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# Learning support in the 21st century university library space: Strategies for success

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**ABSTRACT**

Library learning spaces in the 21st century are expected to be service-rich spaces. In these spaces, students are often supported by librarians and other campus units offering support for student learning and well-being. This study investigated services offered in library learning spaces in select academic libraries in Kenya through interviews and observations. It was established that the libraries continue to offer services that are basic and largely traditional. They are yet to introduce modern and innovative support for student learning or to bring together services spread throughout their campuses which would make their spaces one-stop shops. The study recommends that academic libraries in Kenya should consider redeveloping their services by modifying the existing services and bringing on board new learning support services through a good understanding of student needs and the establishment of university-wide collaborations. This would lead the libraries into becoming true learning hubs and popular spots for student learning.

## Introduction

Academic libraries have traditionally been referred to as "an extension of the classroom," and in the campus environment they are seen as the "place to be" for those seeking academic success. Thus, their contribution to learning and to the quality of higher education cannot be overlooked. For the past two decades or more, a shift in how university libraries are designed has been witnessed. Academic libraries in Kenya are affected by advances in technology that continue to be witnessed in the 21st century, shifting approaches to pedagogy, and the variety and evolving nature of student learning styles, needs, and expectations. These libraries existed before the advent of ICTs and their services were for a long time designed for a different generation of students. As such they have had to make various adjustments to their collection development strategies and to service provision. Their physical spaces have also had to be rethought so as to

accommodate technology, electronic collections, and student learning needs and styles in the 21st century. The extent of these changes varies across libraries and is mainly determined by how the academic library is conceptualized and the availability of financial and human resources. Advocating the need for academic libraries in Kenya to reinvent themselves, Makori (2009) emphasized that the libraries should strive to meet the unique needs of the millennial generation through an establishment of relationships, and an improvement of the physical facility by incorporating technology and bringing on board spaces for collaborative learning. Ten years later, Musangi et al. (2019) did not find the Information Commons to exist as a service model in Kenyan academic libraries despite the fact that librarians are familiar with the concept. Kenyan universities are affected by changes in higher education; equally, their students are millennials or net gens in every respect. They expect that their campuses including the libraries therein are 21st century compliant. This article explores services provided in academic libraries in Kenya to support learning in the century.

While a review of literature does not provide a single description of what a 21st century library looks like, scholars point to various trends that comprise 21st century libraries. Libraries are focusing more on engagement and connection with users through shared spaces, embedded librarians, collaboration with other student services like writing centers, and outreach. Increased engagement is sought through the creation of makerspaces, innovation hubs, and such spaces that allow library users to explore, build and experiment with smart tools, equipment, and software that are characteristic of the 21st century (Garofalo, Johnston, & Lupold, 2015; Leong, 2013; Nichols, Melo, & Dewland, 2017). Academic librarianship is indeed changing since another notable trend is support for research and communication that requires new librarian skills in such areas as research data management, altmetrics, information literacy and evidence of learning, curation of open access resources, digital scholarship, and communications, data management and visualization, digital humanities, geographical information systems as well as use of social media (ACRL Research Planning & Review Committee, 2018). Innovative reference services are also considered a 21st century library trend. These are characterized by efforts to reach library users where they are physically or virtually through chat, videoconferencing, co-browsing, and email. In library buildings, services like iRoaming where librarians walk around with tablets to address user queries or tablets mounted on robots which telechat, have been reported (Hartsell-Gundy, Johnson, & Kromer, 2015; MacDonald & McCabe, 2011). The Covid-19 pandemic refocused the attention of libraries toward the ability to work remotely, it brought issues of inequality and inaccessibility to the fore, as well as a rethinking of physical spaces with regard to suitability for

distancing and adequacy of sanitation. Service delivery, information access, and material storage were major concerns (McAllister et al., 2022). Nevertheless, libraries continued to deliver core services and creative solutions, especially for virtual reference. Digital literacy became an important topic and there was more investment in the development of born-digital collections. The value of digital access to libraries was proven during this time and for many libraries, open access resources provided a solution for off-campus access to library collections.

True to Ranganathan's 5th law of library science, "the library is a growing organism." The academic library is having to evolve as posited by Cannell (2013) to address challenges brought about by the changing pedagogical environment, shifting user expectations with regard to the quality of service and space, new ways in which users expect to use the library, and behave therein, greater dependence on digital resources and reduced print collections. Trembach and Deng (2018) agree that libraries must adopt a new style to service provision to remain relevant and useful to their varied clients, even during a pandemic.

Oliveira (2017) describes library spaces as having moved from an era of book boxes where space was designed to hold collections through the Information Commons (IC) and Learning Commons (LC) era, which was accelerated by the digital revolution, to the current shift to learning spaces which is inspired by the need for libraries to contribute to the learning experience. Big leaps in service provision were made with the introduction of the IC which according to Karasic (2016) has been lauded for its services which include research guidance, instruction, technology, and flexible physical space despite the challenges of training staff to support both research and technological needs. The LC as stated by Bailey and Tierney (2008) is more integrative within the library and the wider institution and attempts to clearly align with the institutional vision and mission. It is likely to bring on board services previously found outside the library and offer a wider variety of workspaces for collaboration.

Supporting learning is a key role in today's university library and many such libraries provide resources and services in support of student learning. An excellent learning space provides curriculum support and a variety of student services. Students can use the space to record and practice their presentations, display their work, converse with peers, get tutor support, connect to the Internet, power up their devices, and make use of high-end computing technology in a comfortable relaxed environment with refreshments (Andrews, Wright, & Raskin, 2016). Oliveira (2017) opines that such learning environments should be aligned to the diverse learning styles, behaviors, and abilities of students; with a team of staff readily available to support and assist the students as they work toward achieving their

learning goals. Courant et al. (2010) suggest that an academic library is now measured by the quality and range of services it provides as opposed to the size and scope of its collection. Libraries are having to increase the learning support services on offer to cater for more needs and a wider population. This has meant going beyond the traditional library services and co-locating other services within the library building. Massis (2010) refers to this as a "one-stop library" experience with services ranging from tutoring, disability support, advising to administration.

Services that may be offered to support faculty and student interactions are grouped by Felix (2011) into two fundamental types: events and consultations. Events include writing and presentation clinics; software and hardware tutorials; information literacy sessions; readings and performances; as well as social events. Consultations could include research, writing, or presentation consultation; tutorials; lending support; and technology support. Farmer (2016) identifies library space as a service center where reference, writing, technology, and research assistance as well as faculty development can take place. Felix (2011) goes on to provide several exemplary spaces that are represented not just by their physical features but also by their calendar. The Weigle Information Commons at the University of Pennsylvania champions community and collaboration through events, student workshops, and partners like the writing center. The Learning Grid at the University of Warwick has an innovative, student-run service model that features online resources and connects to other university departments. The Scholars Commons in Strozier Library at Florida State University facilitates requests and delivery of information materials; provides media assistance; research and statistics consultations; as well as equipment checkout. Chan and Spodick (2014) state that the learning commons, e-classrooms, and production studios at the Hong Kong University of Science and Technology (HKUST) library house various functions and activities including workshops in media production, music and dance, student advising and industrial training; tutorials of sciences, languages, and research; as well as shooting videos and Massive Open Online Courses for faculty and students.

This transformation in the form and shape of academic libraries along with its magnitude and pace has been gradual, contextual, and individualized. Donkai, Toshimori, and Mizoue (2011) surveyed main or central libraries at colleges and universities in Japan and found that a majority of the libraries offered traditional learning support services like orientation, information literacy classes, inter-library loan, and reservation. Only a few libraries offered innovative services, such as career support, academic writing support, learning support for handicapped students, and academic guidance to bolster student learning. Also, collaboration between the

libraries and other departments in support of student learning was not widespread. A survey of 36 scholarship labs located in university libraries across the United States, Europe, and Canada by Webb (2020) found that the design of spaces and services provided differed depending on the motivation of the creative spaces, the focus of the universities, availability of funding, and staffing.

Research data management services provided by libraries in Australia, Canada, Germany, Ireland, the Netherlands, New Zealand, and the United Kingdom were found to be maturing although the roles played by librarians are more advisory and supportive than technical (Cox, Kennan, Lyon, & Pinfield, 2017). Similarly, European libraries lean toward offering research data services that are consultative or reference in nature as opposed to hands-on (Tenopir et al., 2017). In Spain, the provision of research support services is characterized by a historically weak link between librarians and faculty as well as a scarcity of resources. Most attention is paid to open access and not much priority is given to emerging topics like data management (Borrego & Anglada, 2018). Equally, Namuleme and Kanzira (2015) report that research support services in Ugandan academic libraries are still largely traditional with only one library offering bibliometric support. They cite limited budgets, lack of relevant skills, and inadequate infrastructure as the constraining factors. In Kenya, Anduvare (2019) investigated eResearch support in private university libraries and concludes that university libraries are yet to be positioned to support research data management. Information Commons as a service model in academic libraries in Kenya was reported by Musangi et al. (2019) as only existing in fragments.

It is evident that across the world, student support in university libraries is changing. Acknowledging that academic libraries in Kenya exist in a higher education environment that is not unique from the rest of the world, this study explored learning support services provided within academic libraries in Kenya with an aim to propose ways in which librarians can bring on board services that are supportive to students learning in the 21st century. This paper explains the research methodology applied, reports the findings using a thematic approach, and suggests ways in which Kenyan academic libraries can improve learning support offered to their students.

## Methodology

This study examined the learning support services provided in learning spaces found in selected academic libraries in Kenya. Specifically, the research study sought answers to the question: "are there services tailored to support student learning in academic libraries in Kenya?" The aim of the study was to assess the nature of services provided and propose ways in

which they can be enhanced to suit student learning in the 21st century. The researchers applied a qualitative multi-case study since in-depth and detailed information was needed to understand how services are modeled in the libraries. A stated-criteria focusing on libraries that are keen to stay current with a variety of degree programs, at varied levels, was used to purposively select four case libraries. Libraries from private and public institutions as well as those with new and old library buildings were included to broaden the variety of scenarios. The target population was librarians working in these libraries and student library users. The researchers sought permission from each of the case libraries before commencing data collection.

Two data collection techniques were used, interviewing and observation. Three different sets of interview schedules guided the interviews with university librarians or library directors; librarians in charge of user services, reference, and instruction; and student library users. Using the information-rich cases approach, 17 librarians (four university librarians and 13 librarians in charge of user services or instruction and reference), were identified, their permission to participate in the study was sought and then face-to-face interviews were conducted at a mutually agreed time. These were seasoned librarians, all were aged above 40 years except one and had each held their positions, at the time of the interview, for at least two years. These librarians are involved in the design and the day-to-day delivery of student support services. As such, they had the necessary knowledge and experience to provide in-depth information about learning support services in their libraries. Student library users were sampled conveniently, with sampling going on to a point of theoretical saturation in each of the case libraries. In total, 74 undergraduate students, physically undertaking various forms of academic work at the libraries during the time of the study, were interviewed. These student respondents were enrolled in various degree programs, on offer on their campuses and cutting across such subjects as law, medicine, business, computer science, education, arts and humanities, environment, and statistics, among others. The variety of their lived experiences and perspectives was important to this study. Table 1 shows the interview questions that guided the collection of learning support related data from these three groups of respondents. Observation of the physical library spaces and student learning behavior with regard to learning support was done at different times of the day to make sure no feature or form of service was left out. Table 2 shows the observation checklist that guided the observations. The researchers spent four days at each of the case libraries. The data collected, was organized and documented then thematically analyzed. The researcher sought informed consent and assured the participants of confidentiality and anonymity throughout the research process.

**Table 1.** Interview schedule.

| Respondents | | Questions |
|---|---|---|
| Student library user | a. | Do you get support from the librarians when in the library? Of what kind? |
| | b. | How else would you like to be supported, in the library, to be more successful in your learning? |
| | c. | Apart from lecturers and librarians, are there any other departments on campus that support your academic work? |
| User services/reference and instruction librarians | a. | How do librarians support student learning in the library? Which kind of support has the highest demand? |
| | b. | Are you able to support all the learning and research needs as expressed by students? What is lacking? |
| | c. | Which campus units do you work with within the spaces to support learning? How is this done? |
| University librarians | a. | How do you support student learning in the library? How has this changed your role as a librarian? |
| | b. | What skills and competencies do librarians require to fully support student learning? |
| | c. | Which campus units or departments do you work with within the spaces to support learning? Which units do you think should be brought on board to support students better? |
| | d. | What challenges do you face or are you likely to face in trying to work with other departments to support student learning within the library? |

**Table 2.** Student behavior and space observation checklist.

| Feature | Observed | Not observed | Remarks |
|---|---|---|---|
| **Services and resources use** | | | |
| Seeking help at a reference desk | | | |
| Consulting with librarians | | | |
| Using library provided computers | | | |
| Using audio visual booths | | | |
| Using other equipment within the space | | | |
| Working at the Education Technology Center | | | |
| Working at the writing labs | | | |
| In class | | | |
| Working at the research/information commons | | | |
| Other | | | |
| **Service and support points** | | | |
| Information technology help desk | | | |
| Reference/information desk | | | |
| Assistive technology support | | | |
| Audio-visual production facilities | | | |
| Multimedia centers | | | |
| Computer labs | | | |
| Classrooms | | | |
| Writing labs/centers | | | |
| Research/information commons | | | |
| Other | | | |

## Findings and discussion

Twenty-first century learning spaces are often described as service-rich. Experiences of students with regard to the support received from librarians were explored guided by the questions in Table 1. Students interviewed reported that they received orientation to the library, they got answers

from librarians whenever they were seeking clarifications about services, information about opening hours, and when they wanted to locate or borrow books. Some students, 27% (20/74) indicated that they had received training and research assistance from librarians. Technology support and troubleshooting were also mentioned as support received from librarians. However, there are those, 35% (26/74), who stated that they had had "no interaction," "minimal interaction," and "not much support" from librarians and some even went further to explain that they did not know any librarians. Students suggested that to be more supportive, librarians should "badge up," be welcoming and more available or ready to help as opposed to enforcing rules.

On the other hand, findings from interviews with librarians indicated that librarians offer various kinds of support to students in the learning spaces. Librarians support students by showing them how to access resources; providing the needed infrastructure; offering trainings on access to resources especially remote access, providing advice on referencing and publishing; maintaining a friendly environment, clean with comfortable chairs; providing a Selective Dissemination of Information service; performing literature searches; availing quick consultation sessions; and offering technology support or linking them to the campus ICT team. Observation data collected using the checklist in Table 2 indicated that across the libraries there were desks manned by librarians, located close to the reading areas where students could seek help. Students were observed consulting with librarians at the time of the study.

Looking at the above, one would say the findings indicate that the support provided in the learning spaces by librarians is basic and largely traditional. The expected support in the 21st century should be engaging, innovative, and highly technological to include but not be limited to research data management, support with specialized tools, software and applications, technology support, digital scholarship, among others. Students provided the following description of the support they wish to get from librarians:

1. Access to e-books and online content
2. Training on publishing, plagiarism, accessing resources when off-campus, citing and referencing
3. Finding and locating books; knowing what resources are available
4. Security of the baggage area
5. Reduction of distractions and noise
6. Provision of more and better computers
7. Printing from personal laptops
8. Technological help

9. Research work
10. Literature searches
11. Availability and willingness to help

The nature of learning support provided in the learning spaces by librarians and desired by students can be summed up as encompassing orientation, provision of general information, and access to resources with instances of training, research support, and technology help. This agrees with what Donkai et al. (2011) refer to as traditional and witnessed in most libraries in Japan. Equally, Ducas, Michaud-Oystryk, and Speare (2020) reported that librarians in research-intensive universities in Canada offer services that are largely viewed as traditional though they are taking up newer roles. It is possible that librarians in Kenya offer what their skills, resources and time allow. Also, it is an indication that the timeworn storehouse concept of libraries, where services are organized around the collections and not users, abounds. Felix (2011) points out that services determine the kind of learning experience a student will have within a learning space. Further, he explains that modern learning spaces provide innovative services that range from writing support, technology tutorials, research consultations to social events. This suite of services, while not provided in the libraries studied, Felix (2011) reports that they have been achieved elsewhere. This means that innovative services should be a major consideration as Kenyan academic libraries evolve to become true learning centers.

To provide ready support for the variety of student learning needs in the spaces, libraries are expected to collaborate with other campus units and departments. This study found that the case libraries work closely with the ICT offices and teams to support students in the library space though none of the libraries had an ICT desk or office within the spaces. Students were simply referred to the ICT team and got help through email correspondence, telephone, or by visiting the office physically. One interviewed librarian had this to say: "whenever a student has a technology related problem, we ask them to call ICT." Other offices that were identified as working with the library from time to time to support students were finance, teaching units, and student affairs. Non-library support desks or offices, like writing labs, multimedia, special needs, or language support, were not observed in any of the case libraries. However, one of the case libraries had the ICT, Postgraduate and Research, Online and Distance e-Learning as well as the University Press offices located in the same building. Another library had just had the Post-Graduate and Research office moved from the library building to another building. The physical proximity of these services, as envisioned in the design of one of the cases, is an indication that

they are considered important to student learning although none of the libraries surveyed had in place, a well laid out collaboration or structured working mechanism with these units.

Outside of lecturers and librarians, interviews with students (Table 1), indicated that they considered only fellow students or friends, laboratory technicians, course advisors, security guards, kitchen staff, and cleaners as supportive of their learning. This implies that a culture of supporting student learning, out of the classroom, in a deliberate manner is yet to be established in the universities. Librarians attributed the lack of integration to how student services were originally structured in their universities. The services are yet to be rethought in light of the changing campus. One university librarian had this to say, "there is a silo mentality in the way departments work in this university, it is not easy to bring services together;" an indication that there is need to reconceptualize student services. Librarians generally indicated that integration of services has not been considered or explored in their universities. They suggested that collaborations with such units as special needs, language center, ICT, research, publishing, marketing, and teaching departments have a chance to enhance the level of assistance in the learning spaces. These could take the form of desks in the learning spaces that are manned full time or part time, an office within the library building, or a designated officer who works with students in the learning spaces. Low staff numbers in the universities was cited by all the university librarians interviewed as a possible hindrance to bringing services together. However, in one of the libraries, students on work-study programs were said to be of help to others in the library spaces. Librarians also mentioned that the Covid-19 pandemic caused the libraries to shift focus toward growing digital collections meaning that integration of services may not be an immediate need.

Clearly, library learning spaces in Kenya are yet to become one-stop learning hubs where campus departments are brought together in support of learning. Traditionally, librarians have worked with teaching departments to identify course relevant information materials or to deliver Information Literacy programs. Bringing services together, within the library space, in support of student learning can be described as an emerging area of academic library practice and various scholars (Elliot, Vandenbark, & TeKippe, 2018; Jackson, 2017; Oliveira, 2017; Ozburn, Kirk, & Eastman, 2020) laud collaborative learner-centered approaches as enriching to learning in library spaces. As earlier stated by Henrich (2013), the central location of resources and services lowers barriers that hinder students from seeking help.

It is not unexpected that librarians in Kenyan university libraries only offer support for learning that is basic. What is worrying is the fact that

some students do not know librarians, have not interacted with librarians, or received help from them. In as much as it is possible that some students feel independent and get their way around, librarians should be proactive and endeavor to offer cross cutting services that make them felt and valued by their customers. The value, knowledge, and skill invested in them could be what is needed to bring learning and vibrancy into the library space. It is possible that students are unsure of librarians' roles, which makes it the librarians' duty to shape their roles and foster the kind of learning that should be achieved in the learning spaces through innovative services. Study participants suggested that 21st century academic librarians need to be tech-savvy, good researchers and teachers, familiar with the web and the online environment, and able to communicate and relate well with their customers just as established by previous research (Baro et al., 2019; Davis & Saunders, 2020). This would move Kenyan academic libraries closer to an Information Commons which Beagle (2006) described as a service-rich milieu organized in support of learning. Also, according to Oliveira (2017), an Information Commons has student access to librarians and ICT experts as one of the four basic features. In this space, librarians would not just focus on helping students to manage information, as is the case, they would go further and help them to manage their learning through an assortment of programs and services.

## Conclusion and recommendations

The study explored the services provided within the library space in support of learning. It was revealed that academic libraries in Kenya provide services that are largely traditional. While librarians acknowledge the need to take up new roles in support of student learning, their services revolve around collection access and library instruction. Services should always be in tandem with current needs. As the academic library shifts toward becoming a learning center, services must be rethought. This does not mean doing away with what libraries have always done, some services like user training should continue, some like research assistance should be modified or upgraded and new ones like research data management and bibliometrics should be born especially through partnerships with other campus departments. University librarians must take the lead in repositioning the library to be responsive to student needs, preferences, and the expectations of the 21st century. An elaborate needs analysis would ensure that the services provided evolve with student learning needs, styles and preferences. This would help the libraries to direct efforts and resources to where they are needed and thus stay relevant.

It is expected that 21st century learning spaces have expert help provided by bringing together services that are spread throughout the university. Across the libraries, there were close working relationships with ICT departments but there were no formal partnerships or efforts to bring ICT services and other student services into the library space. Collaborating with other campus units would ensure that a wider range of student learning needs and expectations are met within the library. It is important that libraries formalize existing working relationships and seek new linkages once the gaps in learning support within the spaces have been identified and good candidates for collaboration considered. In the beginning, it may not be possible to bring them physically to the library space but that should be the ultimate goal since students are best supported when services are collocated. Leveraging on established best practices for collaboration will ensure the success of these liaisons.

For enriched and expanded services, roles of librarians and other service providers will need to shift to suit the shape and form of the 21st century library. New skills will likely be needed and investment in capacity building in terms of new positions, professional development, and compensation, would aid the achievement of service-rich learning environments. Equally, discussions with staff regarding their strengths and interests would help to connect them to the right trainings and position them appropriately in the re-invented library. Acknowledging that staffing may be a challenge, libraries could explore getting additional support from well-trained student workers and volunteers, a peer model that has been seen to work as per the studies of Webb (2018, 2020), as well as Schmidt and Kaufman (2007). This would enable the development of a set of services that cater to students' writing, research, technology, and special needs in one location.

Lastly, services define 21st century learning spaces. The traditional library services currently offered in the libraries studied will need to be made richer by bringing in non-library and innovative services. Technology support would have to be part of the services provided since the spaces are increasingly technology infused and students are technology dependent. Service-rich learning spaces would be characterized by a lot of collaboration among service providers and integration across student support departments. Basic features of these services would include enhanced access; instruction; technology troubleshooting; research help; disability support; and writing support. Advanced levels of service would cover publishing support; career guidance; counseling; language support; research data management; makerspaces; media labs; and digital scholarship. Ready, expert, and integrated support is likely to ensure that there is learning in library spaces. Students will likely stay longer as they do not have to seek help

elsewhere. Libraries will thus be future-proofed in case of a crisis like Covid-19 where physical services were suddenly cut off. Librarians and other campus officers would be brought on board, within the library, as partners in the learning process.

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