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# BUDGETING FOR VIRTUAL REFERENCE SERVICES IN AN ELECTRONIC AGE: A CONCEPTUAL REVIEW

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## Abstract

As Libraries increasingly adopt digital platforms to meet the growing demand for online information services, effective budgeting has become essential for the successful planning, implementation, and sustainability of virtual reference services. Libraries are now required to allocate financial, technological, and human resources efficiently to provide accessible and high-quality online support to users regardless of time and location. The study examines the budgeting considerations for virtual reference services in Libraries. It reviews existing literature on Virtual reference services, need for virtual reference services in libraries and budgeting for library virtual reference services. It also reviewed literature on the importance of budgeting for virtual reference services and challenges hindering the success of virtual reference services. The study concludes that effective budgeting plays a significant role in improving the quality, accessibility, and sustainability of virtual reference services. The reference services staff must be proficient and adaptable in ICT for libraries to develop and utilize the virtual reference services. In this sense, it is crucial to provide proper training on digital technology skills both internally and through conferences, seminars, workshops, mentorship, train-the-trainer, and further education.

**Keywords:** *virtual reference services, budgeting, libraries, electronic age*

## Introduction

Funding is a key instrument in acquiring library resources and enhancing services. Therefore, budgeting in an academic library is a fundamental part of academic library managers' functions and fiscal control. It is a formalized statement of all accounts having funds available for a specified period of time, usually a yearly allocated to reference and referral services, etc. the budget is in fact, the formal statement of the financial resources set aside for carrying out specific activities and expressed in financial terms for the operations and resources of an enterprise in a given period of time, usually a specific period in the future (Okonkwo, 2025). While it constitutes a system for the implementation of decisions, it is the financial statement of anticipated income and expenses which an organization prepares for a fiscal year. It is the standard technique for the planning and control of an organization's activities at every level. A budget denotes an organization's expected expenditure, revenue or profit for a given period. It is imperative to understand the role of finance in managing different libraries, be it a public, academic, special, school, private, or national library. In the case of academic libraries, projected figures are used as the criteria for the assessment of performance in the future. It forms a significant part of the financial management of academic libraries. The public's confidence in the prudent use of the resources to the proposed areas of expenditure in the proposed budget has not increased. There is an increasing demand for funding for online resources and services and for Virtual Reference Services (VRS). Resources for staff and for the purchase of materials and services and equipment must be efficiently allocated to improve financial management in libraries; financial management along the lines of Virtual Reference Services (VRS) is increasingly being de-centralized. The increasing availability of online information has affected the methods used to disseminate information. The obvious need for Virtual Reference Services (VRS), which is used to integrate virtual libraries and serve as an interface between the virtual library and users, is attributed to their advantage over traditional reference services in that they are not location or time bound. Thorpe (2017) noted that with the progress of technology in libraries, libraries all over the world are constantly refurbishing themselves in response to the changing needs of the community as well as the advantages and disadvantages of new technologies. In this era of constant digital disruption, libraries must always endeavour to understand the evolving expectations and goals of their patrons. The conventional process of locating desired information has become complicated by the developments in ICTs and growth in the available online information resources; accordingly, the reference environment is being transformed as major elements of its services are moving from traditional to digital, this have helped see the establishment of web-based digital reference services (Okoli, et.al, 2021). Therefore, academic reference librarians must put in a lot of effort to provide virtual reference services so that customers can choose the best option from the vast array of explosive information resources available on the internet. Even though virtual reference services are capital-intensive, most academic libraries suffer from limited funding, which results in inefficient services where they are offered. Among various problems that bedevil virtual reference services. Madu et al. (2018) stated that issues representing IT applications by African libraries include poor commitment and deficient government financing, which is fundamental to effective library administration, especially in the electronic age.

The introduction of computers and virtual networks marked the beginning of the electronic or digital age. Libraries are now able to provide a variety of services by digitizing printed documents due to the growing usage of the World Wide Web and the quick advancements in internet technology. The organization and types of library services have changed in the age of electronics. Since virtual reference services are already commonplace for libraries with an online presence, it is understandable why university librarians give them lip service. As a result, even to maintain acceptable levels of virtual reference service implementation among libraries, academic libraries need a substantial expenditure. Academic libraries should review their ICT policies to assess the implementation of VRS. Therefore, academic libraries in Nigeria require adequate budgeting for finance to maintain ICT facilities and to sustain their services.

**Meaning, Nature and Scope of Budgeting in Academic Libraries**

Originally, the budget originated from the French word bougette, which was defined as a small leather pouch. Historically, the usage of the term started in 1733 when Sir Robert Walpole brought his budget (financial proposals) before the House of Commons. The leather bags used to transport these financial proposals, and other supporting documents were referred to as "budget," and we have come to use that term to refer to an official document that estimates how much money is needed and spent over a defined period (Kim, 2024). A budget is an organizational plan stated in monetary terms. Abdulsalami (2015) explained that a budget is a summary or plan of the intended revenues and expenditures of an institution, individual, or government. Budget is the lifeblood of the government; the financial reflection of what an organization or the government does or intends to do. Budget helps to aid the planning of actual operations by forcing managers to consider how the conditions might change and what steps should be taken now, and by encouraging managers to consider problems before they arise (Tijani & Ihaza, 2021). A budget is an estimate of expenses an organization will incur, usually broken down by category, for the purpose of providing a road map that the organization should follow. For instance, in libraries, the budget ideally consists of analysing expenses and matching them to existing or future income sources. Once the major programs that define the mission of the library are identified, the next step is to develop the companion piece, a program budget that provides cost and expenditure information on each program. Libraries' budgets can be divided into two categories: program budget, which appears individually, and line-item budget, which is a line-item budget that arranges expenditures by kind of inputs, typically specified by accounting object codes. Because it is a management tool, the terms "program," "cost center," and "services" are used interchangeably. It displays all the expenses related to a specific service, whether they are billed to the library or included in the line-item budget. The expenditure versus revenue budget provides the starting point for determining the cost of each program (Tijani & Ihaza, 2021).

Since a budget is the mechanism by which funds are granted, in putting forward a funding proposal, it is imperative. As posited by Lerasus (2021), the fiscal management of academic libraries has always been difficult due to the gap between the cost of services that libraries would like to provide and the resources they have. Budget administration or fiscal management is a year-round occupation, and the procedure of preparing, presenting, and negotiating the budget is rapidly becoming a continuum that is likely to begin over a year in advance of the other fiscal year to which the budget applies. As a result, the budget includes cash in hand at the start of the term and provides an overall picture of the various allocations (for expenditure) and expected income.

**Virtual Reference Services (VRS)**

The primary intention of the reference service is to connect library users with information resources that are relevant and timely. Librarianship has evolved, and with it so has reference service. Reference service has traditionally been an in-person activity, but the practices and frameworks that have been built for technology-based information support and digitally mediated interactions have changed that (Cassell & Hiremath, 2022). Reference services are an integral part of the system because they help satisfy the information needs of the users of the library and information centre. Modern librarianship has retained many elements found in the older system of library and information science. However, it has integrated digital information technologies, digital media, and new online structures for information and data searches. Because information users have the expectation of quick and easy access to information, reference services have been designed to provide services within the virtual spaces and online communities of the Internet. An example of an innovative design in this area is Virtual Reference Services (VRS). It has enabled reference services to connect users and receive aid from any location. In addition to answering general reference questions, services offered virtually aid users in locating digital resources and online library collections, and in developing electronic information literacy**.**

VRS and DRS are simply characterized as providing consumers with real-time human assistance through web-based interactive software to respond to a reasonably specific or straightforward question, distribute digital materials, or recommend pertinent web resources to the user, and offer online bibliographic training. Through computers and other electronic terminals known as digital or virtual services, technology has recently made it possible to access library contents and services from outside the actual library building. One advantage of virtual reference services (VRS) over traditional reference services is that they are not constrained by time or location. Virtual reference service, digital reference service, electronic reference service, online reference service, live reference, and real-time reference describe the same service and can be used interchangeably (Chowdhury, Burton, & McMenemy, 2023). In an electronic or digital setting with sufficient internet access, virtual reference services have made tremendous strides; these are particularly common in academic libraries in industrialized nations. Reference services are expanded by VRS/DRS from a real reference desk to a virtual one, where users can write from work, home, or a variety of other locations. The usage of both synchronous (like instant messaging, videoconferencing, etc.) and asynchronous (like texting, email, etc.) communication is included in the virtual reference. Synchronous virtual reference refers to any real-time computer-mediated communication between patron and information professional, while Asynchronous virtual reference is all computer-mediated communication that is sent and received at different times (Sinhababu, 2016). Virtual reference services are the use of computers and information communication technologies to offer patrons reference services at any time and from any location.

**Tools used for Virtual Reference Services**

Reference Services (VRS) without physical contact are attainable through these mediation and ICT tools:

**Email Technology:** Electronic mail refers to the technology where messages are transferred via one or more electronic devices. Anna & Sirirahayu (2020) identified e-mail technology as cost-effective, speedy, and user-friendly.

**Voice over Internet Protocol (VoIP) Technology:** According to Kumar & Roy (2021), VoIP technology is defined as the transmission of voice over packet-switched networks



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using the Internet Protocol. VoIP technology enables direct and instant contact with users over the Internet. A myriad of VoIP applications is currently being embraced and adopted in many of the academic libraries worldwide to offer virtual reference services. Google Hangouts is an excellent example of such an application; Google Hangouts offers SMS, VoIP, Video Chat, and Messaging. VoIP and Instant Chat are other services offered by WhatsApp, a free application that enables sending and receiving messages, videos, and calls in real time via the internet.

**Instant Messaging (IM) Technology:** Instant messenger (IM) services send messages via the internet in real-time (Bera, 2019). Real-time communication is accomplished by entering a message in a window or chat room created by the IM software.

**Social Media Technology:** Social media dominates the modern-day information world (Ashiq et al., 2020). One benefit of using social media in academic library services is the ability to reach the user community despite being physically distant. The social media user community facilitates direct user engagement, especially in promoting library activities and events, including library services, library guides, and exhibitions (Maniki & Jain, 2019).

**Need for Virtual Reference Services (VRS) in Libraries**

The impact of communication technology on Virtual Reference Services (VRS) is widely recognized. Furthermore, VRS is currently one of the most prevalent forms of communication between patrons and academic libraries. Virtual reference services (VRS) best describe the delivery of traditional reference library services to library patrons in a computer-based environment, using an array of specialized services. Okoli et.al. (2021) contend that virtual reference services are rapidly becoming a crucial library service, especially in the academic library. For two reasons, these services were primarily needed. There is a burgeoning crop of library patrons who use the internet to get information, resulting in a reduction of patrons visiting the library to get reference services, and there is an increasing realization on the part of librarians that they need to approach their patrons and motivate them to return to the library.

Due to these factors, remote communication between librarians and library patrons was introduced, and many libraries and other organizations worldwide created virtual reference services that primarily used electronic mail (e-mail). More significantly, users who find online tools and resources new, challenging to master, or inadequate to meet their information needs might receive assistance from VRS. Additionally, it can provide collection builders with insightful user feedback, enabling them to optimize their investment in content production and better allocate their resources. According to Okoli et al. (2021), several key features comprise a virtual reference transaction. First, the reference transaction includes the user, the user interface (video, chat, email, web form, etc.), reference materials (printed and electronic resources, CDs, web resources, digitized local documents, etc.), and the information specialist. Virtual Reference Services (VRS) strives to enhance the user's ability to locate relevant information by means of direct and indirect services of reference librarians. Furthermore, assisting users with online access to digital library resources is just one aspect of VRS. Therefore, virtual reference services include any reference services offered on the web and may involve the use of both print and electronic resources.

**Budgeting for Library Virtual Reference Services (VRS)**

Budgeting is a fundamental aspect of library planning and management. It involves estimating and allocating financial resources to ensure that library services are delivered effectively and efficiently (Usoro & Umoh, 2024). In the context of Virtual Reference Services (VRS), budgeting becomes particularly important because these services depend heavily on technology, skilled personnel, and continuous maintenance. The goal is to ensure that users can access information remotely through digital platforms while maintaining high standards of service quality. The following are key considerations when budgeting for Virtual Reference Services:

**Staffing and Training:** Human resources constitute one of the most important components of VRS budgeting. Libraries must allocate funds for recruiting, training, and retaining competent staff capable of providing reference services through virtual platforms. Librarians need specialized skills in digital communication, online information retrieval, customer service, and the use of virtual reference software. Training budgets should cover workshops, seminars, professional development programmes, and certification courses that enhance staff competencies. As noted by Yimam (2022), training helps employees develop the knowledge, skills, and behaviours necessary to achieve organizational goals. Therefore, adequate investment in staff development ensures that librarians remain proficient in emerging technologies and evolving user needs.

**Technology and Infrastructure:** Virtual reference services are technology-driven and require substantial investment in information and communication technologies. Libraries must budget for hardware such as computers, tablets, servers, webcams, and headsets, as well as software applications that support virtual reference interactions, including chat platforms, video conferencing tools, and knowledge management systems. In addition, recurring costs such as internet connectivity, bandwidth subscriptions, software licensing, maintenance, system upgrades, and technical support must be considered. As digital information resources continue to expand, libraries must secure sustainable funding sources to maintain reliable and up-to-date technological infrastructure capable of supporting uninterrupted virtual services (Onunka et al., 2023)

**Marketing and Promotion:** Even the most sophisticated virtual reference service cannot achieve its objectives if users are unaware of its existence. Consequently, libraries should allocate resources for marketing and promotional activities aimed at increasing awareness and encouraging patron utilization. Budgetary provisions may include expenses related to social media campaigns, website advertisements, email marketing, printed promotional materials, community outreach programmes, and user engagement initiatives. Effective promotion helps maximize the use of VRS, while inadequate marketing may result in low patronage and underutilization of available services (Obi & Nsirim, 2022)

**Collaboration and Partnerships:** Libraries increasingly collaborate with other libraries, educational institutions, government agencies, and private organizations to improve service delivery and expand access to information resources (Amanze-Unagha & Unagha, 2023). Such partnerships may involve resource sharing, joint service provision, cooperative training programmes, and technological support. Budget allocations should therefore cover costs associated with partnership development, collaborative projects, inter-library resource sharing, and communication activities. Strategic collaborations can reduce operational costs while enhancing the quality and reach of virtual reference services.

**Security and Data Protection:** Since VRS involves the collection, storage, and transmission of user information through digital platforms, security and privacy are critical considerations. Libraries must budget for measures that protect information systems and safeguard user data against cyber threats. Such expenditures may include firewalls, encryption technologies, antivirus software, secure servers, authentication systems, data backup solutions, and cybersecurity training for staff (Matonkar, 2024). Investing in information security helps maintain user trust and ensures compliance with data protection standards and policies.

**Budgeting planning procedures**

Budgeting is a multifaceted process. A suitable budget should be ensured by following the correct approach. Budget preparation necessitates a methodical procedure with several successive phases. The budget will not be correct and accurate if these procedures are not performed methodically, one after the other. The several procedures that must be performed to prepare a library's budget are listed below.

- Determining the main objectives for the budgetary period.
- Determining any significant external developments that might have an impact on the library.
- Determining the restricting or budgetary aspect.
- The functional budget's first preparation.
- The budget committee reviews and oversees the subsidiary budgets.
- Combining separate functional budgets into a master budget.
- After that, the budget is submitted for approval; if it is accepted, it is finalized; if not, it is altered.

**Importance of Budgeting for Virtual Reference Services**

In the contemporary Information and Communication Technology (ICT) environment, budgeting plays a critical role in the effective management and sustainability of virtual reference services in libraries. Budgeting serves as a financial planning and control mechanism that enables libraries to allocate resources efficiently for the provision of quality electronic information services. Since finance is regarded as the lifeblood of every organization, whether public or private, inadequate funding can negatively affect service delivery, technological development, and user satisfaction. Although libraries are primarily service-oriented institutions with little or no profit motive, budgeting remains indispensable for achieving their objectives in the electronic age. The importance of budgeting for virtual reference services includes the following:

**Facilitates Technology Maintenance and Upgrades:** Technology is the backbone of virtual reference services, making budgeting essential for maintaining and upgrading technological infrastructure. Libraries depend on computers, servers, internet connectivity, software applications digital databases, and communication platforms to provide effective online reference services. Through proper budgeting, adequate funds can be allocated for the acquisition, maintenance and replacement of these technologies ensuring that systems remain functional and reliable. Furthermore, technological innovations occur rapidly, rendering many tools obsolete within a short period. Budgeting enables libraries to plan for periodic upgrade and modernization of equipment and softwar (Saka & Ladan, 2025). This proactive approach service delivery, and meet the changing information needs of user in an increasingly digital environment.

**Makes Classifying Expenditure Items Easier:** Budgeting provides a structured frame work for organizing and classifying library expenditures (Saka & Ladan, 2025). Through a well – prepared budget, funds can be allocated to specific operational area such as staff salaries, electronic resources, software subscription, internet services, maintenance and user support actives. This classification allows the library management to monitor spending patterns and ensure that resources are utilized effectively. In addition, proper categorization of expenditure promotes financial transparency and accountability. It enables library administrators to identify priority areas, track financial commitment and evaluate whether allocated funds are producing the desired outcomes. Such organization contributes to sound financial management and enhances the overall efficiency of virtual reference services.

**Promotes Academic Libraries' Financial Accountability:** Budgeting plays a significant role in promoting financial accountability within academic libraries. By establishing clear financial plans and expenditure limits, budgeting ensures that available resources are utilized in accordance with approved objectives (Prabowo & Ekanigsih, 2025). It provides a basis for monitoring income and expenditure, thereby reducing the like hood of financial mismanagement. Moreover, academic libraries often receive funding from institutional allocations, government agencies, grants, and donor organisations Budgeting enables library administrators to account for the utilization of these funds and demonstrate responsible stewardship. This accountability helps build confidence among stakeholders and may improve opportunities for future financial support.

**Guarantees Service Continuity:** Sustainability virtual reference services depend on continuous financial support. Budgeting ensures that adequate resources are available to cover recurring expenses such as software licenses, internet subscriptions, technical support, and staff remuneration. By anticipating these costs in advance, libraries can maintain uninterrupted service delivery. Additionally, effective budgeting minimizes the risk of service disruption caused by unexpected financial shortages. Consistent funding enables libraries to respond promptly to operational challenges and maintain reliable access to information resources. This continuity enhances user satisfaction and reinforces the library's role as a dependable source of information.

**Encourages the Library to Use Monetary and Fiscal Policies:** Budgeting helps the implementation of monetary and fiscal policies that guides financial decision making in libraries. It helps management establish expenditure controls, spending priorities, and resource allocation strategies that align with institutional goals. Such policies promote prudent financial management and ensure that limited resources are used efficiently. Furthermore, budgeting assist libraries in maintaining financial discipline by preventing unnecessary expenditures and encouraging cost effective practice (NA, & Nurhadi, 2025). Through proper fiscal planning, libraries can achieve greater financial stability while ensuring that virtual reference services receive adequate support for long term sustainability.

**Improves the Online Presence of Libraries:** Libraries need to have a strong online presence in the electronic age. The creation and upkeep of digital repositories, social media sites, online communication tools, and library websites are all supported by budgeting. Libraries can increase their exposure and accessibility to distant users with enough funding, which boosts the use of virtual reference services. However, adequate funding enables the libraries to enhance the quality and accessibility to their online services (Onunka et al., 2023). Regular updates improved website functionality, and the adoption of user- friendly technologies increase visibility and attract more users, as a result, libraries can expand their reach and improve access to information resources beyond physical boundaries.

**Challenges hindering the success of Virtual Reference Services**

Virtual reference services as many advantages but are still faced with difficulties.

**Insufficient Funding**: One of the major challenges affecting the success of virtual reference services in libraries is insufficient funding. The establishment and maintenance of virtual reference platforms require substantial financial resources for the acquisition of computers, software applications, internet facilities and other technological infrastructure. Many Libraries, particularly developing countries, operate under limited budgets that make it difficult to invest adequately in these essential resources (Orubebe et al., 2025). As a result, the quality and efficiency of virtual reference services may be compromised, limiting the ability of libraries to meet the information needs of users effectively. In addition, inadequate funding affects staffing and professional development opportunities. Libraries may struggle to recruit and retain skilled personnel capable of managing virtual reference Services.

**Quick Obsolescence of Technology**: The rapid pace of technological advancement presents a significant challenge to virtual reference services. Technology used in virtual service delivery, such as software applications, communication tools and hardware devices, become outdated within a relatively short period. Libraries are therefore compelled to upgrade or replace these technologies regularly to remain relevant and competitive in the digital information environment. Frequent technological upgrade place additional pressure on already limited library budgets. The costs of associated with purchasing new equipment, updating software license, and maintaining modern systems can be substantial. Failure to keep pace with technological developments may result in reduced service quality, system inefficiencies and user dissatisfaction, there hindering the overall effectiveness of virtual reference services (Ilawagbon & Mustapha, 2024)

**Expensive Electronic Resources**: The increase cost of electronic resources is another major challenge confronting virtual reference services. Academic libraries rely heavily on electronic databases, e-journals, and digital reference materials to support online information services (Iroroeavwo et al., 2025). However, subscription fees of these resources continue to rise, making it difficult for library to maintain comprehensive and up-to-date collections. As Libraries allocate significant portions of their budgets to acquiring electronic resources, fewer funds remain available for developing and maintaining virtual reference infrastructure. This financial burden often forces libraries to make difficult decisions regarding resources allocation. Consequently, some libraries may be unable to provide access to a wide range of quality information resources, thereby limiting the effectiveness of the virtual reference services.

**Inadequate Staff Training:** The successful delivery of virtual reference services depends largely on the competence of library personnel. However, many libraries lack the advanced information and communication technology (ICT) skills required to operate modern virtual reference systems effectively. The transition from traditional face-to-face reference services to digital platforms required specialized knowledge in areas such as online communication, database searching and digital resources management (Rodríguez & Pulido-Montes, 2022). Furthermore, continuous technological changes necessitate on going staff development and training. Organising regular workshops, seminars and professional development programs requires significant financial and institution support. Where such opportunities are lacking, librarians may struggle to adapt to



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emerging technologies and changing user expectations, ultimately affecting the quality of virtual reference services.

**Inadequate Internet Facilities:** Reliable internet connectivity is fundamental to the effective functioning of virtual reference services (Okeke & Nsirim, 2024). Unfortunately, many libraries, particularly in developing countries, experience challenges related to poor internet infrastructure, slow connection speed s and frequent network disruption. These limitations hinder real-time communication between librarians and users, resulting in delays in services delivery. Poor internet facilities also increase operational costs as libraries may need to invest in alternative connectivity solutions or backup systems.

**Risks to Cybersecurity:** Cybersecurity threats pose a growing challenge to libraries offering reference services. The use of online platforms exposes libraries to risks such as hacking, phishing attacks, malware infections and unauthorizes access to sensitive information. These threats can compromise the confidentiality, integrity and availability of library system and user data. To address these risks, libraries must invest in robust cybersecurity measures, including firewalls, antivirus software, data encryption and regular security audits (Dumbiri et al., 2025). However, implementing and maintaining these protective measures can be costly and technically demanding. Failure to adequately manage cybersecurity risks may result in data breaches, service disruptions and loss of user trust in virtual reference services. Similarly, in Nigeria, it has been recognized that several information professionals don't possess the requisite digital skills and competencies for modern academic librarians in the $21^{st}$ century (Madu et al, 2018). Also, at the organizational viewpoint level (i.e., libraries), the challenges are hinged upon workload implications, inadequate communication technology infrastructure, guidelines and training, resources, and continuous budget decline or funding (Williams, 2020). Additionally, Nemati-Anaraki et al. (2017) contend that a lack of funding and the high cost of information resources are the main obstacles to establishing and utilizing communication technology solutions to deliver VRS in academic libraries. Furthermore, many developing nations, especially those in sub-Saharan Africa, have struggled to maintain a steady and adequate electricity supply over time.

## Conclusion

Virtual reference services have become an essential component of modern library service delivery, enabling libraries to provide timely and accessible information support beyond physical library spaces. This review has shown that effective budgeting is fundamental to the successful implementation, operation, and sustainability of virtual reference services. Adequate financial planning ensures the availability of technological infrastructure, software, internet connectivity, staff, and other resources required for efficient service delivery. The study also highlights that proper budgeting enhances the quality, accessibility, and effectiveness of virtual reference services, allowing libraries to meet the changing information needs of users in a digital environment. However, challenges such as inadequate funding, limited technological infrastructure, and insufficient staff competencies continue to hinder the successful provision of these services. To address these challenges, libraries should adopt strategic budgeting practices that prioritize both technological investments and human resource development. Continuous training and capacity building through workshops, seminars, conferences, mentorship programmes, and further education are necessary to equip reference librarians with the digital skills required to manage virtual reference services effectively. Therefore, sustained funding, careful resource allocation, and ongoing staff development are critical to ensuring that virtual reference services remain responsive, reliable, and sustainable in the digital age.

**Recommendations**

The following recommendations were made:

1. The reference services staff must be extremely proficient and adaptable in ICT for academic libraries to develop and utilize the virtual reference services. In this sense, it is crucial to provide proper training on digital technology skills both internally and through conferences, seminars, workshops, mentorship, train-the-trainer, and further education.
2. Library authorities should make sure that the facilities and opportunities for skill development required for efficient information service delivery in their libraries are adequately funded.
3. Libraries should align virtual reference services with institutional goals and objectives, thereby establishing metrics for budgeting and evaluation of virtual reference services' sustainability.
4. Libraries should identify key cost components (e.g., staffing, technology, training), before allocating resources for virtual reference services.
5. Libraries should analyse case studies of successful virtual reference services to identify key budgeting strategies.

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