



Library operations performance objectives: empirical evidence from users' expectations

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Abstract

This study aims to investigate the expectations of library users based on operations performance objectives (OPO) such as quality, flexibility, speed, dependability, and security of services and resources to adopt a strategic direction in which the creation and delivery of library resources and services would meet the expectations of library users. A survey was conducted to collect data from 506 students of fifteen (15) academic universities in Ghana using questionnaires and the data was analysed descriptively. The results indicated that the general student populace prioritised speed as the key operations performance objective determining user satisfaction with library operations. Besides, undergraduate students prioritised speed and dependability, whereas postgraduate students prioritised flexibility. Finally, the outcome indicated that public university students prioritised dependability higher, while their counterparts in the private sector prioritised quality. Findings of the study might aid the adoption of a strategic direction in which the creation and delivery of library resources and services would meet the expectations of its users.

Keywords: Library operations, user expectations, operations performance objective, service quality, flexibility, dependability, security, speed.

Introduction

There is a growing concern that service providers, particularly libraries, must pay critical attention to performance objectives such as flexibility, dependability, speed, and security. Libraries are urged to adapt and incorporate new technologies to meet users' increasing demands for remote services. Additionally, there is a critical need for libraries to safeguard the privacy and security of users, especially given the potential for tracking and monitoring user behaviors during their interactions with resources and services, as noted by Vaughan (2020). The contemporary environment is also characterised by concerning social issues such as workplace violence,

mental illness, child neglect, and homelessness, which further highlight the importance of these precautions (Albrecht, 2023). As customer expectations evolve towards instant gratification, it becomes essential for libraries to maximise time in service delivery thereby positioning swift service as a vital aspect of their offerings in the current service industry landscape.

These calls aimed to address the limitations of existing approaches to library performance assessment, primarily highlighting that most studies focus on evaluating performance based solely on the quality of library resources and services. In this context, "quality" is often a broad term encompassing various factors, with customer satisfaction indicating

reliability, availability, usefulness, efficiency, and speed of service. For instance, Nitecki et al. (2001) define service quality as meeting or exceeding customer expectations. Well-known models like ServQual and LibQual do not differentiate “quality” from other performance objectives, leading to criticisms of these frameworks for relying solely on user perception. This reliance implies that only users can determine service performance, making other performance aspects seem irrelevant (Parasuraman et al., 1988; Nitechi, 1996).

Furthermore, traditional models primarily evaluate face-to-face services, neglecting the rise of online or electronic services in academic libraries. The introduction of services such as digital reference, electronic document delivery, online support, information literacy training, e-content services, and access to electronic resources and databases have led to the development of new models including DigiQUAL, E-S-QUAL, Hernon & Calvert’s Library E-SERVQUAL Model, and Kiran and Diljit’s Hierarchical Model of Web-based Library E-service Quality, tailored for these digital contexts. Others like the Technology Acceptance Model, and the End-user Computing Satisfaction were adopted to measure electronic service quality in libraries. These models assess factors essential for user satisfaction with e-service quality, such as perceived usefulness, ease of use, web aesthetics, ease of access, system availability, efficiency, linkages, collections, reliability, support, fulfilment, flexibility, and customisation.

However, these e-service quality models have faced criticism for issues like lack of statistical reliability and validity (Hernon & Carvert, 2005), overemphasis on service functionality at the expense of technical operations, and vague or overlapping attributes (Trivedi & Bhatt, 2019). Despite these drawbacks, they establish the basic framework for measuring electronic service quality. Consequently, Carman (1990) suggested that refining existing SERVQUAL dimensions or introducing new ones might be necessary for particular service contexts.

In the field of business, Slack, Brandon-Jones and Burgess’ (2022) performance objectives: quality, speed, cost, dependability and flexibility, have been employed by many researchers to measure the performance of organisations and ensure customer satisfaction and competitive advantage. According to Slack et al. (2022), performance objectives, also referred to as competitive factors, are a set of factors that guide the activities, decisions and responsibilities of managing the production and delivery of goods

and services in a company to achieve a competitive advantage and provide customer satisfaction. A review of existing literature reveals a notable absence of studies applying Slack’s operational model within library and information services contexts. This represents a significant research gap that calls for a study to explore libraries’ attempt to leverage these performance objectives to compete effectively against newer information sources, including social media and collaborative platforms.

Purpose of the study

In view of this, the study adopted four of the operations performance objectives, such as quality, speed, dependability, flexibility, and security, to assess users’ expectations for resources and services of academic libraries in Ghana, and to formulate a strategic direction to guide the creation and delivery of library resources and services that would meet the expectations of its users. This was achieved by addressing the following research questions:

- a) How are quality, flexibility, speed, dependability, and security applied to library operations?
- b) What are users’ expectations of library services and resources?
- c) Which of these performance objectives is of priority to library users?

The study contributes to research on library operations by expanding performance factors used to assess library services to include Slack et al.’s (2022) performance objectives. This accomplishment expands the dimension of user satisfaction research and provides directions for future studies. Finally, the findings of the study will result in the adoption of a strategic direction in which the creation and delivery of library resources and services will meet users’ expectations.

Literature review

Literature was reviewed on the use of the five operational factors: quality, flexibility, speed, dependability, and security/privacy to assess user expectations of libraries.

Quality in library operations

Quality, as defined by Slack et al. (2022), implies delivering error-free products and services to meet customer expectations, a goal shared by service organisations, including academic libraries. Libraries strive to provide quality services that fulfill user needs, and the measurement of e-service quality has

emerged as a crucial area of research in librarianship (Trivedi & Bhatt, 2019). The nature of service quality is multidimensional, influenced by two main factors: content and context (Henon, Haltman & Dugan, 2015). Content pertains to information resources, technology, and library space, which attract users, while context involves user interaction with staff, ease or difficulty in navigating the system, and the comfort of the physical environment during library visits.

Frequent library users benefit from both content and context elements, and their expectations regarding the availability and accessibility of library resources have risen (Barfi et al., 2023). Satisfying clients' needs is at the heart of the library's existence and service quality encompasses the relationship between the library and its clients. Herbet Francois, as cited by Hernon, Haltman and Dugan (2015), noted, "When library and customer measures of quality are not congruent, the library may be meeting its intended internal standards of performance but may not be performing well in the eyes of its customers" (Henon, Haltman & Dugan 2015). In digital libraries, information quality, (encompassing attributes such as accuracy, format, timeliness, currency, precision, completeness, conciseness, and relevance) is viewed through users' perceptions regarding how well information meets their demands (Balog, 2011). Review of literature revealed that most studies highlights a strong correlation between content quality and user satisfaction across various systems, including e-learning systems and electronic medical records (Roca et al., 2006; Freeze et al., 2010; Napitupulu & Patria, 2013). Also, Chang (2013), Lwoga (2013), and Masrek et al. (2010) have demonstrated that information quality is a critical factor in determining users' happiness with digital libraries. A study by Gyau et al. (2021) further explored user perspectives on library services, revealing general satisfaction with aspects such as information access, staff availability, and procedures for borrowing and renewing materials. However, a study by Barfi et al. (2023) indicates that library service quality often does not meet user expectations, with notable differences in expectations based on gender. Therefore, users recommended that libraries should regularly solicit their feedback via surveys to accommodate evolving needs, libraries should enhance internet access and electronic services, and libraries should extend library hours.

Dependability in Library Operations

Dependability is generally the measure of how often something can be relied upon and is identified as a vital measure of user expectations regarding products, services, or systems (Pushparaja et al., 2021). It is closely related to reliability. Dependability includes several key attributes: reliability, availability, safety, security, and integrity, as highlighted by Avizienis, Laprie, and Randell (2001). Users of digital libraries expect interfaces that are both supportive and secure, and provide relevant materials. In the information services field, dependability significantly influences customer satisfaction and loyalty, with studies noting a moderate positive correlation (0.53) between dependability and customer satisfaction at a significance level of $p < 0.01$ (Martins & Riyanto, 2020; Kumar et al., 2013). Also, Wada (2018) suggests that the adoption of cloud computing enhances the dependability of data access in libraries, as it facilitates global access to shared resources, and improves both efficiency and user service because it requires less administrative effort. However, research evaluating library service quality (LSQ) at the University of Kashmir using the LibQUAL+ model revealed that dependability was perceived as the least desired aspect of service (Kumar & Mahajan, 2019). The study therefore recommends that libraries prioritise dependability in addressing user service challenges. In summary, dependability plays a significant role in determining customer satisfaction and loyalty in various sectors.

Flexibility in Library Operations

Flexibility is defined as the capacity to adapt to changing circumstances (Gupta & Gogal, 1989; Walton, 2007), and respond rapidly to market dynamics (Beach et al., 2000), which is crucial for gaining competitive advantages (Gomez-Gras & Verdu-Jover, 2005:842). Research indicates that flexibility enhances operational performance by reducing manufacturing costs and time while enabling the swift introduction of new services and products. This is particularly vital in the manufacturing sector due to customisation, uncertainty, and changing consumer preferences (Beach et al., 2000a; Boyle, 2006; Dreyer & Gronhaug, 2004). In the education sector, flexible learning programs, the integration of information and communication technologies, and flexible work patterns are essential for educational institutions to remain effective (Cloonan, 2004; Edwards et al., 2001).

Libraries and information services are experiencing increasing demands for flexibility, due to the proliferation of new technologies such as the Internet of Things, RFID, Makerspaces, portable devices, robots, and integrated library systems (Ibrahim, 2021; Aina, 2019). Users now expect libraries to adopt these innovations, providing instantaneous services that cater for users operating across various time zones. According to Naikar (2024), some libraries, like the University of Chicago Library and New York Public Library, have successfully implemented robots to assist with various tasks, including organising, sorting, and retrieving books and managing inventory. Also, the University of Monash introduced integrated library systems in some Ugandan libraries (Ponelis & Adoma, 2018) to automate technical tasks. Additionally, during the COVID-19 pandemic, academic libraries demonstrated significant organisational flexibility by broadening the scope of services and introducing remote and rotational work structures (Jaskowska, 2020).

On the other hand, a study by Cendón and de Almeida Souza (2017), discussing flexibility as a factor in the assessment of library performance concluded that library users found some libraries less flexible. To foster flexibility within libraries, enhancing the digital competencies of library staff and taking into account the needs of users are critical steps. The successful adaptation to these changes not only improves service delivery but also aligns library management with contemporary technological trends. Even though these studies show how libraries implemented flexibility in their operations, few discussed flexibility as a factor in the assessment of library performance.

Speed in Library Operations

Speed is a critical factor in a company's ability to efficiently deliver goods and services, particularly in library operations where it directly impacts user satisfaction. Armstrong and Seng (2000) highlight that customer satisfaction heavily relies on transaction speed, an assertion that aligns with Hoffman and Novak's (1996) assertion of a significant correlation between download speed and user satisfaction. Ranganathan, citing Manjunatha and Shivalingaiah (2004), emphasises the importance of librarians in saving readers' time during service delivery. Academic libraries recognise that providing prompt services is essential for enhancing user satisfaction. To improve service speed, many libraries have integrated technological innovations, such as Radio Frequency

Identification (RFID), the Internet of Things (IoT), artificial intelligence (AI), chatbots, and real-time shelf location tracking systems like "Map Treasure" (Cao et al., 2018). RFID technology, in particular, offers a significant advantage by enabling the scanning of books on shelves without removing them, allowing for quick inventory checks through handheld devices.

However, not all libraries are equally equipped. In developing countries, many libraries struggle to deliver timely services. A study by Tetteh and Nyantakyi-Baah (2019) assessing user satisfaction in Ghanaian academic libraries found varied responses regarding internet speed. Additional research by Armah and Cobblah (2021) identified poor internet connectivity and inadequate computing resources as significant hindrances to accessing online scholarly materials promptly. Such delays lead to user dissatisfaction (Asogwa et al., 2019).

The positive impact of speed on customer satisfaction is not isolated to libraries; similar findings have been reported across other sectors, including banking and hospitality. Studies by Jahan et al. (2020), Ling et al. (2016), and Simon et al. (2016) in banking, as well as research in the hotel industry by Grechy and McShane (2021), Min et al. (2015), and Jun and Cai (2001), further confirm that speed plays a crucial role in enhancing customer satisfaction across various industries.

Security in Library Operations

Security is a vital element in the management of information and data, as highlighted by the National Information Standards Organisation (NISO) in Baltimore, USA, which emphasises the collective responsibility of libraries, publishers, and software providers to create a digital ecosystem that safeguards user privacy (NISO, 2026). This encompasses not only the safety of library users and their belongings but also the confidentiality of their personal records. The advent of digital technology has enabled libraries to generate substantial quantities of user-specific data, unfortunately, libraries are unable to guarantee the safety of users' information as required, despite making some efforts.

A systematic literature review by Farid et al. (2023) illustrates that some university libraries have developed Digital Information Security Management (DISM) policies addressing various aspects such as information security systems, data backup, data protection, and the training of staff. Despite these efforts, many academic libraries struggle to implement

such policies effectively due to challenges including inadequate data backup systems, difficulties with DISM policy adherence concerning data security and privacy, hardware and software upgrades, and insufficient technical support for library personnel. Further investigation into user privacy within digital library contexts at Loughborough University by Sturges et al. (2003) indicated that patrons typically express less concern about their privacy, based on the assumption that libraries would not disclose personal information to third parties, while librarians often regard privacy as a professional value only in theory, and hence do not prioritise it. Additionally, a few libraries were found to lack sufficient data protection measures. To address this issue, the study recommends establishing comprehensive privacy policy guidelines to enhance user privacy.

Moreover, security concerns have escalated due to the theft of library materials and user properties within library spaces. Research indicates a concerning trend of theft and damage to both books and non-book items in Nigerian university libraries, presenting significant risks to the preservation of their collections (Isebe, 2014). Furthermore, inadequate security staffing and poor library infrastructure have contributed to inappropriate behaviors observed in various Ghanaian university libraries (Appiah et al., 2024; Aryee & Tetteh, 2024).

Methodology

Research design

The study utilised a quantitative research approach, specifically employing a cross-sectional survey design. This design incorporated descriptive ranking scales aimed at evaluating five key operations performance objectives: quality, speed, flexibility, dependability, and security. The use of a survey was determined to be effective for gathering quantitative data from respondents and facilitating analysis of these performance metrics.

Sampling technique and sample size

The study's target respondents were university students in Ghana. The sample size of 506 students from fifteen public and private universities in Ghana was conveniently sampled. A convenient sampling technique (a non-probability sampling technique) was used due to the lack of a sample frame, as practised in Aryee and Tetteh (2024). The fifteen institutions were purposively selected because they have distinguished themselves as having well-resourced academic libraries

with functional policies and practices for service delivery and have been in existence for over 10 years, hence providing rich and relevant data for addressing the research objectives stated above. Moreover, the justification for deliberately choosing both private and public universities is that their distinct governance structures, funding mechanisms, resource allocation, and service provision strategies have a big impact on how libraries work and how users feel about them. Since the study seeks to encompass findings from a wider range of users with different needs and expectations, incorporating both categories of institutions, was necessary to augment the depth and significance of the findings, and provide informed recommendations applicable to various higher education settings.

Data collection

Quantitative data was collected using a well-structured questionnaire developed from previous scales in literature on the subject, such as Barfi et al. (2023), UI Haq and Faizan (2022), and Tetteh and Nyantakyi-Baah (2019). During the data collection phase of the study, the questionnaires were sent to various university WhatsApp platforms for students to complete. Online data collection is lauded for saving time, reducing coding errors, and facilitating easy analysis. However, it has a low response rate. To mitigate this limitation, the exercise spanned a longer period of four months (May to August 2023) and the link to the questionnaire was repeatedly shared weekly to ensure that most members of the target population had an opportunity to see the link, as noted by Saunders et al. (2016), resulting in 506 questionnaires completed.

Data analysis

Before analysis, the data underwent a cleansing process to check for missing values, but none were found since respondents were required to answer all statements in the survey instrument. For the analysis, descriptive statistical techniques, specifically frequency and percentages, were utilised through the Statistical Package for Social Sciences (SPSS) version 20. The results were conveyed in terms of a percentage frequency distribution, a method that illustrates the percentage of observations corresponding to each data point or group of data points. This technique has been recognised as an effective means for portraying the relative frequency of survey responses (McPherson, 2001; Healey, 2014). Additionally, a frequency table was employed to document several observations

within specific score ranges in the dataset (Healey, 2014; Marshall & Jonker, 2010).

Results and discussions

The results in Table 1 show that out of the 506 respondents surveyed in this study, 57% were male and 43% were female. This outcome corresponds with national statistics, which suggests that there are more males than females in Ghanaian universities. The results also indicate that 74% of respondents were from public universities and 26% were from private universities. This outcome also reflects the national ratio of the population of public and private universities. Finally, the profile characteristics show that 64% of the respondents were undergraduate students and 36% were postgraduate students.

Table 1: Profile of respondents

Characteristics	Category	f	%
Gender	Male	286	57
	Female	220	43
		506	100
University type	Public	372	74
	Private	134	26
		506	100
Student type	Undergraduate	322	64
	Postgraduate	184	36
		506	100

Relative importance of Operations Performance Objective (OPO) in Library Operations

The study aimed to determine the most prioritised OPO in library operations. Out of 286 male students, 37% ranked flexibility as the first OPO, followed by quality (26%) over the others. Female students, on the other hand, ranked quality (23%) and dependability (21%) higher, though the other OPOs also had significant scores as their most important OPOs (Table 2). The results imply that male students' expectations were skewed more towards flexibility and quality. Possibly, males expect libraries to provide remote and ICT-enabled services and to revise policies to accommodate users' limitations. In contrast, female students might expect quality service and expect to find the materials that they need. This result corroborates the assertion by Barfi et al. (2024)

that users' expectations are gender-based.

Table 2: Operational performance objectives in the library operations based on gender

OPO	male		female	
	F	%	F	%
Quality	74	26%	50	23%
Speed	42	15%	40	18%
Flexibility	108	37%	42	19%
Dependability	34	12%	46	21%
Security	28	10%	42	19%
	286		220	

Again, the study revealed that among the 322 undergraduates surveyed, 30% ranked dependability and 28% ranked speed as the first and second most important OPOs, respectively, followed by quality, security, and flexibility in Table 3. Undergraduates are concerned about dependability, possibly due to their younger age and need for guidance. Postgraduates prioritise flexibility (27%) and quality (23%) higher, possibly because they combine work with school (Rockman et al., 2022; Tumin et al., 2020) and expect libraries to adapt to their unique needs. They expect libraries to provide a variety of services, both online and face-to-face, to ensure easy access to library materials. At an advanced level of education, they appreciate quality and have high expectations from service providers. Overall, the study provides valuable insights into the needs and preferences of undergraduates and postgraduates in library services.

Table 3: Rating of OPOs by the entire student populace and the level of students

OPO	Undergraduate		Postgraduate	
	F	%	F	%
Quality	70	22	42	23
Speed	90	28	32	17
Flexibility	30	9	50	27
Dependability	98	30	28	15
Security	34	11	32	17
	322	100	184	100

Furthermore, the study analysed the relative importance of OPOs from the perspectives of private and public universities in Table 4. Results showed that public university students prioritise speed (30%) and dependability (25%) over the other OPOs. This may be due to delays in serving a high student population, a characteristic of public universities. Dependability is also important for public university students due to the larger collection size as compared to that of private libraries. In private universities, students prioritised quality over speed, possibly because, since their collections are smaller, they expect them to be fit for purpose and quick to access.

Table 4: Ranking OPOs based on university type

OPO	Public		Private	
	f	%	F	%
Quality	54	15	42	31.4
Speed	110	30	30	22.4
Flexibility	50	13	22	16.4
Dependability	94	25	22	16.4
Security	64	17	18	13.4
	372	100	134	100

Finally, the study reveals respondents' rankings of some specific operational activities; students prioritised speed and flexibility in library registration, borrowing, and returning books, and privacy. Students are more concerned with the speed of registration and prefer a flexible, online process. University library management should therefore consider introducing online registration, which is faster and can be done remotely. Privacy is the second most prioritised OPO in borrowing and returning books, as students are interested in the nondisclosure of books they borrow. This could be due to unhealthy competition among young people (Fülöp et al., 2025).

Library orientation is rated first as quality (57%), followed by flexibility (14%). This might be indicative of the significance of orientation in determining the successful use of the library, as it promotes library resources and guides students to navigate their way in and around the library. Flexibility is another concern for students. They may want orientation scheduled at different times to accommodate their needs. To address this, libraries can create recorded videos on library resources and services to be made available on their website. Overall, the study highlights the importance of OPOs in the academic environment.

Table 5: Rankings of OPOs on specific operations practices

Specific operations practices	quality		speed		flexibility		dependability		security or privacy	
	f	%	f	%	f	%	f	%	f	%
Library registration	42	8%	206	41%	114	23%	98	19%	46	9%
Literature search	88	17%	166	33%	62	12%	128	25%	62	12%
finding materials in the library	118	23%	158	31%	66	13%	106	21%	58	11%
Borrowing and returning books	52	10%	46	9%	210	42%	64	13%	134	26%
Library orientation	290	57%	46	9%	70	14%	54	11%	46	9%
Information literacy training	338	67%	48	9%	42	8%	46	9%	32	6%
Printing and photocopying	104	21%	206	41%	174	34%	16	3%	6	1%
Use of library computers	24	5%	242	48%	152	30%	78	15%	10	2%
Social media services	106	21%	276	55%	64	13%	26	5%	34	7%
Library online catalogue	32	6%	270	53%	86	17%	68	13%	50	10%
Library online services (email)	254	50%	84	17%	86	17%	28	6%	54	11%

A general overview of the ranking, as shown in Figure 1, highlighted speed as the highest ranked OPO (31.4%), followed by quality (26%), then flexibility (20%). Respondents have demonstrated that they expect library services such as registration, literature search, finding print materials in the library, printing and photocopying, use of library computers, and online service, among others, to be fast. For example, the results in Table 5 show that 33% of respondents expect online literature search requests to be delivered fast, and students do not want to struggle to find books. But paradoxically, these same students change the location of books intentionally to hide the materials from other users (Aryee & Tetteh, 2024). This affirms the findings

of previous studies that there is a correlation between speed and customer satisfaction (Armstrong et al, 2000; Hoffman & Novak, 1996; Jahan, Ali & Al Asheq, 2020). Libraries are therefore urged to maximise time in service delivery. To accomplish this, libraries must adopt information and communication technologies (ICT) to automate manual services to ensure speedy and easy access to information (Enakrire & Ocholla, 2017). Similarly, libraries must invest in high internet speed and provide regular electricity supply to ensure speedy and easy access to information (Ashikuzzaman, 2014). Also, shelving and shelf reading should be done regularly to ensure that print books are placed at their expected locations for easy retrieval.

Moreover, quality is the second-ranked OPO (26%) after speed in the delivery of library services, as indicated in Figure 1. In Table 5, quality is the users' priority for library orientation, information literacy training, and searching online catalogues. This affirms the assertion by Barfi et al. (2023), Gyau et al. (2021), and Hernon, Haltman and Dugan (2015) that there is a correlation between quality service and user satisfaction. It is therefore important that librarians ensure that the library collection (both print and electronic) is relevant to the needs of users, and that library services and staff engagement with users meet the expectations of library users. As recommended by Gyau et al. (2021), librarians must frequently seek the views of their users to be abreast of their changing needs and improve their ICT infrastructure to enhance their services.

Flexibility is the third most prioritised OPO (20%) in library operations, as shown in Figure 1. It is ranked first (42%) for borrowing and returning books and second for library registration (23%), orientation (14%), printing and photocopying (34%), use of library computers (30%), and online services (17%) as indicated in Table 5. This finding supports the assertion that there has been an increasing demand for flexibility (Walton 2007). To ensure flexibility, libraries must consider the constraints of users when scheduling training and formulating library rules. Libraries must also leverage innovative technologies to offer library services. For example, as mentioned above, recorded video can be used for orientation, while training can be done online.

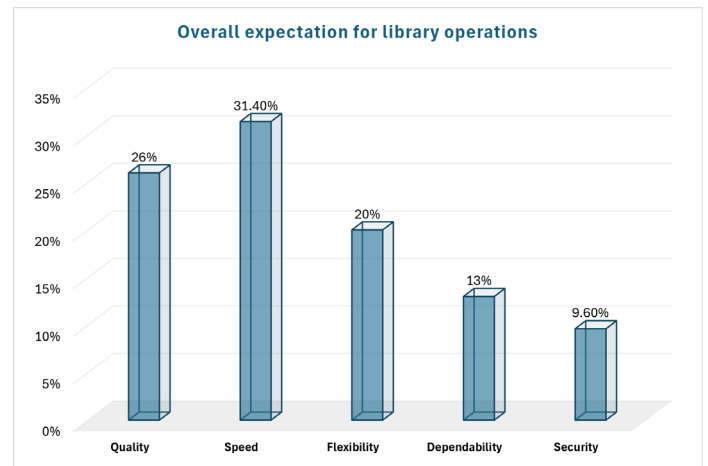


Figure 1: Overall ranking of OPO on library operations

Implications

The theoretical implication of the study is that Slack's operational performance objectives (OPO), such as quality, flexibility, speed, and dependability, can be applied in library research to assess user satisfaction with library services. In addition, every service organisation, specifically, academic libraries, strives to render quality services that meet customer needs due to the influx of online information sources such as social media platforms, news sites, blogs, and government and corporate websites, some of which are not validated, poses huge competition to libraries, hence it has become necessary to ensure that library services, resources, and the physical environment meet the expectations of users. This study recommends the adoption of innovative technologies to automate manual operations of libraries and enhance library operations.

Conclusion

This study sought to explore the relative importance of operations performance objectives in university library operations by analysing data from 506 university students. The results show a positive correlation between five performance objectives and user satisfaction. Library users prioritised speed, quality, and flexibility as the three most important performance factors. Male university students prioritised flexibility, while females prioritised quality. Undergraduates prioritised dependability, while postgraduates prioritised flexibility. Public university students were concerned about speed, while private students valued quality. The findings suggest libraries should adopt technologies to maximise time, enhance service delivery, provide remote access, and accommodate user constraints in rules and training schedules.

Limitations and directions for future studies

This study is not without limitations. The usage of convenience and purposive sampling techniques did not give all members of the targeted population an equal chance to participate in the study. Therefore, the outcome of this study cannot be generalised, at least on statistical grounds. Future studies may want to explore the same study using a method (such as random sampling) that allows generalisation of the results. Additionally, this study was conducted among students (undergraduate and postgraduate); future studies can replicate this study among university staff (faculty and administrative). Finally, from the conceptual perspective, future studies may consider exploring the relationship between “cost” as an OPO and user expectations.

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Conflict of Interest

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