%)	53 (47.3%)	23 (20.5%)	10 (8.9%)	3 (2.7%)
<i>Software troubleshooting, e.g. installations, management of viruses</i>	12 (10.7%)	12 (10.7%)	46 (41.1%)	24 (21.4%)	9 (8%)	8 (7.1%)
<i>Web design</i>	10 (8.9%)	10 (8.9%)	53 (47.3%)	28 (25%)	7 (6.3%)	4 (3.6%)
<i>Use of e-learning platforms</i>	20 (17.9%)	11 (9.8%)	52 (46.4%)	14 (12.5%)	6 (5.4%)	9 (8%)
<i>Use of educational tools, e.g. referencing, anti-plagiarism, statistical packages</i>	8 (7.1%)	17 (15.2%)	46 (41.1%)	27 (24.1%)	4 (3.6%)	10 (8.9%)
<i>Local content management, e.g. blogs, wikis, RSS, e-reserves, repositories</i>	10 (8.9%)	11 (9.8%)	43 (38.4%)	28 (25%)	10 (8.9%)	10 (8.9%)
<i>Programming, e.g. development of mobile apps</i>	11 (9.8%)	11 (9.8%)	42 (37.5%)	26 (23.2%)	13 (11.6%)	9 (8%)
<i>Use of software packages, e.g. Wordprocessing</i>	14 (12.5%)	12 (10.7%)	51 (45.5%)	18 (16.1%)	7 (6.3%)	10 (8.9%)
<i>Use of ILS/library automation, e.g. circulation and cataloguing</i>	13 (11.6%)	11 (9.8%)	50 (44.6%)	18 (16.1%)	9 (8%)	11 (9.8%)

As shown in Table 4, the majority of the student respondents agreed that library staff required all the listed skills and competencies in nearly equal measure. However, search skills were the most outstanding. Other significant competencies required included hardware troubleshooting, web design, usage of e-learning platforms, and software packages. The trend also shows that this is followed by respondents who were undecided about the nature of skills that library staff should possess. No other skills were added to the guided list.

Three out of four deans/directors considered the skills adequate, while one viewed them as inadequate. They opined that all library staff needed regular skill empowerment. To promote skill development, one of the deans suggested that library staff should practice regular sectional rotation. The main areas identified for skill acquisition were operational software applications, referencing, anti-plagiarism, searching, and use of online databases. All three librarians agreed that library staff require regular training in ICT skills as a way of

repositioning for better services in the future, such as value-added reference services. The areas highlighted by librarians include basic troubleshooting, searching, educational tools (such as referencing and anti-plagiarism), ILS, word processing, and digital content organisation. However, one of the librarians made a surprising observation:

“Users are not bothered by what the librarians are doing and hardly consult librarians as they utilise ICT facilities”. [Q9]

Other individual observations made by the librarians included the need for a dynamic mindset by librarians, collaboration between librarians and the faculty, and improved acquisition models to access the most relevant information resources.

The CUE representative suggested that surveys could best determine the level of adequacy of skills among the staff and future requirements. However, as part of the general observation.

With the new norm brought about by COVID-19, the increased use of ICT services directly shapes the future of education. As education becomes more technology-based, library services are expected to follow a similar pattern. I would therefore challenge librarians to be proactive in promoting the library as a hub for teaching, learning, and research. [Q10]

IV. DISCUSSION OF FINDINGS

Educational trends that affect the nature of library ICT services

Among the trends highlighted in the data presentation section, the use of ICT in education was echoed by the highest number of respondents. The mode of learning in Kenyan universities has received considerable attention in the recent past. Universities are required to seek accreditation from CUE for all their blended and online programmes before offering them to students (Nyamai, 2020). For accreditation, the programmes “must be approved by CUE, institutions should have adequate IT staff and appropriate infrastructure, reliable internet connection on campus to support live streaming of lectures, and a functional Learning Management System (LMS) which is hosted in a secure data centre, anti-plagiarism software and tools for access to e-library” (Nyamai, 2020, para. 6).

The growing uptake of online education, largely following the COVID-19 pandemic, suggests that universities are in a transitional period. A hybrid (also

blended) mode of learning during the transitional period has been recommended by several authors, such as Igoki and Langat (2023) and Maombo (2021). The realization of a functional, fully online programme was visualized by Atkins (2005 : 3), thus “ICT-based solutions, e-learning, are possible but should be comprehensive enough to avoid creating second-class, off-campus students without full access to the library, laboratories, and informal serendipity learning opportunities with instructors and peers”. One way is through the use of improved technologies that will make the learning experience more interactive and nearly similar to the face-to-face version. Librarians, therefore, have the opportunity to participate in this process by translating the user experience into the virtual environment through the use of ICT and participating in the relevant institutional decision-making processes. The university librarian, as a member of key decision-making committees of the university, such as the university management, senate, and school boards, has a role in shaping the future of e-learning. These roles are entrenched in the CUE Universities standards and guidelines, 2014 (LIBR/STD/07 and LIBR/STD/08). To a great extent, CUE plays a vital role in facilitating the librarian in implementing innovative ideas in the library’s ICT-based services through these standards and guidelines.

This study showed that student respondents utilized regular library services in the same manner as the online services, highlighting the trending user preference for hybrid services. Notably, hybrid services were preferred even though the majority of the respondents studied on a full-time basis. Most of the responses were gathered before the onset of the COVID-19 pandemic, before libraries were compelled to overhaul their services to meet the needs of online users. Thus, in response to the changing user needs and information-seeking habits, academic libraries may gradually incline towards offering ICT-based services. For instance, Kortick (2021) noted that academic institutions in the United States continued to increase their budgetary allocation for electronic resources and reduced expenditures for physical resources. While librarians continue delving into the debate on the future of print versus electronic resources, the theory of disruptive innovations offers a framework for examining future trends and responding to them at the right time. Librarians need to closely monitor these trends to avoid incurring unnecessary wastage in resource acquisition amidst changing user preferences.

Expected ICT skill requirements for library staff

The key importance of ascertaining the level of adequacy of ICT skills among library staff was to shed light on

where they stand in the overall expectations of the university. In other words, it provides an understanding of the role they play in university education and their level of preparedness to meet the expectations. Regarding the adequacy of skills possessed by library staff, most respondents chose adequate on the scale. This suggests that librarians have made significant strides in acquiring the required ICT skills for information service provision. They were not ICT illiterate, but only met the basic user expectations. They were therefore expected to put more effort into skill acquisition.

Coincidentally, the majority of the respondents agreed that library staff required the listed skills and competencies. This agreed with the views of two of the Deans, who opined that the skills were adequate, but the librarians required more empowerment. Bajpai and Margam (2017) also observed that the ICT skills of library staff in selected universities in India in 2017 and Nigeria in 2015 were described as satisfactory and average, respectively. A cross-section by Abbas and Siddique (2020) of studies on staff competencies in various countries, including Malaysia (2006), KwaZulu-Natal, South Africa (2006), Nigeria (2015), and Bangladesh (2010), showed an average level of ICT competency among library staff in selected universities. According to section 7[5] of the CUE Universities standards and guidelines, 2014, library staff are also expected to access various forms of continuing education to expose them to new developments in their information work (Commission for University Education, 2014). The use of ICT forms part of the areas that require retooling in academic libraries.

The approaches for skills acquisition, according to Abbas and Siddique (2020), include library schools, professional meetings, conferences, seminars, professional associations, workshops, etc. Babu et al. (2007) add on-the-job training, personal practice, and benchmarking with other libraries. A study by Nkuebe and Raju (2020) on knowledge and skill requirements of the National University of Lesotho concluded that a blend of disciplinary, generic, and personal competencies is required for effective information services in the digital age.

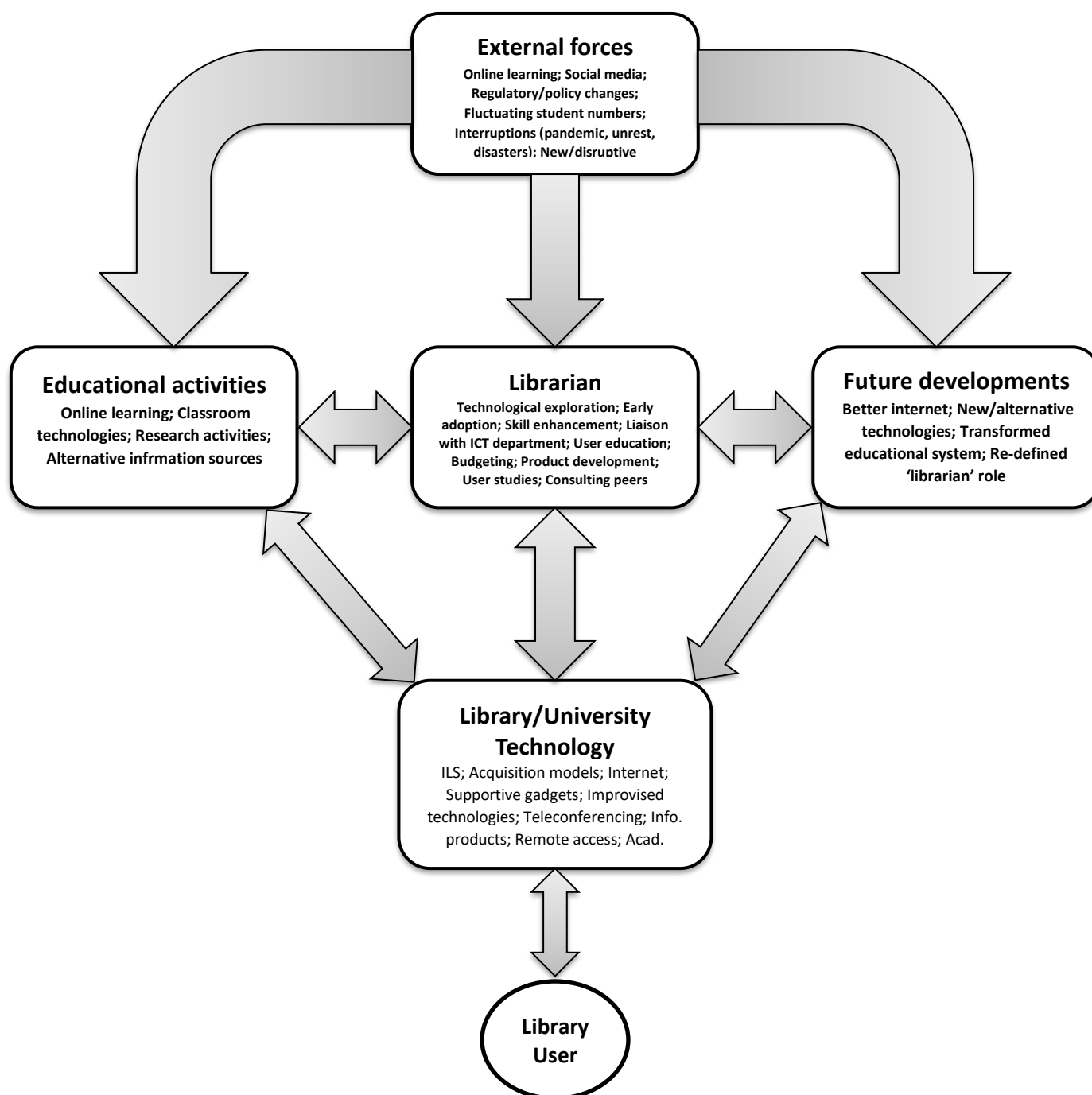
A number of respondents were undecided about the skill requirements of library staff. Several students most probably looked up to the library staff to provide

leadership in technological requirements and expected the library staff to be better placed to champion skill acquisition. As Gore (2014) puts it, librarians are challenged to be early adopters of technologies in a dynamic educational landscape. Manager of Library and Citizen Service at Roskilde Libraries in Denmark also emphasized that “it is the library’s obligation to be at the edge of different uses of culture and uses of technology” (Paraschiv, 2017, para. 1). As they carry out user studies, librarians are expected to lead the way by identifying technological solutions and acquiring the required skills. Besides the adoption of new technologies, librarians should be able to identify the potential of existing technologies and optimise their usage in service provision, including those that are not traditionally used in library services. This follows the argument that academic libraries incorporate “a variety of non-traditional resources, services, and expertise” (Men, 2018, p. 2)

Hence, the nature of skills required by librarians may not be confined to certain types of technologies or the regular skills suggested by literature, popularly considered as the bedrock skills for LIS professionals. As Moruf and Dangani (2020) argue, librarians are expected to stay on top of the technology learning curve and, at the same time, plan ahead to future-proof their libraries. These arguments suggest that librarians reserve the sole responsibility of charting their technological future. This, as emphasised by Ifijeh and Yusuf (2020), is more profound in an environment of constant change. Otherwise, the future relevance of librarians may be in doubt. With an average skill rating by respondents, deliberate action may spur a positive change, resulting in a notable contribution to education. Similarly, if librarians maintain the status quo, disruptive services may render librarians less useful. These services include user support from the university’s ICT department in ways that mirror reference services, alternative models and platforms to facilitate access to information resources, and facilities such as cyber cafés that offer better support services than the libraries’ multimedia centres.

As a wrap-up of the discussion, the researcher conceptualises the place of the librarian in a university setting and summarises it in the following model.

Figure 2: Conceptual framework for university libraries



As shown in the model, the library user interacts with the ICT infrastructure and facilities courtesy of the university library. However, the librarian is the central player in the facilitation of ICT usage by determining the type of resources to be used and the actual provision of the resources. It is based on the fact that personnel are the drivers of technologies (Otike & Barat, 2021). In this

context, the assumption is that the user also interacts with the librarian via ICT resources (such as social media and online reference services). The librarian tailors the ICT services to meet the current needs of the users. As argued in the literature review, the nature of library services offered is also a reflection or an extension of the 'self' of the librarian. The librarian continuously monitors the

external forces (environment) that influence educational activities, such as disruptive technologies and the changing nature of potential students. These forces provide the basis for the design of ICT services. It has, for instance, been argued that the library systems market and development in library systems are driven by internet trends and the software industry, rather than by the library and information community (Ebenezer, 2003). There should be a close working relationship with the ICT department or a provider of ICT support services in all aspects.

The long-term role of the librarian is to identify emerging trends that will impact the prevailing ICT services, such as new technologies, the competitive strategy of the university, and the dynamic role of the librarian in the university. The essence is to have the librarian in pace with future developments. The prevailing roles and personal attributes of the librarian shape the future roles of the librarian as well as the adoption of new technologies. For example, the development of a library app is determined by the ability of the librarian to identify a user service need and adopt a technological solution for the problem. This may involve an improvement of an existing app or the development of a new one. In this model, the user interaction with the library ICT services will take centre stage. The interaction of the user with librarians will take a 'backstage' (save for feedback purposes) in service provision as the librarian contributes more towards the overall educational output and development of services. The ICT resources take the place of service delivery from the perspective of the user. If the librarian does not become proactive in ICT usage, the user will be content with the prevailing educational activities and embrace technologies as they develop. However, the user will miss out on technological leadership and solutions, value addition, and other support services, hence having a poor educational experience. This role may also be assumed by a different player, such as the ICT and ODEL staff.

V. CONCLUSION

This article concludes that the educational landscape of universities is rapidly changing, and libraries and librarians must adapt to these changes to remain relevant. Librarians play a vital role in the provision of ICT services to support university education. The future of libraries in universities depends greatly on the ability of librarians to innovate in service delivery and quickly adapt to emerging technologies. As these changes are experienced, librarians in Kenya are challenged to seek technological solutions that work best for their clientele

and in the most cost-effective manner. Instead of working against a technological disruption, librarians succeed by reaping its potential benefits and participating in the development of new products and services. For effective use of the necessary technologies, librarians need to continually empower the user through literacy programmes. To effectively train users, librarians must continuously upgrade their skills. This is important because as technology usage increases in university education, the user needs will change in tandem with these changes.

VI. RECOMMENDATIONS

The study recommends the following:

Librarian as a leader

The guidelines and regulations by the Commission for University Education in Kenya provide a clear position of the library and the head librarian in a university setting. Universities should prepare for the right change by always endeavouring to have a visionary librarian in charge, in addition to the other university administrators. In addition, university libraries make technological strides when they recruit competent and innovative systems librarians to spearhead ICT services. The recruitment process of other members of staff should equally incorporate the ICT component to build a competent team.

Budgeting and resource mobilization

Recognition of the need to strategically harness ICT in the provision of information services forms part of the desirable traits of the visionary librarian. Action is done through appropriate budgeting and mobilisation of the human capital under them to set the pace for optimal utilisation of technologies in the entire university.

Personal development

Besides the ordinary formal and informal training methods, library staff should habitually use regular and new technological innovations and services. This allows the library staff to understand the functionality of the technological resources and creatively apply the relevant components in library services. As supported in the literature review section, the vision of the library is not complete without the vision of the librarian (Feret & Marcinek, 1999). This implies that technological innovations in a library are an extension of the self of the librarian.

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