



# The Effectiveness of Collection Development Practices and Academic User Library Needs at INES Ruhengeri in Rwanda

Marie Confiance Uwinema<sup>1</sup>, Patrick Odong<sup>2</sup> & George William Kiyingi<sup>2</sup>

<sup>1</sup>University of Global Health Equity, Rwanda

<sup>2</sup>Kabale University, Uganda

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## Abstract

Academic libraries are expected to provide current, relevant, adequate and accessible resources, but collection size alone does not demonstrate whether academic user needs are being met. This study assessed collection development practices at a private university library in Rwanda, examined the alignment of available resources with academic user needs, identified constraints and proposed improvement strategies. A descriptive cross-sectional design within a convergent mixed-methods approach was used. The planned sample comprised 92 academic users and five library personnel. Ninety participants provided usable data: 50 students, 35 academic staff and five library personnel, representing a 92.8% response rate. Common closed-ended items were analysed using frequencies, percentages, means and standard deviations. Semi-structured interviews with the Library Director and four librarians, observation and document review were analysed thematically and integrated with the quantitative results. Acquisition, user education and resource organisation were more visible than systematic user feedback and programme alignment. Print books were the strongest resource category ( $M = 3.53$ ,  $SD = 1.29$ ), while digital and specialised resources were less accessible. Funding, policy, ICT, participation and staff-capacity constraints were interconnected. The study concludes that collection development was operational but did not yet function consistently as an evidence-based, user-responsive lifecycle. It recommends an annual curriculum- and usage-informed collection review supported by protected funding, defined responsibilities and measurable access outcomes.

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## Introduction

Academic libraries support teaching, learning and research through the selection, acquisition, organisation, preservation and provision of access to information resources. However, collection size alone does not demonstrate effectiveness; a collection becomes valuable when its content, formats, currency and accessibility correspond to users' academic needs (Evans & Saponaro, 2012; Gregory, 2019; Johnson, 2018). While traditional collection development concentrated on acquiring and



preserving printed materials, contemporary collection management involves a continuous cycle of needs assessment, policy formulation, selection, acquisition, licensing, organisation, evaluation, preservation, deselection and promotion (Corrall, 2012; IFLA, 2001; Mangrum & Pozzebon, 2012). These perspectives collectively connect effective collection development to institutional curricula, research priorities and changing patterns of information use rather than to the accumulation of materials.

The user-centred nature of collection development is supported by Ranganathan's (1931) Five Laws of Library Science, which emphasise resource use, equitable provision, discoverability, saving users' time and continuous institutional growth. Gorman (1998) similarly stresses service to humanity, respect for different knowledge formats and the intelligent use of technology, while Connaway and Faniel (2014) argue that libraries should organise resources around user behaviour. Electronic resources have expanded access through remote availability, simultaneous use and efficient searching (Dadzie, 2005; Tenopir et al., 2015). Nevertheless, inadequate awareness, weak information literacy skills, authentication difficulties, limited ICT infrastructure and unreliable internet connectivity can reduce their use (Ani et al., 2015; Khan & Bhatti, 2012; Tsakonas & Papatheodorou, 2006).

Therefore, getting or subscribing to resources does not necessarily mean satisfying academic users' needs unless the acquired resources are relevant, discoverable and accessible to users.

Academic library collections should be designed to assist with the achievement of institutions' missions, curriculum and educational goals (Association of College and Research Libraries [ACRL], 2018). While conventional methods concentrate on expenditure, collections and their usage, modern evaluations consider how library resources facilitate learning, teaching, research and user satisfaction (Matthews, 2014; Oakleaf, 2010; Poll & Payne, 2006). The statistic on collections is still valid, but it fails to give an entire picture if it is not coupled with information on unsatisfied needs and user satisfaction (Nicholson, 2004; Nitecki, 1996). This problem is especially actual for African academic libraries because of limited funds, insufficient ICT infrastructure and inadequate staff development which prevent these institutions from offering up-to-date scholarly resources (Alemna, 1998; Rosenberg, 2005). Digital scholarship presents a good opportunity for enhancing access, but it may deepen existing imbalances in cases of lacking connectivity, equipment and ICT skills (UNESCO, 2021; World Bank, 2020).

As far as the country of Rwanda is concerned, national priorities about education quality, research, innovations and ICT integration mean that the collection development practices of academic libraries need to respond to policy intentions (Ministry of Education, 2018; Republic of Rwanda, 2020).

Suitability of the case. INES Ruhengeri Library was chosen since it is the central library of a multidisciplinary private university that offers health sciences, engineering, agriculture, business administration, education, law, and information sciences programme hence creating diverse academic information needs. Institutional records showed that there are 21,706 print books, 10,908 e-books and access to five important databases while having a user population greater than 8,800. The same institutional records noted collection-currency and usage problems, noting that only 2,254 titles have been acquired from 2020 to 2025. The library thus provided a rich information context for evaluating whether the mixed physical and electronic collection, in the resource-limited private university environment, was relevant to diverse academic needs (INES Ruhengeri Library Directorate, 2025).



Knowledge gap. While there are some records about the size and age of the collection, there are no records on the relevance, currency, accessibility and usage of the collection from the viewpoint of the academic users. It was also difficult to determine what the practice of needs assessment, user participation, selection, acquisition, evaluation, deselection and digital resources management means in terms of integration within the Rwandan private university libraries. Thus, it is unknown whether the practices of the collection development at the INES Ruhengeri Library result in a relevant and usable collection. This empirical knowledge gap was addressed by the integration of user assessments with evidence from the library personnel, observations and institutional documents.

**Aim of the study.** The aim of the study was to evaluate how the practices and management of the collection development at the INES Ruhengeri Library supported academic user needs. Specifically, the study investigated the current practices, found the information needs of academic users and assessed their alignment with the existing resources, found the issues impacting the process of collection development and suggested strategies for improving it. The concept of alignment was seen as the result of the whole system affected by funding, policy, user participation, curricular relevance, discoverability, infrastructure, staff skills and information literacy skills.

**Significance of the study.** The study gives the institution-specific evidence to inform the collection policies, budget allocation, curriculum-oriented selection, user participation and digital access planning in the INES Ruhengeri. For library administrators and university managers, it reveals the measurable weaknesses and their responsibilities for improving the relevance and accessibility of the resources. For scholars and policymakers, it provides evidence from the context of a resource-limited multidisciplinary private university in Rwanda which is underrepresented in collection development literature.

### **Theoretical framework**

The study was guided by Ranganathan's Five Laws of Library Science and Gorman's reformulation of library principles for a technologically changing environment. Ranganathan (1931) proposed that books are for use; every reader should have access to an appropriate book; every book should reach its reader; the reader's time should be saved; and the library should be understood as a growing organism. In the present study, 'book' was interpreted broadly to include print books, journals, databases, electronic books, theses, audio-visual resources and institutional documents.

The first four laws provided criteria for evaluating outcomes for academic users. Availability and accessibility operationalised 'books are for use'; relevance and adequacy reflected 'every reader his or her book'; awareness, promotion and discoverability addressed 'every book its reader'; and organisation, retrieval and functional electronic access reflected 'save the time of the reader'. The fifth principle put forward that collection development must always be an ongoing cyclical process, whereby holdings, formats, and policies had to be revised with the changing curricula, research and technological developments, and not just stand still.

Gorman's principles elaborated on this concept further, with emphasis on service to humanity, respect for all means of communication of knowledge, intelligent use of technology, free access to knowledge, and balanced approach towards heritage and innovation (Gorman, 1998). The principles were relevant because the case library was working with both traditional and digital collections of information. The



principles focussed on issues such as format diversification, digital environment, user mediation, and balance between preservation of valuable holdings and discarding useless holdings.

In the end, all frameworks provided for linkage of practices to measurable user effects. Needs assessment, policymaking, selection, participation, acquisition, evaluation, and weeding were viewed as inputs in management process. Relevance, currency, adequacy, accessibility, usability, awareness, utilisation and satisfaction were viewed as outcomes of practice for users. Thus, the questionnaire addressed these outcome dimensions, and the interview guide explored the process through which policymaking, budgeting, selection, digital access and evaluation led to the reported experience.

### **Method**

The study employed a descriptive cross-sectional design within a convergent mixed-methods approach (Creswell & Creswell, 2018; Setia, 2016). Quantitative and qualitative evidence was collected during the same study period and integrated during interpretation. The planned sample comprised 92 academic users and five library personnel. The achieved sample comprised 85 academic users—50 students and 35 academic staff—and five library personnel. Students and academic staff were selected through disproportionate stratified and systematic sampling; academic staff were deliberately oversampled because of their knowledge of curricula, teaching and research requirements. The Library Director and four librarians were included through a purposive census because they possessed specialised knowledge of collection development operations.

Data were collected using structured questionnaires, semi-structured interviews, observation and document review. Common closed-ended items were administered across the 90 participant records and generated the four reported quantitative tables. The five library personnel—the Library Director and four librarians—participated in semi-structured interviews. Observation examined the organisation, condition, visibility and accessibility of print, digital and specialised resources, while document review covered available collection development guidance, acquisition records and user-support documents. Quantitative data were coded and analysed in SPSS using frequencies, percentages, means and standard deviations.

For the qualitative strand, detailed interview records were made during each session and expanded immediately afterwards to preserve the participants' explanations and the context in which they were given. Records from the Library Director were coded LD and those from the four librarians L1-L4. Analysis followed the stated thematic procedure: familiarisation with the records, identification of meaning units, descriptive coding, grouping related codes into categories, development and review of themes, and interpretation against the study objectives. An objective-based evidence matrix linked each theme to its source and to the relevant questionnaire, observation and documentary evidence. Qualitative findings are therefore reported as attributed thematic paraphrases rather than as verbatim quotations. Integration by objective identified convergence, complementarity and contradiction across sources.



## Results

### *Response profile*

The study findings indicated that 90 of the planned 97 participants took part in the study, producing an overall response rate of 92.8%. The achieved sample comprised 50 students (55.6%), 35 academic staff (38.9%) and five library personnel (5.6%). Male respondents constituted 55.6%, while female respondents accounted for 44.4%. Students were drawn from different years of study, whereas academic staff represented Education, Social Sciences, Applied Sciences, Law and Engineering. This distribution provided perspectives from the major categories of academic library users, although it was not intended to support comparisons between academic disciplines.

### *Current collection development practices*

Table 1 shows that policy roles most visible to respondents were updating the collection through acquisition (27.8%), information literacy and user education (23.3%), and organisation and retrieval (20.0%). Incorporating user feedback (5.6%) and relevance to academic programmes (3.3%) were least visible. The pattern indicated stronger operational functions than participatory, programme-responsive and evaluative functions.

*Table 1: Roles of library policies (n = 90)*

| Policy role identified                             | Frequency | Percentage   |
|----------------------------------------------------|-----------|--------------|
| Updating the collection through acquisition policy | 25        | 27.8         |
| Information literacy and user education            | 21        | 23.3         |
| Organisation and retrieval                         | 18        | 20.0         |
| Cataloguing and classification                     | 10        | 11.1         |
| Digital-resource support through ICT frameworks    | 8         | 8.9          |
| Incorporating user feedback                        | 5         | 5.6          |
| Relevance to academic programmes                   | 3         | 3.3          |
| <b>Total</b>                                       | <b>90</b> | <b>100.0</b> |

*Source: field data 2026*

The study findings in table 1 indicate that acquisition-related collection updating was the most visible policy function, reported by 27.8% of respondents. This was followed by information literacy and user education (23.3%), organisation and retrieval (20.0%), cataloguing and classification (11.1%), and digital-resource support (8.9%). In contrast, incorporating user feedback (5.6%) and ensuring the relevance of collections to academic programmes (3.3%) were the least visible functions. This pattern suggests that library policies were implemented more visibly in routine technical and service activities than in participatory and programme-responsive collection development. Although the emphasis on acquisition and organisation supported access to existing resources, the limited visibility of user feedback and academic-programme alignment indicated weaknesses in ensuring that collection decisions consistently responded to users' changing teaching, learning and research needs.

The interview findings reinforced this pattern by showing that selection, acquisition, cataloguing, organisation, retrieval and user education were established practices. However, these activities were



not implemented as interconnected stages of a comprehensive collection development lifecycle. The Library Director and librarians reported that resource selection relied primarily on recommendations from academic departments and lecturers, with limited direct participation by students. They also indicated that budget constraints restricted acquisition, while needs assessment, collection evaluation, weeding and digital-resource management were not fully institutionalised. Consequently, the process of collection development seemed to be driven more by day-to-day operational needs and recommendations than through a continual analysis of the users' needs, resource use, and collection effectiveness.

The information gathered through observation and document analysis confirmed the data obtained through the survey and interview. The print resources appeared to be more systematically organised than electronic and specialised ones, and the process of systematic collection evaluation, decision-making based on usage, and deselection was not well developed. All in all, the results revealed that the library's collection management was operationally developed but not yet fully developed from the perspective of a lifecycle approach. There were functioning systems of selection, acquisition, cataloguing, organisation, retrieval and user education at the library. However, the library needed to improve the systems of needs assessment, user feedback, coordination with academic programmes, systematic evaluation and deselection, and governance of digital resources.

#### **Academic user needs and available library resources**

Users needed relevant, current, adequate, available, and usable resources for their coursework, teaching, and research. Availability of resources was ranked between 3.18 and 3.53, with a general item mean of 3.30. All item means were higher than the neutral value but lower than the agreement value of 4.00. The ratings for the items were done using a five-point scale where 1 meant “strongly disagree” and 5 meant “strongly agree.”

*Table 2: Resource availability, accessibility and selected alignment indicators(n=90)*

| <b>Indicator</b>                                 | <b>Mean</b> | <b>SD</b> | <b>Interpretation</b>                                     |
|--------------------------------------------------|-------------|-----------|-----------------------------------------------------------|
| Textbooks and print books sufficiently available | 3.53        | 1.29      | Strongest resource category; availability remained uneven |
| Reference materials adequately provided          | 3.38        | 1.29      | Moderate availability                                     |
| Theses and dissertation available                | 3.32        | 1.30      | Moderate availability                                     |
| Electronic books accessible when needed          | 3.29        | 1.28      | Weaker than print                                         |
| Online databases easily accessible               | 3.26        | 1.27      | Digital access constraints remained                       |
| Grey literature available                        | 3.22        | 1.24      | Low visibility/access                                     |
| Audio-visual materials sufficiently provided     | 3.20        | 1.26      | Low visibility/access                                     |
| Institutional policies/ documents accessible     | 3.18        | 1.23      | Lowest resource rating                                    |



| Indicator                                         | Mean | SD   | Interpretation                             |
|---------------------------------------------------|------|------|--------------------------------------------|
| Resources relevant to academic needs              | 3.34 | 1.32 | Moderate relevance                         |
| Materials sufficiently current                    | 3.33 | 1.29 | Updating gaps remained                     |
| Resources usable and accessible                   | 3.40 | 1.31 | Moderately positive, with access variation |
| Limited copies of high-demand materials           | 3.40 | 1.39 | Clear unmet need                           |
| Satisfaction with digital resources/online access | 3.28 | 1.34 | Moderate comparatively weak                |

Source: field data 2026

The study findings in table 2 indicate that textbooks and print books were the most available resources ( $M = 3.53$ ,  $SD = 1.29$ ), followed by reference materials ( $M = 3.38$ ,  $SD = 1.29$ ) and theses and dissertations ( $M = 3.32$ ,  $SD = 1.30$ ). Institutional documents received the lowest availability rating ( $M = 3.18$ ,  $SD = 1.23$ ), followed by audio-visual materials ( $M = 3.20$ ,  $SD = 1.26$ ) and grey literature ( $M = 3.22$ ,  $SD = 1.24$ ). Although respondents considered the available resources moderately relevant to their academic needs ( $M = 3.34$ ,  $SD = 1.32$ ), 54.5% agreed that copies of high-demand materials were insufficient. These results demonstrate that relevance alone did not ensure the currency, numerical adequacy or timely accessibility of resources. The relatively higher ratings for textbooks and reference materials suggest that the collection was better aligned with conventional teaching and learning requirements than with specialised, institutional and multimedia information needs.

The qualitative and observational data further substantiated the infrastructure-based nature of the alignment problem. In terms of interviews, a lack of appropriate computer devices, poor internet connectivity, lack of knowledge about electronic-resource portals, problems with authentication and discovery, as well as low search skill level were mentioned by the interviewees as the most important obstacles in using digital resources. The observation data confirmed the reported problems with infrastructure, whereas the interview data additionally revealed the existence of out-of-date versions of books and lack of visibility of grey literature, audio-visual material and institutional publications. Overall, the data collected revealed partial rather than complete alignment between the collection and academic users' needs. The print materials served better in supporting academic work than the digital and specialised resources, which still faced issues such as poor infrastructure, low discoverability and low user competency.

### **Challenges affecting collection development practices**

All five challenges scored above the neutral scale point is indicative of the fact that there was a well-meaning intention to solve the problems. Insufficient funding emerged as the top barrier ( $M = 4.00$ ,  $SD = 1.14$ ) while unclear policies and lack of ICT infrastructure came second.

*Table 3: Challenges affecting collection development practices(n=90)*

| Challenge                                        | Mean | SD   | Rank |
|--------------------------------------------------|------|------|------|
| Inadequate funding for relevant materials        | 4.00 | 1.14 | 1    |
| Absence of a clear collection development policy | 3.96 | 1.13 | 2    |
| Limited ICT infrastructure                       | 3.94 | 1.15 | 3    |
| Lack of user involvement                         | 3.87 | 1.18 | 4    |
| Inadequate staff training                        | 3.86 | 1.15 | 5    |

*Source: field data 2026*

The study findings in table 3 revealed that inadequate funding was the highest-rated challenge, with a mean of 4.00 (SD = 1.14). It was followed by the absence of a clear collection development policy at 3.96 (SD = 1.13), limited ICT infrastructure at 3.94 (SD = 1.15), lack of user involvement at 3.87 (SD = 1.18), and inadequate staff training at 3.86 (SD = 1.15). The narrow difference between the mean scores showed that respondents considered all five challenges important and closely related.

The results revealed through interviews that inadequate funding restricted the acquisition of current materials, additional copies of high-demand textbooks and electronic-resource subscriptions. Library personnel indicated that policy weaknesses affected needs assessment, prioritisation, user consultation, evaluation and deselection. Limited ICT infrastructure reduced access to electronic resources, while inadequate user participation weakened evidence about changing academic needs. Insufficient staff training also affected digital-resource management, collection evaluation and resource promotion. The findings therefore demonstrated that these challenges operated as an interconnected institutional system.

### **Strategies for optimising collection development practices**

Respondents supported all six proposed strategies, with means between 3.94 and 4.01. The difference between the highest and lowest means was only 0.07, supporting a coordinated intervention package rather than a single remedy.



*Table 4: Proposed optimisation strategies (n = 90)*

| Strategy                                            | Mean | SD   | Rank |
|-----------------------------------------------------|------|------|------|
| Increase funding for relevant and current materials | 4.01 | 1.18 | 1    |
| Develop and regularly update a clear policy         | 3.99 | 1.15 | 2    |
| Strengthen ICT infrastructure for digital access    | 3.97 | 1.19 | 3    |
| Provide regular staff training                      | 3.97 | 1.15 | 3    |
| Involve users in selection and needs identification | 3.96 | 1.14 | 5    |
| Promote user education and information literacy     | 3.94 | 1.14 | 6    |

*Source: field data 2026*

The study findings in table 4 indicated that increasing funding for relevant and current resources was the most highly rated strategy, with a mean of 4.01 (SD = 1.18). This was followed by developing and regularly updating the collection development policy at 3.99 (SD = 1.15). Strengthening ICT infrastructure and providing regular staff training each recorded a mean of 3.97, while involving users in selection recorded 3.96 and promoting information literacy recorded 3.94. The mean range within a very narrow range of 3.94-4.01 strongly supported implementing all the strategies as an integrated package.

From thematically coded data gathered from interviews, it was found that institutional responsibility would contribute greatly in making continuous progress. The university administration and the Finance Department were seen as contributing to the provision of financial resources; the Library Directorate, faculties and Quality Assurance Department for reviewing policies and curriculum needs assessment; and the ICT Department for making digital resources accessible. Staff training and consultations with students and academic departments, along with information literacy training for catalogues and databases were suggested. It can be evaluated using current-title inclusion, copy-to-demand ratio, request-to-fulfilment ratio and database usage.

## **Discussion**

### ***Current collection development practices***

The findings showed that collection development practices at the case library were more visible in operational activities than in participatory and evaluative processes. Acquisition-related updating was the most visible policy function (27.8%), followed by information literacy and user education (23.3%) and organisation and retrieval (20.0%). By contrast, incorporating user feedback (5.6%) and ensuring relevance to academic programmes (3.3%) were the least visible functions. Interviews, observation and document review confirmed that selection, acquisition, cataloguing and organisation were established practices, but needs assessment, collection evaluation, weeding and digital-resource management were not fully institutionalised. This pattern indicates that collection development was implemented as a set of technical activities rather than as a continuous and integrated management cycle. It therefore differed



from the comprehensive approach advanced by Corral (2012), IFLA (2001) and Mangrum and Pozzebon (2012), who conceptualise collection management as an interconnected process involving needs assessment, policy development, acquisition, evaluation, preservation, deselection and promotion.

The dependence on recommendations from lecturers and academic departments provided some connection between resource selection and teaching requirements. However, limited student participation reduced the library's capacity to capture diverse and changing information needs. This finding supports Connaway and Faniel's (2014) argument that library services and collections should be organised around users' actual behaviour and experiences. The library also shows an incomplete adherence to the second law of Ranganathan (1931), "Every reader his or her book," since collection development policies do not adequately cater to the needs of all the user groups when students' involvement is limited. Furthermore, the lack of evaluation and weeding is a violation of the fifth law defining the library as a growing organism that should keep up with changes in curricula, technology, and research. From the standpoint of Gorman (1998), the superior management of print rather than digital and special collections indicates the discrepancy between the preservation of existing collections and technology adoption.

#### ***Academic user needs and available library resources***

It has been found out that the degree of correspondence between the available library resources and the academic needs of users was moderate and uneven, being dependent on the type of library material. The greatest availability score ( $M = 3.53$ ,  $SD = 1.29$ ) was received by textbooks and print books, followed by reference materials ( $M = 3.38$ ,  $SD = 1.29$ ), theses and dissertations ( $M = 3.32$ ,  $SD = 1.30$ ), institutional documents ( $M = 3.18$ ,  $SD = 1.23$ ), audio-visual materials ( $M = 3.20$ ,  $SD = 1.26$ ), and grey literature ( $M = 3.22$ ,  $SD = 1.24$ ). Although these materials were deemed moderately relevant ( $M = 3.34$ ,  $SD = 1.32$ ) to academic needs, 54.5% of the participants indicated an insufficiency of high-demand materials copies. In this case, there is a difference between relevance and adequacy; the library material can be relevant, addressing the course or research need, but at the same time, it will not serve the purpose due to its being outdated or having too little copies. This statement corresponds with the ideas of Evans and Saponaro (2012), Gregory (2019), and Johnson (2018).

These results helped understand the reason why the moderate presence of resources did not lead to efficient resource use. The print textbooks were known, and relatively easy to find, whereas electronic-resource use was hindered by insufficient number of computers, poor internet connections, problems with authentication, lack of awareness and search skills. Such results are consistent with Ani et al. (2015), Khan & Bhatti (2012), and Tsakonas & Papatheodorou (2006), who point out infrastructure, awareness, discoverability and information literacy skills as significant factors of electronic-resource use. The results are also consistent with the benefits of access to electronic resources noted by Dadzie (2005) and Tenopir et al. (2015), that is, remote access and effective search capabilities are valuable only if there is sufficient infrastructure and user capabilities. The revealed digital access inequities match the concerns of UNESCO (2021) and the World Bank (2020) about how digitalisation can lead to increasing inequities if there are insufficient connectivity, hardware, and competencies.

From a theoretical perspective, the study shows partial accomplishment of Ranganathan's (1931) Five Laws. Textbooks fulfilled the idea that "books are for use," but a lack of sufficient quantities and



outdated versions meant not everybody could have access to the right resource. Lack of visibility for grey literature, organisational papers and audio-visual material meant that some of those sources were unlikely to get into the hands of their intended audience, thus, contradicting the idea that “every book has its reader.” Also, authentication, connectivity and discoverability obstacles created extra time for finding and using the electronic source, hence, going against the fourth law of “saving the reader’s time.” The principles stated by Gorman (1998) imply that intelligent application of technology does not only mean subscribing to electronic resources, but it also means having reliable infrastructure, proper organisation, good education for users and equal access to resources.

#### ***Challenges affecting collection development practices***

In this regard, the top three challenges include inadequate financing ( $M = 4.00$ ,  $SD = 1.14$ ); lack of a clear collection development policy ( $M = 3.96$ ,  $SD = 1.13$ ); and limited ICT infrastructure ( $M = 3.94$ ,  $SD = 1.15$ ). They are immediately followed by insufficient user participation ( $M = 3.87$ ,  $SD = 1.18$ ) and lack of adequate staff training ( $M = 3.86$ ,  $SD = 1.15$ ). Given the slight differences in mean scores, it would be inappropriate to consider the challenges as separate issues that need to be sorted out based on their rankings. Instead, these challenges are part of an interconnected institutional system. In this regard, the fact that there is inadequate financing limits the ability to acquire new materials, duplicate materials, and databases subscriptions; lack of policy means the inability to prioritise and evaluate resources; lack of ICT infrastructure limits electronic access; lack of user participation limits the evidence on the needs of the users; and lack of training affects digital-resource management and promotion.

This finding is in line with Alemna (1998) and Rosenberg (2005), whose studies have recognised lack of funding, poor ICT infrastructure and inadequately trained staff as continuing challenges faced by academic libraries in Africa. This finding also goes some way in explaining the discrepancy between Rwanda's national priorities in respect of quality of education, innovation and ICT integration on one hand and their actual implementation in the context of an institutional library on the other (Ministry of Education, 2018; Republic of Rwanda, 2020). The lack of a policy framework is critical because without a policy, the institution cannot formulate clear guidelines for selection, funding, evaluation, preservation and deselection based on its priorities and those of the country.

Considering the theory by Ranganathan (1931), such obstacles hinder all five laws at once. Lack of funds and ICT infrastructure hinders the use of resources; lack of user participation undermines the reader-document relationship; lack of visibility and promotion prevents resources from getting to their users; problems with access waste users' time; and lack of policies and training limits the ability of the library to grow as a living organism. Considering the principle by Gorman (1998) on the intelligent use of technology, its application will also be hindered by the lack of proper infrastructure, staff, and user-support.

#### ***Strategies for optimising collection development practices***

The findings showed strong and nearly equal support for all the proposed improvement strategies. Increasing funding received the highest rating ( $M = 4.01$ ,  $SD = 1.18$ ), followed by developing and regularly reviewing a collection development policy ( $M = 3.99$ ,  $SD = 1.15$ ). Strengthening ICT infrastructure and providing regular staff training each recorded a mean of 3.97, while user involvement in selection recorded 3.96 and information literacy promotion recorded 3.94. Given the close range from 3.94 to 4.01, no singular action will suffice. Additional funding without an effective



policy will not ensure proper selection, and e-resources subscription without ICT facilities, skilled personnel and users will not improve use. Thus, the results suggest an approach that considers financial, policy, technological, professional and user aspects at once.

This approach aligns with the definition of collection development by IFLA (2001) as an ongoing process and with the idea of ACRL (2018) that collections must serve institutional missions and support its programmes and educational outcomes. Frequent needs assessments and mapping the curricula will contribute to improving the relevance of selection, while usage data, unfulfilled requests and satisfaction evidence will provide grounds for evaluation. This agrees with Matthews (2014), Oakleaf (2010) and Poll & Payne (2006) who argue that the assessment should rely on the contributions to the education, research and users' needs.

The proposed strategies also provide a practical means of applying the theoretical framework. Increased funding and adequate ICT infrastructure would make resources more usable; involving students and academic staff would help connect every reader with appropriate materials; promotion and information literacy training would enable resources to reach their intended users; and improved catalogues, authentication systems and searching skills would save users' time. Regular policy review, collection evaluation, updating and weeding would support Ranganathan's (1931) principle of the library as a growing organism. Similarly, strengthening the management of both print and electronic resources would reflect Gorman's (1998) emphasis on respecting diverse forms of knowledge while using technology intelligently. Responsibility should consequently be shared among university management, the Library Directorate, academic faculties, the Finance Department, Quality Assurance and the ICT Department. Progress should be assessed through indicators such as current title coverage, copies-to-demand ratios, request-fulfilment rates, database usage, failed-access incidents, user participation and satisfaction.

### **Practical implications and recommendations**

The case library should adopt an annual, user-responsive collection development lifecycle based on curriculum mapping, reading lists, enrolment data, usage statistics, and documented student and faculty needs. These data should inform transparent selection, protected acquisition budgets, resource organisation, promotion, access monitoring, evaluation, preservation, and deselection. University management and the Finance Department should prioritise current programme-relevant materials, additional copies of high-demand titles, and essential electronic resources. The Library Directorate, faculties, and Quality Assurance should operationalise a clear policy defining responsibilities for needs assessment, selection, licensing, evaluation, weeding, and user feedback.

The university, ICT Department, and library should improve internet connectivity, computers, authentication, discovery tools, and remote access where licences permit. Staff should receive regular training in digital-resource management, licensing, metadata, assessment, preservation, and user instruction. Information literacy should be integrated into orientation and relevant courses and evaluated through users' searching competence and resource use. Information literacy provision should be aligned with the ACRL Framework for Information Literacy for Higher Education (Association of College and Research Libraries, 2016).

Annual collection evaluation should combine circulation, database usage, unmet requests, curriculum relevance, currency, condition, and user satisfaction. Library-resource adequacy should also form part



of programme review and quality assurance, with success measured by whether relevant and current resources reach users in sufficient quantities and accessible formats.

### **Limitations**

The results are to be analysed in view of the context of one private university library only and cannot be applied to all universities' libraries in Rwanda. The cross-sectional design allowed collecting the data on collection development practices, resources and users' perception at one point of time; no causal relationships and dynamics could be assessed. The faculty was overrepresented to obtain more evidence regarding the curriculum; therefore, combined percentages represent the obtained sample only and should not be regarded as estimates of the whole university population without weightings.

The study failed to gather full circulation figures, database utilization reports, budget details or any user feedback data sets systematically. Thus, the conclusions made regarding funding, use of resources and accessibility have been made on the basis of the findings from the questionnaire and the interviews recorded and systematically coded along with the observations and the organisational records that were accessible. Such a constraint prevents independent verification of the usage and spending patterns, but this does not change the nature of the methodology used; the five recorded interviews have been analysed using the procedure described above along with the identification of participants and the research questions.

### **Conclusion**

It was found that the collection development process in the case library operated well enough, but it was poorly integrated, evidence-based or user-oriented. Selection, acquisitions, cataloguing, organisation, access, and user instruction formed the backbone of the process. But lack of user needs analysis, poor user involvement, poor collection evaluation and weeding, and poor handling of electronic resources hindered the effective functioning of the process as a collection development lifecycle.

The collection did not correspond fully to the needs of academic users. The print books and reference materials met the basic needs much better whereas the lack of popular titles, out-of-date editions, lack of specialised materials and electronic access problems formed a gap. Lack of funds, vague policy, poor ICT infrastructure, poor user participation, and staff training were all interrelated issues.

Following the Five Laws of Ranganathan and the Principles of Gorman, collection development must ensure that the resources available are accessible, findable and usable in sufficient quantities and appropriate formats. Hence, the library should adopt a user-oriented collection development cycle on an annual basis based on sufficient budgetary allocation, sound policy formulation, enhanced ICT infrastructure, staff training, information literacy education and user involvement. Evaluation of success should be based on the effectiveness with which current resources facilitate teaching, learning and research.



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