

From the President of RUSA

Kindness as a Practice

Leading with Care in Uncertain Times

Shannon D. Jones

As I sat down to write this column in December 2025, we were emerging from a period marked by chaos, turmoil, uncertainty, and profound stress. We had just come off the longest federal government shutdown in US history. Millions of people faced the threat of losing their SNAP benefits, while many families were bracing for potential reductions to or the loss of Affordable Care Act subsidies that make basic healthcare accessible.

Taken together, these events reflected more than political disagreement. They revealed a troubling disregard for the lived realities of everyday people. They underscored how deeply leaders' decisions can affect people's lives in immediate and lasting ways.

As I reflected in that moment, I found myself thinking not only about what was happening nationally, but also about the care and consideration we show to one another closer to home, within our workplaces, teams, and profession.

I was writing during a season when pausing to give thanks is the norm. For me, Thanksgiving invites reflection on all the things in my life for which I am grateful. At the same time, December is a month of gratitude, generosity, and giving, where we offer gifts and expressions of love and care to the people who matter to us. December 2025 sharpened my focus on one word: kindness—more specifically, how we operationalize kindness in our everyday lives and in our interactions with the people we encounter, our colleagues, our patrons, and ourselves.

I also want to be transparent about what prompted me to lean into this topic so intentionally. Around the time I was drafting this column, I received an email from a colleague. The tone felt unkind. It landed differently than perhaps it was intended, and it stayed with me, not because of its content, but because of how it made me feel. That moment reminded me how powerful our words are, especially in written communication, and how easily tone can cause harm even when harm is not intended. Rather than responding immediately, I chose to sit with that experience and use this column as a way to reflect, to process, and to recommit myself—and invite others to recommit—to kindness in how we show up for one another.

Kindness is the word, and kindness is the focus of this column.

Why Kindness Matters

As individuals, we all want to be treated well. We all want to be treated with respect. We all want to be treated with kindness, whether we are leaders in the profession or front-line library workers.

My mother and grandmother taught me the adage, “do unto others as I would have them do unto me.” I want to be treated with kindness, and that is what I aim for in all my interactions.

Kindness is one of the greatest expressions of respect we can offer one another. It is one of the clearest ways to demonstrate compassion and empathy. It is also one of the strongest markers of civility in the workplace. Kindness is something we should all aim for, model, and practice consistently.

A quote often attributed to the late Dr. Maya Angelou captured this truth with clarity when she said, “I’ve learned that people will forget what you said, people will forget what you did, but people will never forget how you made them feel.”¹ In our libraries and daily interactions, how we make people feel often outlasts any policy, procedure, or transaction. Kindness shapes those feelings and, in doing so, shapes trust, belonging, and memory.

Before moving further, it is important to define what I mean by kindness.

Defining Kindness

I was struck by a recent LinkedIn post by Amy Gibson² that clearly articulates the difference between being nice and being kind. Gibson’s post reinforced something many of us intuitively know. Niceness prioritizes comfort, while kindness prioritizes care, growth, and trust, even when conversations are difficult. For me, being nice is often about who you want people to think you are. It can be performative, shaped by a desire to manage impressions or maintain appearances. Kindness, on the other hand, reflects who you are on the inside. It is not driven by motive or performance. It comes naturally, rooted in sincerity, and is offered freely to others because it aligns with your values.

Being nice often means avoiding hard conversations to keep the peace. Being kind means engaging in those conversations with honesty and compassion because avoiding them helps no one. Niceness may soften the truth or remain silent. Kindness delivers feedback clearly and respectfully, with the intent to support growth. Niceness seeks harmony in the moment. Kindness seeks progress over time.

Kindness is not passive. It is not people pleasing. It is not the absence of accountability. Kindness is active, intentional, and principled. It sets boundaries with respect. It holds people accountable with empathy. It shows up consistently, even when it would be easier to step back.

In librarianship, and especially in reference and user services work, this distinction matters. Kindness builds trust. Trust is essential to the work we do in libraries.

Kindness Is a Workplace Practice

Research validates what many of us experience. Studies highlighted by *Harvard Business Review* demonstrate that kindness in the workplace, expressed through recognition, gratitude, and genuine acknowledgment, reduces burnout, strengthens well-being, builds social connection, and contributes to lower turnover and higher productivity.^{3,4}

Swinand⁵ further argues that when anxiety is high and morale is low, kindness is not a luxury. It is a necessity. He emphasizes that kindness at work shows up through everyday practices, including prioritizing self-care, doing your job well so others are not burdened, offering help when colleagues are struggling, recognizing and acknowledging contributions, and delivering honest feedback

with care. He also distinguishes kindness from niceness, noting that niceness can drift toward avoidance, while kindness is rooted in honesty, accountability, and genuine concern for others.

Additional research reinforces the idea that kindness is not simply a personal virtue but a powerful driver of organizational health. Levy⁶ highlights that respectful and kind workplaces are associated with higher energy, increased motivation, greater job satisfaction, stronger organizational commitment, and cultures in which trust and psychological safety can flourish. Kindness is also contagious. Small, everyday acts of care can ripple outward, shaping workplace culture in meaningful and lasting ways.

For those of us in reference and user services, this is especially significant. Our work depends on presence, trust, and human connection. How we show up matters.

Libraries Are Not Immune

It is important to acknowledge that libraries are not immune to workplace behaviors that run counter to kindness. Research in library and information science has documented the prevalence and persistence of bullying, incivility, and dysfunctional workplace dynamics in library environments.^{7,8}

Ettarh⁹ coined the term *vocational awe* to describe the set of ideas, values, and assumptions that librarians hold about themselves and the profession, in which libraries are framed as inherently good, almost sacred institutions beyond critique. When libraries are viewed in this way, the harm that occurs within them is often minimized, dismissed, or rationalized, making it difficult to name, address, and remediate workplace incivility and bullying.

Recent scholarship further highlights how harm, silent resistance, and unaddressed power dynamics allow workplace harm to persist, even in institutions that publicly espouse values such as equity, care, and service.¹⁰ These behaviors can manifest as dismissive communication, public criticism, information gatekeeping, silencing of voices, or patterns of disrespect that erode trust over time. Too often, such conduct is excused under the guise of professionalism, tradition, or personality differences.

Naming these dynamics matters because unaddressed incivility undermines morale, damages psychological safety, and disproportionately impacts those with less positional power. Recognizing that libraries are susceptible to these challenges is not an indictment of our profession. Instead, it is a necessary step toward building workplaces rooted in accountability, respect, and care.

Recognizing harm, however, is only the first step. Awareness without action does little to change lived experience. If we are serious about addressing bullying, dysfunction, and everyday unkindness, then kindness must move beyond aspiration and become practice.

What This Looks Like in Practice

Operationalizing kindness does not require grand gestures. It shows up in the small, consistent choices we make every day. At an information desk or service point, this means approaching patrons with patience, empathy, and respect, especially when they arrive at the encounter feeling frustrated, stressed, or unsure about their information need. With colleagues, it involves listening without interrupting, providing feedback clearly and thoughtfully, and choosing collaboration over competition. In our communication, we need to be mindful of our tone in emails and messages because intent can easily be misinterpreted, and grace is often lacking. In leadership and teamwork, it means setting clear expectations respectfully, holding team members accountable with empathy,

and acknowledging their contributions and efforts. With ourselves, it requires extending grace when our capacity is limited, setting boundaries to protect our well-being, and recognizing that self-kindness is essential for sustaining our ability to care for others.

When kindness is practiced this way, it becomes part of our professional muscle memory. It shapes culture, strengthens trust, and allows us to support one another consistently and humanely.

A Call Forward

As I close this column, I return to December, a season marked by gratitude, reflection, and giving. In a time when we exchange gifts and offer expressions of care and appreciation, I am reminded that one of the most meaningful things we can give one another costs nothing.

Kindness

As we move into 2026, I hope we choose to practice kindness with intention in how we lead, collaborate, serve, and care for ourselves and one another. In a world that too often models indifference and incivility, let us commit to creating library workplaces where people feel seen, respected, and valued.

In all that you do, choose kindness as the default.

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Amplify Your Impact

Yvonne Dooley, Col. Ed.

Microsites as Outreach Tools

A Case for Targeted Engagement in Academic Libraries

Loren Mixon, Adam Johnson, and Joseph Taylor

This column presents a case study in which academic librarians at a mid-sized university designed, implemented, and evaluated a targeted microsite to support first-year students in large-format instruction sessions. The microsite served as a curated landing page linking to high-demand resources and services, and it was promoted via a QR code sticker for ongoing access. The authors describe the institutional context, rationale for selecting a microsite, implementation details (including collaboration with a library makerspace), and preliminary analytics from the pilot project's deployment. The column concludes with practical lessons for academic libraries that are considering microsites as tools for outreach and instruction.

Introduction

Microsites are small, standalone web pages or collections of pages that focus on a defined purpose and audience. They typically provide streamlined navigation and a curated set of links or content, and they are frequently employed in marketing and outreach to highlight a specific campaign, event, or set of services.^{1,2} Academic libraries have begun to adapt microsites to guide users toward key services such as research help, specialized studios, makerspaces, and program-specific guides because they present concise, high-relevance pathways to resources.³ These microsites can easily be included in print, on larger websites, on social media, and on promotional items with the aid of short links or QR codes.

At Coastal Carolina University (CCU), librarians faced the challenge of supporting approximately 315 first-year students in the Edwards College of Humanities and Fine Arts across five one-hour auditorium sessions. Given the limited time for face-to-face instruction and the complexity of navigating institutional websites, the team sought a durable, student-centered takeaway that would reduce barriers to access and encourage continued engagement.

This column applies the concept of microsites to that context by documenting the development of a curated landing page and accompanying QR code sticker to address the outreach needs of a subset of CCU's first-year student cohort, and it analyzes initial results to inform future iterations.

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About Coastal Carolina University and UNIV 110

The authors are faculty librarians in the Research and Scholarship Department at CCU, a public research university in Conway, South Carolina. With a steadily increasing enrollment now surpassing 12,000 students, CCU Libraries have been augmenting services, including the construction of a new library building and the renovation of the original campus library, adding a makerspace, data visualization and virtual reality laboratory, audio and video studios, scholarly publishing and data management support, and new outreach programs such as Craft Nights and book clubs. Concurrently, CCU has expanded UNIV 110, a first-year experience seminar offered in discipline-specific sections. One cluster of course sections for students with majors in the Edwards College of Humanities and Fine Arts provided an opportunity to reach approximately 315 students in an auditorium format across five one-hour presentations.

Rationale for Using a Microsite

To provide a relevant takeaway that would persist throughout students' undergraduate experience, the authors elected to create a microsite: a concise, curated landing page with quick links tailored to the needs of Edwards College students.^{1,2} The microsite was promoted via a sticker featuring a QR code and Edwards College branding to encourage sustained use. These stickers were given to students during the instruction sessions so they would have ready access to the microsite as a resource. Many students chose to place the sticker directly on their laptop or tablet, which ensured they would have it with them during research-related activities.

Advantages of Using Microsites for Large-Scale Instruction Opportunities

Libraries routinely implement microsites for event registrations and special programming; for example, the University of Toronto Robarts Library developed a dedicated site for its fiftieth anniversary.³ However, this case provided the authors with the chance to create and deploy a microsite with an instructional edge. The combined UNIV 110 sessions created an opportunity to distribute a targeted outreach tool that provided first-year Edwards College students with rapid access to the most relevant library resources for upcoming projects. Providing a tangible resource in the form of a QR code sticker during the first semester also functioned as a warmth-based intervention designed to reduce library anxiety.⁴

Benefits of Microsites as an Outreach Tool

Microsites offer several benefits: modest implementation costs, a limited scope that helps users locate targeted information quickly, simplified navigation on a single page, and optimization for discovery via search engines or social media platforms.² In this case, additional advantages included:

- Curated resource lists aligned with humanities and fine arts students' needs (e.g., recording studio rooms, makerspace services, and program-specific LibGuides)
- Actionable analytics on page access and link engagement through referral tracking, enabling evaluation of resource usage
- A succinct landing page that reduced clickthrough fatigue when compared to complex institutional websites, while remaining easy to place on promotional materials and social media profiles

- A perception of exclusivity and relevance that strengthened students' connection to the library as a key partner in their academic major

Choosing a Microsite Platform

The authors selected Microsoft Sway as the landing page platform because it was readily available within CCU's established Microsoft product ecosystem and could be set up rapidly for a pilot. Sway's analytics provided basic metrics including click rate, views, and broad categories of time spent on the page, but Sway lacked granular timelines of when students accessed the page or link-level reporting.⁵ Alternative platforms could provide more detailed analytics, such as access timing, link-specific click counts, and detailed geographic information. Other platforms for creating a microsite include an abbreviated LibGuide that would leverage asset analytics in a manner familiar to many librarians, or a free version of other single-link landing page tools commonly used on social media profiles (e.g., profile link aggregators such as Linktree or Hopp).

Sticker Production

The QR code stickers were designed through a collaboration between the CCU Libraries Makerspace and University Libraries Marketing. The Marketing Coordinator led the graphic design aspect of the project to ensure conformity with brand standards, while the makerspace printed the stickers using specialized paper on a large-format printer and cut them with a vinyl cutter. Libraries without makerspace access could partner with external vendors (e.g., national vendors such as Vistaprint or local, small print companies) or use design tools such as Canva, Adobe Express, or Word processing software. Lower-cost approaches include printing stickers on Avery-style mailing labels and trimming them with a paper cutter.

Initial Results and Future Considerations

Using Microsoft Sway's analytics features, the authors tracked page views and coarse time-on-page categories labeled as "glanced," "quick read," and "deep read." Microsoft provides only general descriptions of these labels, limiting the precision of interpretation.⁵ Over the first two weeks, 205 students visited the page, with 108 categorized as a "deep read." After one month, views reached 283, with 102 categorized as "deep read," while average completion increased from 36% to 47%, suggesting a growth in student familiarity and more targeted use of the microsite (i.e., heading to the page for a specific link rather than browsing the list of resources). Future iterations will prioritize platforms with more granular analytics to inform link selection and usage patterns, and the authors also plan to extend the sticker-and-microsite approach to additional populations (e.g., students within other colleges, orientation, and large events).

Conclusion

This pilot project used a purpose-built microsite to create a portable takeaway for a large-scale instruction opportunity and was a successful venture overall. It is a route that can be duplicated easily by other libraries for little to no cost. Although those looking to implement this approach may be doing so on a shoestring budget, the authors advocate taking the time to determine which platforms best meet the needs of each individual library or project. For instance, analytical features that provide detailed insight into time spent on a page are often important when attempting to gauge student engagement with a microsite. Therefore, it would be advantageous to take a

comparative look at several microsite platform options at the outset of any new project. Once a librarian has selected the ideal tool, creating a microsite provides an easy opportunity to share richly detailed and highly relevant information for specific populations.

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Reference Services and Instruction

Rebecca Graff, Col. Ed.

Getting Started with Trauma-Informed Reference Consultations

Emily Reed

Introduction

Every day, patrons visiting their library bring with them unique personal traits and histories that inevitably impact their experience. Many of these characteristics are invisible to the library employees they interact with, sometimes resulting in misunderstandings about the patron's needs, motivations, or library knowledge. Accidentally retraumatizing patrons during their library visit is a particular concern.

Unfortunately, trauma is considered a common experience and "has no boundaries regarding age, gender, socioeconomic status, race, ethnicity, or sexual orientation."¹ In addition to traumatic events experienced individually, there are many causes of trauma that distinctively affect whole communities or generations, such as epidemics, war, or discrimination. Considering the impact of trauma on library patrons, taking steps to prevent retraumatization is more important now than ever.

Awareness about trauma-informed pedagogy is increasing in the field of education and is also gaining ground in library instruction, but recommended practices have largely focused on a traditional classroom setting. Recommendations mostly avoid other teaching and learning contexts, such as one-on-one reference consultations. This article will propose practical recommendations for implementing a trauma-informed approach during reference consultations, leading to a more impactful and positive learning experience for trauma survivors.

What Does It Mean to Be Trauma Informed?

Trauma-informed approaches began in 2001 when two clinical psychologists, Maxine Harris and Roger Fallot, published a book outlining a new concept called "trauma-informed service systems" and proposed new care practices designed for patients with histories of trauma. In this context, the definition of trauma is quite broad. Trauma can refer to either a single event or a series of events that physically or emotionally harm someone or is life threatening, which has a prolonged negative impact on that person's physical or mental well-being.² Trauma can negatively impact the survivor's sensorimotor skills, empathy response, attention, memory, or executive functioning skills.³ Trauma impacts everyone uniquely, even when the trauma is shared with others, such as with generational trauma or racial trauma.⁴

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Trauma-informed approaches acknowledge that a trauma survivor will “construct a new theory of how the world works and how people behave.”⁵ The ultimate goal of a trauma-informed approach is to “return a sense of control and autonomy” to the trauma survivor by teaching them healthy coping strategies and developing a plan for how to deal with future crises.⁶ This goal can be directly applied to reference consultations; librarians can teach patrons research strategies that can be used independently in the future.

Any organization in any discipline can implement a trauma-informed approach by understanding the impact of trauma, promoting safety, empowering individuals by giving them agency, and proactively preventing retraumatization.⁷ The six key principles that comprise a trauma-informed approach developed by the Substance Abuse and Mental Health Services Administration (SAMHSA) include:

1. **Safety:** Participants and staff feel physically and psychologically safe.
2. **Peer support:** Peer support and mutual self-help are key as vehicles for establishing safety and hope, building trust, enhancing collaboration, and utilizing their lived experience to promote recovery and healing.
3. **Trustworthiness and transparency:** Organizational decisions are conducted with the goal of building and maintaining trust with participants and staff.
4. **Collaboration and mutuality:** Importance is placed on partnering and leveling power differences between staff and service participants.
5. **Cultural, historical, and gender issues:** Culture and gender-responsive services are offered while moving beyond stereotypes/biases. (Author note: As of February 8, 2026, this principle was removed from SAMHSA’s list of key principles.)
6. **Empowerment, voice, and choice:** Organizations foster a belief in the primacy of the people who are served to heal and promote recovery from trauma.⁸

Applying Trauma-Informed Principles to Reference Consultations

Trauma-informed teaching and learning (TITL) is an umbrella term coined by Janice Carello, a college educator with a master’s in social work and a doctorate in social welfare, to denote trauma-informed approaches to the delivery of the college curriculum.⁹ Drawing on inspiration from Harris and Fallot’s concepts of trauma-informed care and SAMHSA’s guidance for trauma-informed approaches, she adapted the six key principles to a trauma-informed approach for classroom and college settings and developed an additional seventh principle. Her TITL principles are¹⁰:

1. **Physical, emotional, social, and academic safety:** Efforts are made to create an atmosphere that is respectful of the need for safety, respect, and acceptance for both individual and group interactions, including feeling safe to make and learn from mistakes.
2. **Trustworthiness and transparency:** Trust and transparency are enhanced by making expectations clear, ensuring consistency in practice, maintaining appropriate boundaries, and minimizing disappointment.
3. **Support and connection:** Individuals and groups are connected with appropriate peer and professional resources to help them succeed academically, personally, and professionally.
4. **Collaboration and mutuality:** Opportunities exist to provide input, share power, and make decisions. Individuals and groups act as allies rather than as adversaries to reach common goals.
5. **Empowerment, voice, and choice:** Individuals and groups are empowered to make choices and to develop confidence and competence.

6. **Social justice:** Individuals and groups strive to be aware of and responsive to forms of privilege and oppression in order to respect one another's diverse experiences and identities.
7. **Resilience, growth, and change:** Strengths and resilience are emphasized over deficiencies and pathology. Feedback is provided to convey optimism and to facilitate growth and change.

Carello designed her principles to be applied in "classroom, department, and college-wide settings."¹¹ However, they can be applied to an even greater range of teaching and learning contexts such as one-on-one learning experiences like tutoring, and they can be applied in any location where teaching and learning transpires, such as libraries.

Reference is a core service provided by most libraries, and consultations in particular offer a unique opportunity for patrons to learn from a librarian. Using Carello's TITL principles as a framework, and informed by two of American Library Association's guiding documents for reference professionals, the *Guidelines for Behavioral Performance of Reference and Information Service Providers* and the *Professional Competencies for Reference and User Services Librarians*, the following recommendations can be applied to reference consultations.¹² These recommendations can be implemented by individual librarians, although organizational support from library leadership would certainly advance these principles even further. This list is not exhaustive and should serve as a starting point for thinking about trauma-informed consultations.

1. Physical, emotional, social, and intellectual safety

- a. Clear information is provided in advance about when, where, and how to meet for the consultation.
- b. The consultation occurs in an accessible and inclusive environment. The environment is periodically examined for physical and psychological safety concerns; alternative locations should be explored and offered if needed.
- c. The librarian is welcoming and nonjudgmental.
- d. The librarian acknowledges noticeable emotions experienced by the patron and considers how those emotions or their cause may impact the consultation, and then responds appropriately.
- e. The librarian considers factors that may make a patron unlikely to schedule a consultation, such as researching sensitive topics or personal reasons, and works with colleagues to brainstorm how to proactively communicate information safely and confidentially.

2. Trustworthiness and transparency

- a. All efforts are made to protect the privacy and confidentiality of the patron's identity, the nature of their information need, and any services or resources discussed or recommended.
- b. The librarian explains their thought process as they consider the information needed and begin to problem solve; they are forthcoming and open when responding to clarifying questions from the patron.
- c. The librarian maintains professional boundaries, clearly and directly setting appropriate expectations for the scope of the consultation service.

3. Support and connection

- a. The librarian connects the patron with high-quality resources that are best suited to address their information need and explains the reasoning for their selection.

- b. The librarian is prepared to connect the patron with subject-expert librarians, local organizations, licensed professionals, or other experts who are best equipped to help the patron with their specific need.

4. Collaboration and mutuality

- a. The librarian asks clarifying questions to fully understand the patron's information need.
- b. The librarian invites the patron to be a collaborator during the consultation by offering additional input and suggesting new ideas.
- c. The librarian avoids using library jargon, opting to use descriptive, natural language instead.

5. Empowerment, voice, and choice

- a. The consultation occurs in the offered modality preferred by the patron.
- b. The librarian offers the patron skill-building opportunities and information that they can use independently in the future if they have a similar information need.
- c. The librarian invites the patron to provide feedback about their consultation experience and reflects on suggestions for improvement.

6. Social justice

- a. The librarian learns about social justice issues such as bias, stereotyping, microaggressions, antiracist practices, and censorship.
- b. The librarian exhibits cultural and intellectual humility and avoids making assumptions about the patron.
- c. The librarian learns about the community they serve and reviews if delivery of consultations is equitable for all, making changes when able.

7. Resilience, growth, and change

- a. The librarian suggests that the patron actively participate during the consultation, such as encouraging the patron to perform some searches, decide if they would prefer to further develop expertise using their preferred resource or learn to use a new one, and determine if their information need has been met before the end of the scheduled meeting time. If the patron declines this level of participation, the librarian respects and accepts their decision.
- b. The librarian suggests new or different aspects of the patron's information need that they may have overlooked, such as reflecting on the impact of their regular processes and strategies, considering resource bias and credibility, searching for opposing sources, and determining unconventional but legitimate strategies or resources.
- c. The librarian frequently checks in with the patron to see if their needs are being met or if alternate methods should be considered.

Benefits and Limitations of Trauma-Informed Consultations

There are many benefits to implementing a trauma-informed approach to consultations. It is, at its core, strengths based.¹³ The patron is empowered during the consultation to express their voice and make their own choices, minimizing the power imbalance. There is a special focus on skill building and equipping the patron to independently solve similar problems in the future.

Trauma-informed approaches also complement equity-centered approaches. A lack of equity will cause or worsen trauma, and existing systems are not naturally designed to be equitable for trauma survivors.¹⁴ For example, a trauma survivor may have a fear of driving and not often leave their home. Offering consultations that can occur remotely makes reference service more equitable not just for that trauma survivor, but for any patron who cannot easily get to the library's physical location.

Culturally responsive approaches also work in tandem with trauma-informed approaches. As a librarian gets to know what various cultures comprise the community they serve, the librarian should proactively learn about social customs, local cultural history, and sociopolitical contexts. This knowledge can inform both logistics and social aspects of the consultation, and the librarian can work to ensure a "socially, emotionally, and intellectually" safe environment for the consultation to occur.¹⁵ The trauma-informed librarian will also display cultural humility, recognizing that the patron's experiences are different and may not be fully understood by the librarian.¹⁶

Employing a trauma-informed approach to consultations does have some challenges. The goal of this article is to equip individual librarians to make some practical, realistic changes to their consultations. However, that unfairly places the onus on individual librarians to take the initiative to learn about trauma, to find time to do this work, and to have a certain amount of agency to thoughtfully consider the impact of changes to their consultations. Support from library leadership would allow for a more coordinated organizational approach by conducting a holistic review of library policies, services, and resources from a trauma-informed lens.

Another challenge is maintaining healthy boundaries. Patrons who find a librarian to be safe, trustworthy, and supportive may become repeat customers, finding comfort and security in spending time with the librarian. The librarian, who is likely to have a helping predisposition, may also find satisfaction in successful consultations with the patron. This kind of situation can easily lead to the patron viewing the librarian as a confidante, and they may open up about their mental health and trauma. Librarians should remain alert and cognizant of when a patron starts taking up too much time, is not appropriately using the consultation service, or if the nature of their need requires a licensed expert. The librarian should compassionately yet clearly define the boundaries of their service and connect the patron to the appropriate services or experts.¹⁷

Further Learning and Conclusion

This article provides a high-level overview of trauma-informed approaches and makes some practical recommendations for trauma-informed consultations. Librarians who are interested in diving deeper into trauma-informed approaches may find the following resources to be particularly useful to start:

- Janice Carello's *Trauma-Informed Teaching and Learning* blog: <https://traumainformedteaching.blog/>
- *ACRL's Keeping Up With . . . Trauma-Informed Pedagogy* (2021) by Desirae Zingarelli-Sweet: https://www.ala.org/acrl/publications/keeping_up_with/trauma-informed-pedagogy
- *A Trauma-Informed Approach to Library Services* (2020) by Rebecca Tolley: <https://alastore.ala.org/tiservices>

While it might seem overwhelming to get started with this work, even taking small steps toward a trauma-informed approach can have a large and positive impact. It is also important to keep in mind that librarians do not need to know which patrons have experienced trauma. These practices are

universally beneficial.¹⁸ With a trauma-informed approach to consultations, trauma survivors can experience the library as a welcoming environment where they are encouraged to independently explore, grow, and build their confidence to persevere.

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Feature

Building Connections with Graduate Students Through Credit-Bearing Instruction

Michelle R. Desilets and Kimberly Pendell

Abstract

Graduate students often need support with research skills and other professional development that is under-recognized by their programs. Librarians play a key role in helping students fill in these gaps. This case study reviews student feedback on a librarian-developed and -delivered credit-bearing course. The course, Library Research and Scholarly Communication Fundamentals, is offered to graduate students across all disciplines. The curriculum is flexible and applicable to each student's research, covering topics such as researching literature, citation and data management, and publishing in scholarly journals. The course has generated positive and constructive feedback from students, encompassing themes of self-efficacy, improved research skills, and increased confidence with scholarly publishing. The delivery of the course has been an effective and rewarding avenue for librarians to connect with graduate students and strengthen students' ongoing relationships with library services and resources.

Introduction

Librarians are uniquely situated to observe gaps in the professional development of graduate students. Librarians interact with students outside of their formal coursework and advising relationships by providing support based directly on students' requests for assistance or within a supplementary framework. In these spaces, librarians can observe a student's range of knowledge and skills that are essential to succeeding in graduate programs and professional careers, which departmental faculty and advisors often assume students possess. For instance, while some students have completed rigorous undergraduate programs, others find themselves in the uncomfortable situation of needing guidance on what might be considered basic skills such as literature searching and managing citations. Also, students are navigating expectations as they engage in new professional arenas such as data management and scholarly publishing. Librarians often support these students via individual consultations, workshops, or course-integrated instruction.

While the literature reports on many forms of graduate-level information literacy instruction, ranging from workshops to course-integrated instruction, examples of credit-bearing courses tend to focus on one topic (e.g., systematic reviews) and/or a single discipline (e.g., health sciences). There is little evidence of credit-bearing, disciplinary-neutral courses that cover a broad range of library and research-related topics to address graduate students' research needs. By sharing this case study,

the authors hope to help fill this gap in the literature. The case study describes the development of a credit-bearing online course offered by Portland State University Library faculty and uses student feedback and surveys to explore students' perspectives on the relevance of the course to their academic and professional growth. The course, Library Research and Scholarly Communication Fundamentals, represents the work of two librarians: Kimberly Pendell developed the course and taught it in Spring 2021 and Winter 2022; Michelle Desilets joined in teaching an additional section of the course in Winter 2023. Both continue to teach the course each year.

Portland State University has a substantial number of graduate students, many in professional programs. In Winter 2023, there were a total of 4617 graduate students, with 77.4% in master's programs and 12.2% in doctoral programs. The graduate student population includes 26.4% BIPOC (Black, Indigenous, and People of Color) students and 14.8% international students and is recognized as a federally funded Minority Serving Institution. Notably, Portland State University is 49.4% first-generation students.¹

Existing library instruction and graduate student support at Portland State University occur in a few different ways. Liaison librarians are responsible for course-integrated instruction, orientations, and individual consultations in their assigned areas. Uptake of these opportunities can be irregular depending on disciplinary faculty, program directors, and student awareness of librarian support. The Graduate School has offered a series of graduate student workshops for many years, including workshops developed and delivered by librarians. As a frequent instructor of workshops, Pendell had many conversations with students about what they felt expected to know but had never explicitly been taught. The workshops helped address these curricular and professional development gaps. However, post-pandemic, both online and in-person workshop attendance steadily declined.

With this in mind, Pendell developed the workshop content as a one-credit, asynchronous course via the learning management system. A one-credit course option seemed sensible and attractive for students. In Portland State University's quarter system, a full-time graduate credit load is nine credits while most courses are four credits, leaving students enrolled in two courses in need of one more credit. Existing one-credit courses are primarily professionalization seminars or guided reading. The proposed course added a new, complementary option. This study reviews the development of the course, explores student feedback, and reflects on the experience of teaching a credit-bearing course.

Literature Review

Graduate Student Research Needs

Graduate students' research experience and skills vary, and their research needs differ from those of undergraduate students. Their needs can be complex and nuanced, and students sometimes have gaps in the research skills required for graduate-level study. Understanding graduate student research needs and gaps in knowledge can help librarians develop instruction to better support the graduate academic experience.

In Riesen's study of research skills necessary for success in graduate school, University of Alabama Social Work students identified two top required skills as developing search strings and research questions, which were also areas of low confidence. In the same study, faculty noted the need for graduate students to have foundational research skills.² These findings echo earlier research by Bussell, Hagman, and Guder, whose study suggests that graduate student research needs span the spectrum from basic, foundational skills to more advanced skills and competencies.³

Bussell, Schnabel, and Rinehart's 2020 survey also examined graduate students' research needs and challenges.⁴ Their study "...found uncertainty, stress, and confusion about the research process and what is expected of graduate student researchers to be a common theme among participants across disciplines."⁴ Participants identified difficulty with or uncertainty around effective searching as a specific challenge and reported relying on social networks and connections to help with the research process. Moore and Singley's research also highlighted the role of social relationships to help graduate students identify and contextualize resources, as well as to connect them to other scholars.⁵ Lehnen's research emphasized the importance of structured opportunities for socialization and relationship building during the dissertation process and advocated for librarians to facilitate such socialization and engagement.⁶ In another study that also examined doctoral student research needs, Ince, Hoadley, and Kirschner identified four essential areas of skill development: information literacy, information management, knowledge management, and scholarly communication.⁷⁻¹²

Graduate-Level Curriculum and Information Literacy Instruction

Many of the advanced research skills or competencies required for graduate study build on foundational skills graduate students are assumed to possess. However, students enter graduate school with varying levels of experience, and some may need formal opportunities to acquire the foundational skills they lack. Scholars have identified areas for instructional focus to address specific gaps in knowledge, such as scholarly communications¹³ and data management.¹⁴ Research has also surfaced concepts related to the "hidden curriculum" of graduate school, including unclear expectations, the need to demystify the publication process, and helping students frame themselves as scholars and experts.^{6,8,9} Calarco describes the hidden curriculum of graduate school as "the things you're expected to know or do but won't be explicitly taught" and notes that "...unlike the formal curriculum, which tends to focus on ways of thinking, the hidden curriculum tends to involve ways of doing: how to do, write about, and talk about research, how to navigate complex bureaucracies, and how to ask others for help when you feel lost."¹⁵

Librarians have long recognized the need to develop curriculum and provide instruction on a broad range of library and research-related topics to address these gaps in graduate education. Baruzzi and Calcagno's survey of academic librarians revealed that librarians supported graduate students via direct, non-classroom contact as well as via formal instruction. Instruction mainly focused on finding and using specific resources, conducting literature reviews, and performing technical training.¹⁶ Critz and colleagues' scholarship discussed the development of a research skills workshop series for graduate students at Georgia Institute of Technology.¹⁷ Post-workshop assessments suggested that students experienced increased confidence as a result of the workshop series, "...with students gaining a better understanding of the overall research process, an increased facility with research tools (e.g., databases) and software for citation management, project management, and multimedia product creation, and an appreciation of the big-picture concepts necessary for authentic information competency."¹⁷

Since 2007, librarians at Virginia Tech have offered a one-credit, discipline-specific graduate information literacy course that evolved over time to include new skills and areas of inquiry (e.g., data management, impact metrics, and dissemination of scholarship) in addition to traditional information literacy skills.¹⁸ More recently, Anders described a multi-modal format of information literacy graduate instruction covering a broad range of information literacy topics at Texas A&M University. This instruction included workshops, short courses, retreats, and course-integrated instruction, but no credit-bearing instruction.¹⁹

Building Connections with Graduate Students Through Credit-Bearing Instruction

In addition to covering a broad range of information literacy topics, librarians have offered graduate instruction to address particular topics, such as publishing, or to meet specific student needs. For example, Syeda, Woodend, Liu, and Roy's needs assessment about graduate students' experiences with and perceptions of publishing revealed that more than half of participants had no prior experience with publishing. When asked about things they viewed as aiding the publishing process, participants identified supportive individuals; positive, constructive feedback; familiarity with the process; formal instruction on the process; and an institutional culture of research and publication. When asked about obstacles, two-thirds of participants identified a lack of knowledge about the publication process, and more than half noted a lack of supportive individuals or mentors.¹¹

McClellan and colleagues described the development of a semester-long "Publishing Academy" at the University of Louisville, a series of five workshops created to address the need for graduate instruction focused on the publishing process.¹³ They noted that "...publication continues to be a decisive indicator of success for scholars. Consequently, there is an expectation that graduate students must become experts, create new knowledge within a disciplinary niche, and ultimately share this new knowledge within a published format...."¹³ To help students successfully meet this expectation, Stuit and Caldwell call for a scaffolded introduction to publishing early in graduate studies.⁸ They assert that, "Without this guidance, learning and publishing is a slow, unequal, compartmentalized, and non-transparent process that is an emotional experience for students ... [and go on to say that] ...the library can contribute to the professionalization of graduate students by...uncovering at least some of the hidden curriculum in publishing that disadvantages first-generation students."⁸

Research also reported on graduate instruction to address literature reviews and systematic reviews. For example, Rempel considered the effects of a library workshop on the literature review process of graduate students. One outcome of the workshop was participants' increased feelings of confidence about searching and the literature review process.²⁰ In another case, McGowan, Reed, and Yacilla developed a one-credit systematic review course for health sciences graduate students, and post-class assessment indicated increased student confidence after taking the course.²¹

Course Curriculum and Pedagogy

The course has been offered each year since it was first initiated in Spring 2021, with a second section added in 2023. Each section is capped at twenty students. The overarching course objectives are as follows: students will learn to search, retrieve, and organize information sources relevant to their research topic; students will understand data management best practices; students will explore different methods of communicating research information; and students will examine scholarly communication practices broadly and in their discipline. The course curriculum is based partly on existing workshop curricula, as well as new content on foundational skills, such as communicating visually, communicating broadly, and scholarly publishing. The weekly modules of the course are outlined in Table 1.

Pendell employed backward design for the curriculum development process, first establishing learner-centered outcomes for each weekly topic, then developing the assessment activities. Each week includes selected readings, videos, and tutorials to support the desired outcomes. For example, the learning outcome of the module on communicating broadly is to "demonstrate elements of effective communication to non-academic audiences using your own research topic." The associated activity is to create a 90-second video on their research project for an audience

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Table 1. Course Curriculum

Week	Topic	Activity
1	Introductions and the hidden curriculum	Introduction video and discussion post on hidden curriculum
2	Searching for literature reviews	Literature searching worksheet
3	Citation management	Evidence of citation management account and at least ten saved citations
4	Data management basics	Data management plan worksheet or discussion post on readings
5	Communicating visually	Discussion post on readings or creation of graph, figure, or infographic
6	Communicating broadly	"Elevator pitch" video and peer review
7	Scholarly publishing	Journal selection and evaluation worksheet
8	Scholarly publishing continued	Discussion post on finding academic community, scholarly identity, and engagement
9	Final project work time	No weekly activity
10	Final project due	Project and final statement

unfamiliar with the research and why it is important. Readings and videos explain the value of communicating to audiences outside of one's research area, as well as examples of short, concise videos like "Three Minute Thesis" submissions or social media posts. Submissions are then peer reviewed using provided criteria for research communication.

The authors prioritize student autonomy and engagement in the course. The activities are designed to be flexible enough for students to apply to their own scholarship, no matter the discipline or specific project. They encourage students to leverage the course by connecting activities to other coursework or research projects whenever possible. Some weeks students may reflect on the week's topic rather than complete the practical application activity. For example, students can choose to write a data management plan for their current project or explore core elements of data management planning in a discussion post. Full points are usually awarded if it is clear the student made an honest attempt to understand and complete the activity. The authors address the quality of student work through feedback and opportunities to revise and resubmit. Generally, points are deducted only when activities are submitted late without prior communication.

Students develop final projects that are directly related to their program coursework or professional goals. In week five, they submit a final project proposal outlining the project and identifying potential hurdles for instructor feedback. The range of projects has included seminar papers, drafts of thesis and dissertation chapters, annotated bibliographies, and conference presentation slide decks. Students also submit final project statements, eliciting their thoughts on the course and its impact on the project.

The authors engage with students throughout the quarter by responding to posts, providing feedback on activities, and creating short videos to address common questions. It is particularly important to start building trust and community with the students in week one, especially as module one's discussion post about the hidden curriculum asks students to be vulnerable and share their own experiences of "not knowing" in graduate school. Students are also encouraged to interact with each other, especially during the introduction week and with peer review activities.

Methodology

This case study is based on retrospective analysis, using existing course data from three years of instruction. The data includes the anonymous mid-quarter check-in survey (Table 2) and course evaluation responses from Spring 2021, Winter 2022, and Winter 2023 (Table 3), as well as anonymized final project statements from Winter 2022 and Winter 2023. Access to final project statements from Spring 2021 was lost due to a learning management system migration. Institutional review board approval was granted for the use of this data retrospectively (exempt determination, #238141-18).

The authors used simple descriptive analysis for the survey and evaluation responses. To analyze the anonymized final project statements from Winter 2022 and Winter 2023, they used grounded theory to open code the data and identify common themes.²² The authors independently coded a subset of statements and reviewed the coding collaboratively to establish intercoder reliability. Each of the authors then coded the entire set of statements separately. Once completed, they shared and reviewed their descriptive and analytic codes, deriving themes based on multiple instances of similar statements.

Table 2.

Mid-Quarter Survey Questions

- The content of the course so far is relevant to my work as a graduate student [scale of less or more relevant]
- The workload of the course is...[scale of less than expected to more than expected]
- The instructions and expectations for the weekly activities are well explained and clear [scale of agreement/disagreement]
- The instructor's feedback is constructive and helpful to my understanding of the curriculum [scale of agreement/disagreement]
- Any comments or suggestions for improvement at this point in the course?

Table 3.

Course Evaluation Questions

- Rate your overall satisfaction with the course curriculum. [scale of very satisfied to very dissatisfied]
- Overall, the content of the course was relevant to my work as a graduate student. [scale of less or more relevant]
- The weekly activities complemented the readings and videos. [scale of agreement/disagreement]
- The instructions and expectations for the weekly activities were well explained and clear. [scale of agreement/disagreement]
- What content did you find most helpful?
- What content did you find least helpful?
- Rate your overall satisfaction with the course instructor. [scale of very satisfied to very dissatisfied]
- The instructor's feedback was constructive and helpful to my understanding of the curriculum. [scale of agreement/disagreement]
- The instructor encouraged student interactions and class participation. [scale of agreement/disagreement]
- Would you recommend this course to fellow graduate students? [Yes/No]
 - If you answered "no," please offer any comments you have on improving the course and/or interactions with the instructor.
- How did you hear about the course?

Student Demographics

Course enrollment has included students from multiple disciplines, including the sciences, social sciences, and humanities. Table 4 outlines the academic demographics of the students enrolled in the ULIB 511 course sections analyzed in this case study (n = 51). The over-representation of social work graduate students can be attributed to Pendell’s role as the subject librarian for social work. Enrolled students by program type are shown in Table 5.

Results and Discussion

The findings are based on data from anonymous responses to mid-quarter check-in surveys, end of course evaluations, and de-identified final project statements.

Mid-quarter Surveys and Course Evaluations

The authors used mid-quarter surveys as formative assessment to learn how well students were connecting to the curriculum, format of the course, and workload expectations. The surveys also provided an opportunity to request feedback (e.g., “Any comments or suggestions for improvement at this point in the course?”) and to solicit input on topics relevant to the curriculum (e.g., “Have you used an AI tool for literature searching?”). The mid-quarter survey was optional, and the data in Figure 1 is based on 41 responses (80%).

Course evaluations demonstrated students’ high satisfaction with the course. Of the 36 students (71%) who completed the course evaluation and rated their overall satisfaction with the course curriculum, 30 students responded as very satisfied and 6 as satisfied. All 36 students indicated that the course content was relevant to their work as graduate students. Students universally agreed they would recommend the course to others and provided overwhelmingly positive feedback. For example, one student commented: “I feel this course should be a required class for all first year grad students. It was so helpful, comprehensive, and relevant. I don’t think grad students get the opportunity to learn about the practical side of things. I hope you offer this class again. It was the highlight of my winter quarter!” Another student said the course was “A must-take 101 for graduate students, especially first-gen.”

Course evaluations asked students to indicate which course topics were

Table 4. Academic Degree Programs of Enrolled Students Spring 2021, Winter 2022, and Winter 2023 (n = 51)

Academic Program	Number of Students
Anthropology	3
Biology	4
Civil and Environmental Engineering	4
Communication	2
Computer Science	2
Conflict Resolution	1
Creative Writing	1
Education	1
Electrical Engineering	1
Engineering and Technology Management	1
Environmental Science and Management	1
Finance	1
Gender, Race, and Nations	1
German	1
History	2
Mathematics Education	3
Physics	1
Public Affairs	5
Statistics	1
Social Work & Social Research	13
Urban Studies	1

Table 5. Distribution of Graduate Students by Program Type

Quarter	PhD	Masters	Certificate	Total
Spring 2021	9	5		14
Winter 2022	7	1		8
Winter 2023 (two sections)	11	17	1	29
	27	23	1	51

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the most and least helpful. Many students made broad statements of finding all the course curriculum helpful. Those who responded with specific comments predominantly noted the searching for literature reviews and citation management weeks as particularly helpful. One student added that “Every week had incredibly helpful information— data storage and finding/assessing journals stands out as the two topics that were most useful/that I had the least experience with.”

In response to the question of which content they found least helpful, the majority of responses were some variation of “nothing,” or “it was all helpful.” The students who called out specific topics as least helpful mentioned data management planning, communicating visually, and communicating broadly. These topics were identified by some students as having less relevance to their particular research areas, or as new concepts that they had trouble understanding. A student commented: “I found the data management plan content to be the least helpful, not because it was useless to my future career path, but because there were a lot of terms and concepts that I did not understand.” Feedback like this is reviewed and addressed each year when the authors refresh the curriculum. In this instance, more foundational information and definitions of terms were added to the data management curriculum.



Figure 1. Survey responses about workload expectations.

Final Project Statements

The final project statements provide students with an opportunity to reflect on their learning and give instructors additional insight into students' experience with the course. The statement prompt asks them to discuss their goals going forward as a graduate student and a scholar, incorporating knowledge gained from the course. The themes identified through analysis of final project statements from the Winter 2022 and Winter 2023 sections demonstrated students' sense of growth, excitement, and belonging in graduate school. Across the thirty-eight total statements, the authors identified themes of confidence, self-efficacy in discrete skills, the creation of connections between the course curriculum and future goals, and reflections on the hidden curriculum. The following representative quotes reflect these themes, with the anonymous students coded as “S” and a number.

Increased confidence and self-efficacy

Many students cited their increased confidence and sense of self-efficacy in their final project statements (eighteen instances). These findings echo the course evaluation and mid-quarter check-in survey results in which students found the curriculum to be relevant: “I have gained a deeper understanding of the critical thinking necessary to i) gather pertinent information, ii) display this information in a way that fits my audience...” (S12); and “this final project... has resulted in me finding a vein of research on the topic that I had previously not seen. It filled in research gaps and raised my confidence in tackling the subject again in my exam” (S4).

The authors also identified subsets of this theme of confidence and self-efficacy: increased organizational skills (sixteen instances), improved search skills (eighteen instances), improved communication skills (fourteen instances), and increased awareness of library resources (five instances). Regarding increased organizational skills, a student reported: “I am certainly going to

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be a more *organized* scholar going forward. I've always been kind of a disaster in organizing my research I'm at the stage in my academic career where I've started working with other people, and I can't justify being so scattered.... This course introduced me to standardized ways of collecting and sharing research" (S10).

Improved search skills were also remarked on: "Quickly connecting with specific search engines related to my field helped me efficiently access articles I needed. It also allowed me to branch out when I thought I needed more knowledge from a certain field (e.g., education)" (S1). S38 commented on their improved communication skills: "Outside of academia, I now see what I have to say as not only interesting to myself (and hopefully others) but as something I have somewhat of a responsibility to do. Significant to that last part is being able to communicate in a way that is accessible and engaging."

Regarding increased awareness of library resources, S24 stated: "My learning to identify resources in a literature review, identify databases relevant to my discipline and research area, and use a subject heading and keyword searches properly left me embarrassed to admit I knew so little of how the library at PSU tied into my being a successful graduate student...."

The authors' experience teaching the course and the study's findings align with existing research about graduate student needs and the effects of information literacy instruction. The findings related to increased confidence and sense of self-efficacy in the final project statements are consistent with research about graduate students' increased information literacy self-efficacy and confidence after receiving information literacy instruction.^{17,20,21}

Connecting the course curriculum to academic and professional work

The findings demonstrated that students frequently connected the course curriculum to future academic or professional work and recognizing themselves as scholars (thirty-three instances). Some instances referred to specific skills or knowledge gained and how those would impact their future work, or to a broader notion of their path from a novice to a more professional identity: "I feel a lot better equipped to pursue a career in academia than I felt before taking this course" (S6). S32 remarked: "I am happy that I took [the class] when I did. In part because I gained so many resources ahead of my research methods class that I will take next term and in part because I think it was a really ripe time to consider my scholarly identity and my long and short term academic and professional goals." The student statements tying elements of the course to their future work echo their consistent responses that the course curriculum was relevant to their work as graduate students. This relevance allows students to more easily apply what they have learned.

Publishing

When coding the final project statements, the authors encountered many mentions of pursuing publishing (fourteen instances). The course includes evaluating journals for possible submission, defining terms such as "desk reject," responding to reviewers, and navigating publishing access models. Students appeared to have gained confidence related to submitting an article for publication. Some stated that having a better understanding of the process made publishing feel more attainable, or that the related activity had tangible benefits. For example, student S4 stated, "This course allowed me to think through the publication process in a step-by-step way. This information has given me a new passion for submitting an article for publication consideration. As a first-generation student, it seems a lot more attainable now that I know more about it." Another

student stated: "One of my goals is to publish my work, so the assignment where we searched for appropriate journals was very useful in getting me to start thinking about journal selection" (S17).

These findings directly reflect what has been found in the literature: guidance and transparency alleviate graduate student hesitation to engage with the scholarly publishing process, and librarians are in a good position to address the issues at hand.⁸ Some students referred to their first-generation status in the context of publishing as an additional barrier the course curriculum helped them overcome.

Hidden curriculum

The hidden curriculum theme appeared in multiple instances (ten) of the final project statements. A reading in week one explored this topic, as did a discussion that prompted students to share their own experiences with hidden curriculum. Many students referred back to the week one prompt in their final project statements ten weeks later, indicating the significance of this initial discussion. Students commented on their own experiences of the hidden curriculum. S6 said "Needless to say, I still struggle with imposter syndrome, and I appreciate that this course helped make sense of the hidden curriculum and the various norms and expectations within academia." Another student expressed: "Starting with my formal introduction to the concept of 'hidden curriculum,' an idea I was only aware of during my experience as a student. I didn't know it had a name! Now I have a framework for the phenomenon and can put my former and future experiences into perspective" (S24). Finally, S20 reported their desire to help others navigate the hidden curriculum: "Also, I am not sure if this is too idealistic, but I would love to help my future students with understanding the hidden curriculum...and normalizing not knowing an answer to something. Being a graduate student has not been easy, and I would love to make it easier for my future students because it can be isolating and imposter syndrome is real."

The hidden curriculum theme in students' final project statements echoes research about assumptions of graduate students' existing knowledge or skills, the ambiguous and sometimes contradictory guidance they receive, and the hidden norms and conventions of academia.^{6,15} While it may seem problematic to introduce the topic of hidden curriculum early in the course and ask students to participate in potentially vulnerable conversations before trusted relationships have formed, it has proven to be an effective starting point. It resonates with students; they appreciate being able to connect their own feelings and experiences as graduate students to the idea of a hidden curriculum.

Limitations

This is a retrospective case study of existing data gathered to evaluate the course and student experiences; therefore, the data collection method and resulting data were not designed specifically for research purposes. This study also represents the experience of a discrete group of graduate students at one institution and may not be generalizable.

Reflections on Teaching a Credit-Bearing Course

Along with the study findings, the authors would like to share their experiences as instructors of record on a credit-bearing course. At Portland State University, librarians are tenure-line faculty, which enables them to teach credit-bearing courses. While Portland State librarians had previously taught an undergraduate course, it had been ten years since they had been in this role. The course

has raised the profile of the instructional role of librarians at Portland State University and has led to new conversations and collaborations outside of the Library. Examples include Pendell sharing course information at a meeting of STEM department chairs discussing re-visioning the doctoral curriculum and library administration citing the course in annual reports as evidence of the library's impact on student learning.

In most library instruction models, there are few opportunities for librarians to interact with students more than once, and interactions are often mediated by disciplinary faculty. Teaching this course enables the authors to build relationships with students over time and become part of their academic experience, even after the course ends, which is highly professionally rewarding. Both authors have been contacted by former students of the course to share their successes, including publishing a journal article.

The authors prioritize student engagement and learning over correctness. Consequently, grading is kept very simple, which also helps to keep teaching the course sustainable for the authors. Challenges associated with teaching a credit-bearing course are largely related to navigating situations with individual students. The authors rely heavily on university documentation, policies, and conversations with faculty outside of the library regarding grading, withdrawals, and other student-related issues.

The authors update or revise content annually. They review students' comments from previous course evaluations to inform improvements. They incorporate new tools or changes in the research landscape, such as artificial intelligence and its impact on literature searching, authorship, and research integrity. An increase in humanities and history students taking the course has informed updates to the data management curriculum so that students can better connect their research with the idea of "data," which often is presumed to be only quantitative, not qualitative or inclusive of existing texts, images, and video. Going forward, the authors hope to strengthen the professional development curriculum for graduate students who are pursuing roles outside of academia.

Conclusion

A common theme in existing literature is that graduate students need support with skills not taught in their courses. Librarians work to address these gaps by providing workshops, course-integrated instruction, short courses, and credit-bearing courses tailored to specific disciplines or topics, such as scholarly publishing. Similar to the experience of Anders¹⁹ and others, the authors observed graduate students' recognition of their own need for information literacy support via high registration numbers for workshops, but these ultimately had low attendance. In contrast to non-credit-bearing workshops, providing a credit-bearing course has enabled students to build skills for their graduate program while also tangibly progressing toward their degree. As this case study demonstrates, students have responded positively to the course. In addition to the study data, the authors have received messages months or even years later from students expressing how the course helped them achieve goals such as publishing scholarly articles and presenting at national conferences. The authors' labor to provide the course has been outweighed by their positive professional experiences doing so. The authors hope this case study will act as encouragement for other librarians wishing to explore the credit-bearing course model for graduate student information literacy instruction.

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Feature

Revisiting Ranganathan's Laws

Data-Driven Insights on Libraries and Technology

Manash Esh and Saptarshi Ghosh

Abstract

This study analyzes how modern libraries are keeping up with Ranganathan's Five Laws of Library Science, especially when it comes to user engagement, technology, and adapting to evolving needs. By analyzing data with Python, this study dives into key factors like how often people visit libraries, why they go, how helpful the staff are, the ease of using RFID and self-service tools, and overall satisfaction with digital resources. The results highlight the importance of libraries embracing new technology, expanding their offerings, and putting users first. Ultimately, this study provides practical insights to help libraries improve accessibility, engagement, and satisfaction—ensuring they stay relevant and continue to grow in the digital era.

Purpose of the Research

This study aims to empirically validate Ranganathan's Five Laws of Library Science by examining key factors such as library visit frequency, purpose of visits, staff assistance, technological advancements, and user satisfaction. By analyzing these relationships, the research seeks to understand how libraries can enhance user engagement and resource utilization, ensuring they remain effective and relevant in an evolving digital landscape.

Scope of the Study

The research focuses on user engagement, technological advancements, and library adaptability in response to changing user needs. This study explores aspects such as visit frequency, staff helpfulness, ease of material access, satisfaction with online resources, and website usability. The study employs data-driven analysis using Python, incorporating correlation matrices, visualizations (boxplots, scatter plots, and violin plots), and multiple linear regression to support the validation of Ranganathan's Five Laws. Additionally, the study underscores the importance of understanding the information ecosystem, emphasizing how user behavior and technological progress interact within library environments, as discussed in existing literature.

Introduction

The transformation of libraries from traditional physical spaces to dynamic digital ecosystems reflects broader societal and technological shifts that have fundamentally altered how we access, share, and value information. Advances in technology have prompted a reevaluation of the foundational principles of library science, particularly those established by Shiyali Ranganathan in

the mid-twentieth century. His five laws—books are for use, every book its reader, every reader their book, save the time of the reader, and the library is a growing organism—remain deeply relevant to contemporary library practices. Recent studies highlight a growing trend of aligning these timeless principles with modern user engagement strategies, emphasizing a user-centered approach in response to rapid technological advancements.¹⁻³ This alignment is crucial because the outdated perception of libraries as mere repositories for books no longer holds; today's libraries must evolve to meet the diverse and evolving needs of their users, leveraging tools like digital repositories and interactive platforms.

As libraries navigate this new landscape, user engagement has emerged as a critical focus, prompting researchers to explore how Ranganathan's laws can be applied in modern contexts. Studies suggest that analyzing user behavior through data-driven methods can significantly enhance library engagement strategies, fostering a culture of increased usage and user satisfaction.^{4,5} Additionally, research on social media, mobile applications, and virtual reality offers valuable insights into user interaction patterns, underscoring the importance of integrating these technologies to enrich user experiences.^{6,7} However, despite the growing body of literature on these topics, significant gaps remain in empirically validating Ranganathan's laws through data-driven approaches and translating these findings into practical applications. Much of the existing research remains theoretical or anecdotal, lacking robust quantitative studies to substantiate claims about user engagement and library adaptation.^{8,9} This research is particularly timely given the ongoing discourse around the evolution of libraries, especially in light of the interplay between technological progress and user-centered services. As libraries transition into open, multifunctional community hubs, they face the challenge of addressing an increasingly broad and diverse definition of library "users" and their varied needs.^{10,11} Moreover, the potential for Ranganathan's laws to serve not only as historical benchmarks but also as actionable guidelines for contemporary library practices calls for a reexamination of their relevance in today's context.^{12,13}

While significant strides have been made in understanding user engagement through the lens of Ranganathan's laws, there is a pressing need for more empirical research to address existing gaps. By conducting a data-driven analysis of the relationships among user engagement, technological advancements, and library evolution, this study aims to provide a clearer understanding of how Ranganathan's principles can be reinterpreted and applied to meet the demands of modern library science.^{14,15} This research not only reinforces the enduring relevance of Ranganathan's laws but also aligns them with emerging trends, ensuring their continued significance in an increasingly digital future.

Ranganathan's Five Laws in the Age of Technology

In today's digital era, Ranganathan's Five Laws of Library Science remain highly relevant, shaping how libraries evolve alongside technological advancements. The First Law—"Books Are for Use"—emphasizes the need for enhanced digital access, ensuring materials are easily discoverable through advanced cataloging systems and user-friendly interfaces.¹⁶ The Second Law—"Every Reader Their Book"—highlights the importance of personalized services, made possible by data analytics and AI-driven recommendation systems that cater to individual preferences. With the Fourth Law—"Save the Time of the Reader"—efficiency is paramount in today's fast-paced world, where innovations like RFID (radio-frequency identification) technology streamline inventory management and book retrieval.¹⁷ Meanwhile, the Fifth Law—"The Library Is a Growing Organism"—reinforces the need for libraries to continuously evolve, integrating emerging technologies to enhance user experience and meet the changing needs of their communities.¹⁸

The Transformative Role of Technology in Libraries

Technology is fundamentally reshaping how libraries organize, access, and disseminate information. Digital tools such as automation systems, web-based discovery platforms, and institutional repositories have revolutionized information access, enabling users to retrieve vast resources with ease. Studies from institutions like IIT Delhi and IIT Bombay show that libraries are leveraging technology to improve operational efficiency and user engagement, aligning their services with Ranganathan's Five Laws.¹⁹ Also, knowledge management and indexing play a critical role in handling the exponential growth of information, ensuring seamless navigation of digital archives.²⁰ As libraries adapt, data mining and digital access technologies become essential for maintaining relevance in an increasingly interconnected world. These advancements reflect a deep commitment to meeting user needs while upholding the core principles of library science.

Case Study: University of North Bengal Library, India

This research explores the University Library at the University of North Bengal (NBU), West Bengal, India, through a case-survey methodology. Since its establishment in 1962, the library has continually adapted to shifts in information dissemination and user expectations. By embracing modern technologies, the library has significantly enhanced accessibility, convenience, and service quality.

Key technological implementations include:

- RFID-based checkout systems, enabling seamless book borrowing and returns
- A comprehensive Library Management System (LMS) for efficient resource management
- A diverse range of e-resources, expanding access to scholarly materials

These advancements have transformed the user experience, making information retrieval more efficient and aligning library services with contemporary academic and research demands. This study examines the impact of these technological upgrades, demonstrating how they have improved access, enhanced convenience, and elevated overall user satisfaction.

Literature Review

Ranganathan's Laws of Library Science have faced new challenges as user engagement and technology evolve. Early discussions emphasized their timeless nature, arguing that core library values remain unchanged despite shifts in formats and access methods.¹ However, the rise of digital libraries sparked debates about how technology reshapes user interactions with resources. Studies show online databases and digital catalogs have revolutionized information searches, reinforcing the importance of accessibility—a key idea in Ranganathan's second law.^{2,3} As libraries integrated technology, recent research highlighted user engagement metrics as a modern measure of success. This shift ties user-focused approaches directly to Ranganathan's laws.^{4,5} It also sparked exploration into how new tools enhance library services and user experiences, emphasizing the need for libraries to evolve while staying true to their principles.^{6,7}

Recent studies use data-driven methods to validate Ranganathan's laws, bridging traditional principles with modern digital practices.^{8,9} These studies highlight that core library principles remain vital, even as environments and technologies change. Libraries continue to promote access to knowledge and foster information literacy in a rapidly advancing digital era.^{10,11} This historical perspective underscores the enduring relevance of Ranganathan's laws in discussions about library transformation, user engagement, and technology's impact.¹³⁻¹⁵

Libraries must adapt to changing user needs and behaviors. Research shows digital technology has significantly altered user engagement, requiring a rethinking of traditional principles.^{1,2} User-centered services are now the norm, with accessibility and interactive platforms critical to library evolution.^{3,4} Technological advancements have transformed how libraries operate and share knowledge. Digital tools enable personalized content delivery, aligning with Ranganathan's idea of "Every reader their book."^{5,6} Libraries now balance traditional methods with innovative approaches, reinforcing their role as essential institutions.^{7,8}

Data-driven approaches deepen understanding of user interactions, guiding strategic development.^{9,10} Validating Ranganathan's laws today affirms their importance and highlights the need for libraries to adapt and innovate.¹¹⁻¹³ Ongoing discussions call for a thoughtful approach that respects historical frameworks while addressing modern challenges.^{14,15} Recent research explores methods to validate Ranganathan's laws, focusing on user engagement and technology. Quantitative studies, like user surveys and usage data analysis, support their relevance today. For example, shifts in user behavior align with Ranganathan's principles, emphasizing the link between user satisfaction and access to resources.^{1,2} Qualitative research reveals how libraries adapt to the digital age, showing they are dynamic organizations responding to community needs and technological changes.^{3,4} Mixed-methods research combines quantitative and qualitative data, offering a comprehensive view of user experiences.^{5,6}

Technological change has reshaped library services. Digital tools are transforming how patrons interact with resources.^{7,8} Studies stress the importance of flexibility, reflecting Ranganathan's view of libraries as "growing organisms" that adapt to user needs and technological advancements.^{9,10} The integration of these approaches highlights a shift in library science, reaffirming Ranganathan's laws while promoting user-centered services.¹¹⁻¹³ This blending of methods creates a robust framework for understanding libraries' roles in modern society.^{14,15} The evolving field of library science presents theories that both support and challenge Ranganathan's laws. Recent data-driven research shows personalized services enhance user satisfaction, aligning with Ranganathan's principles.^{1,2} However, technological advancements complicate their validation. Some argue digital tools improve accessibility and efficiency, reinforcing Ranganathan's ideas.^{3,4} Others worry rapid technological change may outpace traditional frameworks, requiring reevaluation of established norms.⁵ Scholars note the shift from traditional information repositories to vibrant knowledge hubs, aligning with Ranganathan's vision of adaptability.^{6,7} By synthesizing perspectives on user engagement, technology, and library roles, the literature supports and critiques Ranganathan's laws, reflecting the interplay between enduring principles and modern demands.⁸⁻¹⁰ These insights guide future research, emphasizing the need for ongoing dialogue between theorists and practitioners.¹¹⁻¹⁵

In reviewing original works and studies, this literature review reveals a complex landscape of user engagement, technological progress, and evolving library practices. Key findings show Ranganathan's ideas remain highly relevant in a digital age marked by rapid advancements and shifting user needs. Libraries are dynamic entities that must adapt, with Ranganathan's laws providing essential guidance.^{1,2}

User engagement strategies are central to validating Ranganathan's principles today. Recent studies highlight the link between user satisfaction and access to resources, signaling a move toward user-centered services.^{3,4} Data-driven approaches provide insight into user behavior, helping libraries refine services to meet modern demands.^{5,6} Libraries also serve as inclusive community spaces, where Ranganathan's laws enhance access to information and promote lifelong

learning.^{7,8} The implications extend beyond theory, highlighting the need for libraries to embrace new technologies as integral to user interactions. This shift reflects Ranganathan's principle of libraries as "growing organisms" that adapt to societal and technological changes.^{9,10} As digital spaces expand, libraries must continually reassess their relevance to remain vital centers for learning and community engagement. However, gaps exist in current research. Many studies are theoretical or anecdotal and lack robust quantitative data to support claims about user engagement and library adaptation.^{11,12} More empirical research is needed to build a stronger framework for applying Ranganathan's laws in practice. Future studies should explore long-term user interaction patterns and compare implementation strategies across different library types.^{13,14}

Ranganathan's Laws of Library Science remain foundational, but their validation must evolve with technological and societal changes. The synthesis of findings reveals a strong connection between user engagement, data-driven methods, and core library principles. Future research should address gaps and foster a dialogue that bridges traditional and contemporary perspectives. As libraries evolve, understanding the digital age is crucial to ensuring Ranganathan's laws remain relevant and continue to actively shape the future of library science.¹⁵

Methodology

This study employs a structured methodology to evaluate Ranganathan's Five Laws of Library Science, focusing on user behavior, technological advancements, and library adaptability to meet evolving user needs. The research adopts a quantitative approach, using a questionnaire distributed to 200 patrons of the University of North Bengal library between November 2, 2024, and December 15, 2024, with 155 responses collected. The questionnaire captures key variables such as library visit frequency, staff helpfulness, ease of finding materials, satisfaction with online resources, website usability, and overall satisfaction ratings. These variables are designed to align with Ranganathan's laws, ensuring a clear connection between the research instrument and the theoretical framework. The methodology is structured around five research questions (RQs), each corresponding to one of Ranganathan's laws. Data are collected from a CSV file containing user feedback and preprocessed to handle missing values, remove non-numeric columns, and select relevant variables for analysis. Descriptive statistics, correlation analysis, and visual tools such as heatmaps, scatter plots, boxplots, and pair plots are used to identify trends and relationships. Multiple linear regression is employed to assess the impact of key factors on user satisfaction. Each research question is explicitly linked to one of Ranganathan's laws, and the analysis is designed to validate these connections.

Research Questions and Links to Ranganathan's Laws:

RQ1: How often do people visit the library, and how does that affect their satisfaction? (First Law: "Books Are for Use")

This question looks at how often people visit the library and why they come. The author sorted the data by visit frequency and reasons for visiting, then calculated average satisfaction ratings. To make sense of the trends, the author used visuals like violin plots and summary tables. What the author found is straightforward: people who visit the library regularly tend to be more satisfied. This lines up with the First Law, which is all about making sure library resources are being used to their fullest.

RQ2: What really makes users happy? (Second Law: "Every Reader Their Book")

Here, the author wanted to figure out what factors boost user satisfaction. The author looked at things like how often people visit, how helpful the staff is, how easy it is to find materials, and how satisfied users are with online resources and the library website. To analyze the data, we used tools like correlation matrices, scatter plots with regression lines, and boxplots. Staff helpfulness and ease of finding materials have a strong connection to user satisfaction. This supports the Second Law, which emphasizes giving every reader access to the resources they need.

RQ3: Does making resources easy to access keep users engaged? (Third Law: "Every Book Its Reader")

This question digs into how things like staff helpfulness, ease of finding materials, and satisfaction with online resources affect user engagement and resource use. It used correlation matrices and pair plots to analyze the relationships. The results were clear: when resources are easy to access, users are more satisfied and engaged. This ties back to the Third Law, which is all about making sure every book (or resource) finds its reader.

RQ4: How does technology save users' time? (Fourth Law: "Save the Reader's Time")

The author wanted to see how technology—like RFID systems and self-service options—impacts time efficiency and user satisfaction. Using correlation matrices and pair plots, we analyzed the data. The findings showed a moderate but positive link between the convenience of RFID systems and user satisfaction. This aligns with the Fourth Law, which focuses on saving readers' time by making library processes faster and more efficient.

RQ5: How do libraries grow and adapt to stay relevant? (Fifth Law: "A Library Is a Growing Organism")

This question explores how user engagement, technological advancements, and the library's ability to adapt reflect its growth and evolution. The author used tools like correlation matrices, scatter plots, and heatmaps to analyze the trends. The results showed strong connections between technology use, user engagement, and satisfaction. This highlights how libraries are evolving to meet user needs, which perfectly aligns with the Fifth Law's idea that libraries are living, growing organisms.

Analytical Tools and Ethical Considerations

The study uses Python libraries such as Pandas for data manipulation, Seaborn and Matplotlib for visualizations, and Scikit-learn for regression analysis. Ethical considerations include ensuring data privacy through anonymization, maintaining transparency in research goals and methods, and minimizing bias by using representative data and avoiding broad assumptions.

Limitations

The study acknowledges limitations, including dependence on data quality, focus on specific variables, and potential limited applicability to libraries with different user demographics or resources. Despite these limitations, the methodology provides a robust framework for validating Ranganathan's laws through empirical data analysis.

By systematically linking research questions to Ranganathan's laws and employing rigorous data analysis, this study offers valuable insights into enhancing library services. The findings emphasize

the importance of user-focused strategies and continuous adaptation, aligning with Ranganathan's vision of dynamic, evolving libraries. This methodology ensures a clear connection between the research design and the theoretical foundations of library science.

Analysis and Interpretation

RQ1: How do the frequency of library visits and the purpose of visits influence user satisfaction ratings, and what implications do these findings have for validating Ranganathan's First Law of Library Science, "Books Are for Use"?

This research question looks at how often people visit libraries, why they visit, and how satisfied they feel, while also checking if these factors fit the idea that libraries work best when their resources are used. By looking at these connections, the study hopes to provide evidence that shows how important accessibility and user involvement are for making libraries better and improving the user experience. The First Law of Library Science, "Books Are for Use," highlights how vital libraries are in offering access to books and other materials, a point that is supported by data analysis. This analysis studies the links between library visit frequency, visit purposes, and user satisfaction ratings, offering key findings. The data are split into library visit categories: Daily, Weekly, Monthly, Occasionally, and Rarely, along with users' reasons for visiting and their average satisfaction scores. A noticeable trend comes from the summary table: people who visit the library often, such as daily or weekly, have higher average satisfaction scores, between 4.00 and 4.50, showing a strong link between accessibility and user involvement. In contrast, those who visit occasionally or rarely have lower satisfaction scores, which can drop to 3.00, indicating that less frequent use may result in lower resource use and engagement.

Table 1. Library Visit Frequency, Purpose of Visit, and Satisfaction Ratings

Library Visit Frequency	Purpose of Visit	Visit Count	Avg. Satisfaction Rating	Median Satisfaction Rating	Std. Deviation	Min Rating	Max Rating
Daily	Attending events	2	4.0	4.0	0.0	4	4
Daily	Borrowing books	14	4.36	5.0	0.84	3	5
Daily	Studying or research	15	4.27	4.0	0.70	3	5
Monthly	Borrowing books	20	3.95	4.0	0.60	3	5
Monthly	Studying or research	2	4.5	4.5	0.71	4	5
Occasionally	Attending events	1	4.0	4.0	NaN*	4	4
Occasionally	Borrowing books	11	4.0	4.0	0.63	3	5
Occasionally	Studying or research	5	3.8	4.0	0.45	3	4
Occasionally	Using library computers & internet	1	3.0	3.0	NaN	3	3
Rarely	Borrowing books	3	3.33	3.0	0.58	3	4
Rarely	Studying or research	4	3.75	3.5	0.96	3	5
Weekly	Borrowing books	48	4.04	4.0	0.54	2	5
Weekly	Studying or research	29	4.34	4.0	0.55	3	5

*NaN, the statistical inference for 'Not a Number,' is a particular value of a numeric data type which is undefined as a number.

The data in Table 1 show how often people visit the library, why they go, and their satisfaction ratings. This gives useful information on how these elements affect library use and resource access. Regular visitors, like those coming daily or weekly, usually report higher satisfaction scores. The satisfaction score for daily visitors borrowing books is 4.36, while weekly visitors satisfaction score is 4.34. These high scores, along with median values of 5.0 and 4.0, respectively, suggest that frequent use of library resources leads to positive experiences and better resource usage. On the other hand, people who visit occasionally or rarely have lower satisfaction ratings, such as with occasional computer users with an average rating of 3.0 and rare book borrowers with an average rating of 3.33. This indicates that less-frequent visits can result in less engagement and poorer experiences. The purpose of visits is also important, with activities like academic research and borrowing books consistently gaining higher satisfaction scores compared with more casual or infrequent use. The standard deviation values show that regular visitors have steadier satisfaction levels, while occasional and rare visitors display more variability in their experiences. These results support Ranganathan's First Law of Library Science, "Books Are for Use," highlighting that libraries work best when their resources are used actively and regularly. The data highlight the need to encourage regular library visits and adapt services for various user needs, as greater engagement is linked to higher satisfaction and effective resource use. For example, the high level of burnout in resident physicians, especially in demanding academic settings, emphasizes the need for ongoing resource engagement for well-being and satisfaction in stressful situations. Libraries should focus on efforts that promote the consistent use of their services, helping them to stay crucial and user-focused spaces that provide knowledge access and positive experiences.

The violin plot shown in Figure 1 supports these findings by showing the satisfaction ratings of users with different visit frequencies and reasons. Key points include a higher concentration of ratings in the upper range (4.0–4.5) from frequent visitors, indicating that more regular visits improve user satisfaction. Additionally, the reason for visits significantly affects satisfaction levels. Activities like academic research and book borrowing lead to more stable and higher satisfaction ratings, as the data show that daily and weekly visitors involved in these tasks report

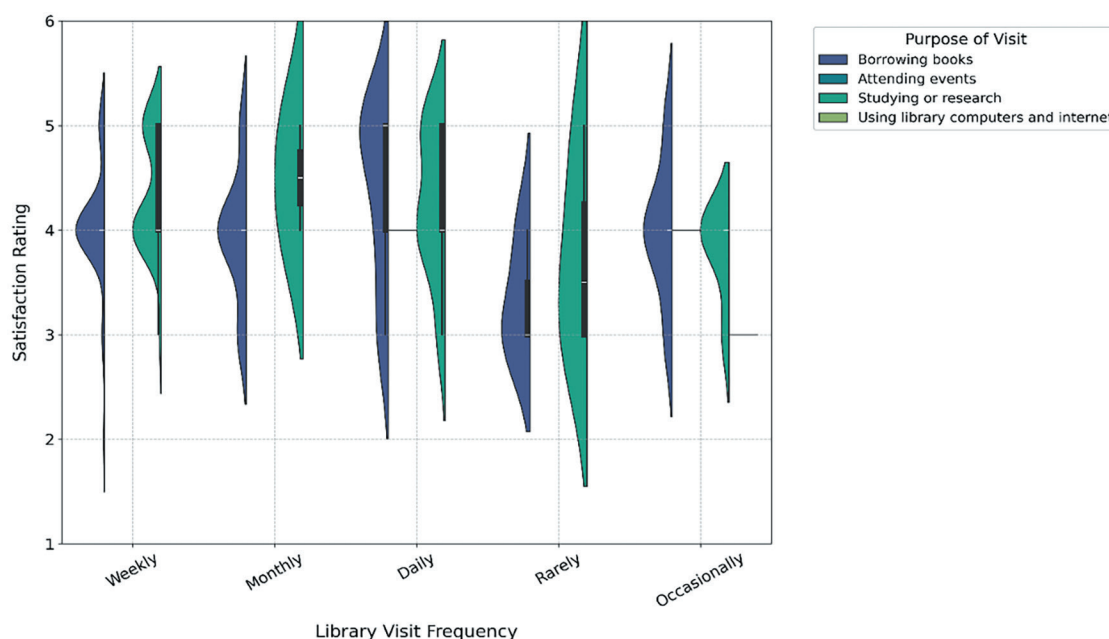


Figure 1. Library visit frequency versus satisfaction rating by purpose of visit.

average ratings above 4.0. On the other hand, casual visits or infrequent usage of the library, like occasional users accessing computers, lead to lower and more varied satisfaction ratings, suggesting that less-frequent engagement might result in worse experiences. These results closely connect to Ranganathan's First Law of Library Science, "Books Are for Use," which highlights that libraries serve their purpose when resources are actively accessed. This analysis validates several important points: frequent library visits relate to higher book usage, supporting the idea that "Books Are for Use"; the violin plot shows different levels of engagement, stressing the need for regular access; and higher satisfaction scores for frequent visitors indicate effective resource use, ensuring that library collections meet their intended role. The data also highlight the necessity for well-planned library policies that encourage regular engagement, such as outreach programs, better accessibility, and tailored services for various user groups. The findings support Ranganathan's belief that libraries succeed when their resources are used. The strong link between frequent visits, higher satisfaction ratings, and effective resource use shows how accessibility and engagement enhance library effectiveness. These insights stress the importance of initiatives that promote consistent use of libraries, ensuring that they remain essential, user-focused institutions that provide access to knowledge and resources. By aligning library policies and practices with these insights, institutions can improve user satisfaction and reinforce the lasting significance of Ranganathan's First Law.

RQ2: How do library-visit frequency, staff assistance, ease of finding materials, online resources, and website usability impact user satisfaction in accessing relevant resources, thereby validating Ranganathan's Second Law, "Every Reader Their Book"?

To explore the research question, the data analysis was conducted to understand how these various factors influence user satisfaction and their alignment with the principles outlined by Ranganathan's Law.

Figure 2 showed boxplots that help to see how factors like library visit frequency, staff helpfulness, ease of finding materials, satisfaction with online resources, and website usability impact user satisfaction. Boxplots let us look at how satisfaction scores are spread out based on different levels of these factors. For instance, the boxplot comparing Library Visits to Satisfaction (plot 1) demonstrated that more frequent visits usually lead to higher satisfaction scores. This supports the theory that visiting the library more often brings about greater satisfaction, which matches the thought that users engage more with their materials during these visits. Also, Staff Helpfulness and Ease of Finding Materials had a noticeable effect on satisfaction, with users reporting better satisfaction when they see the staff as more helpful and materials as easier to locate.²² These visual findings imply that having well-organized library services is crucial for boosting user satisfaction, confirming Ranganathan's Law, which highlights the importance of providing suitable resources for the needs of each user.

Figure 3 shows scatter plots that were made to display how factors relate to satisfaction, with lines showing the main trend. These plots showed that there is a positive link between help from staff, ease of finding materials, and user satisfaction. The regression lines in these plots suggest that as staff help and the ability to find materials increase, user satisfaction also increases, confirming that these are key for a user's experience in the library. The relationship between how often users visit the library and their satisfaction also indicated a positive link, highlighting that more visits to the library lead to higher satisfaction, similar to a reader discovering their book. The boxplots clearly show satisfaction distributions in various categories, while the scatter plots with lines measure the

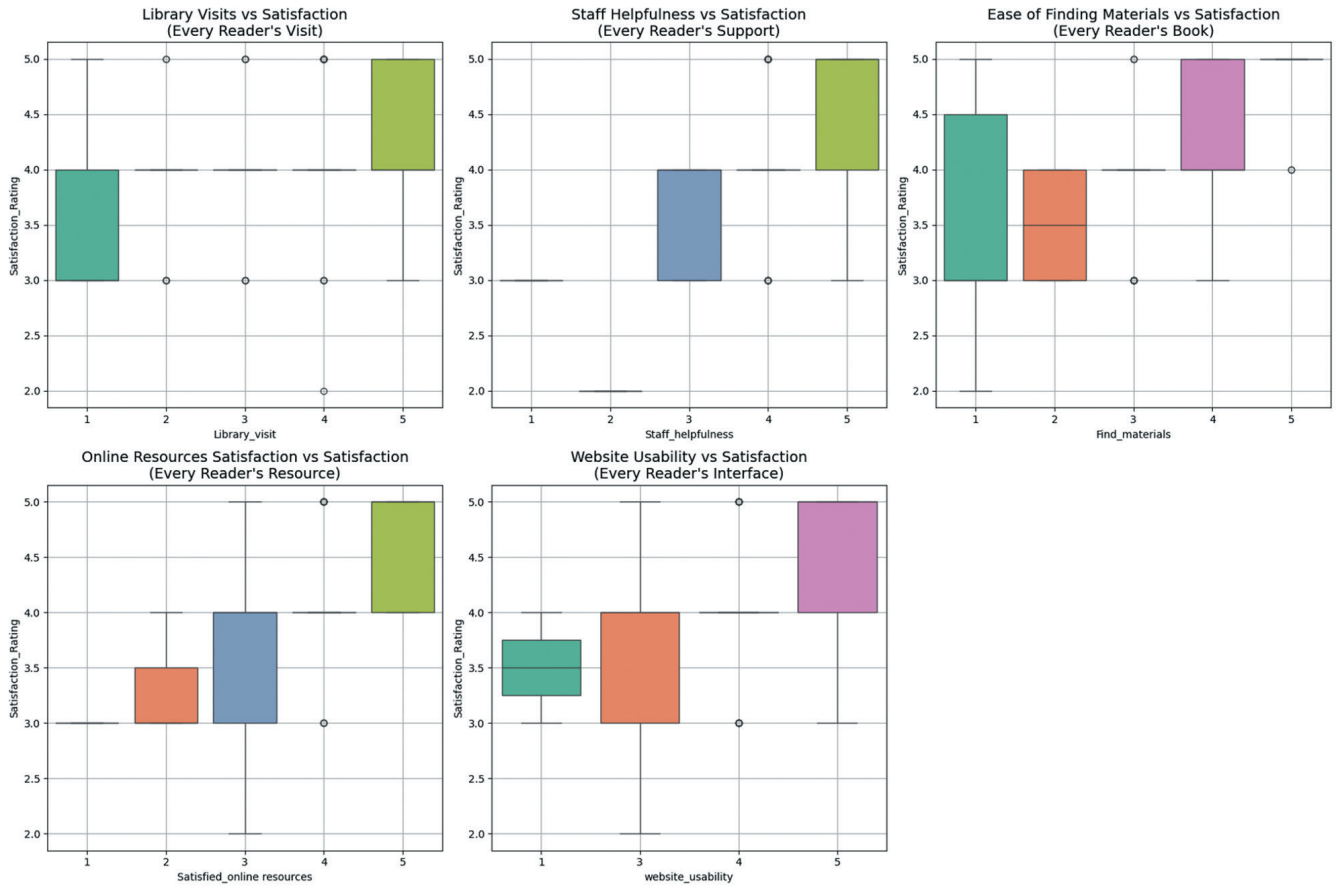


Figure 2. Grid plot (boxplots).

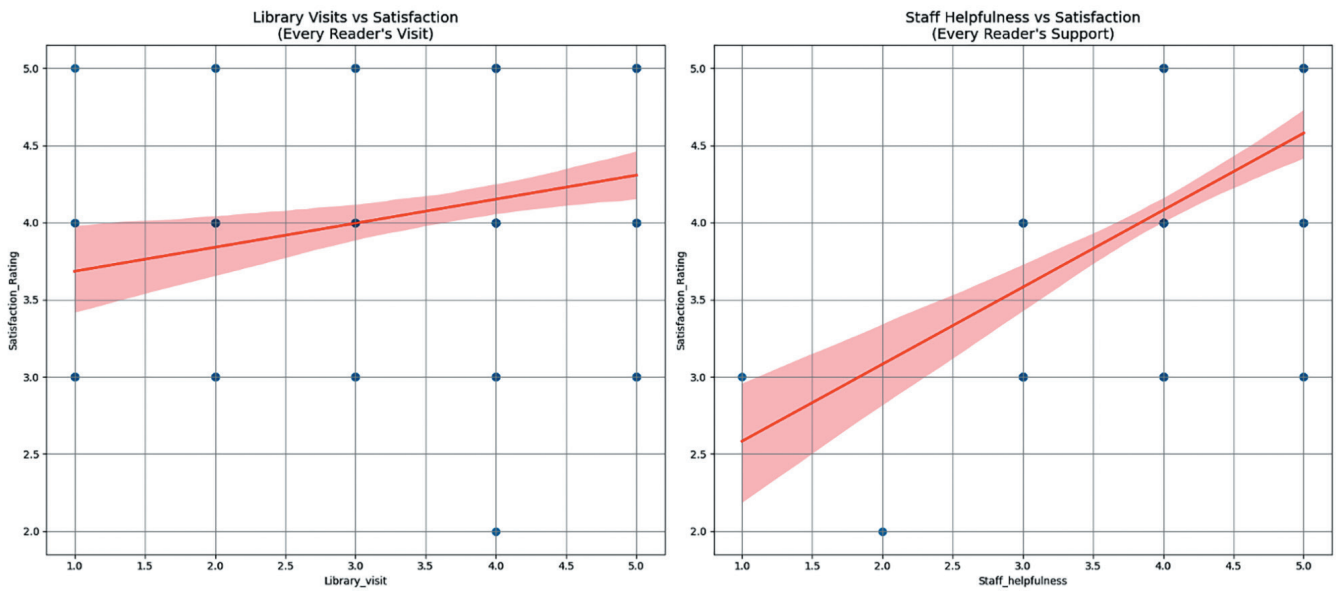


Figure 3. Scatter plots with regression lines.

strength of these links. The correlation matrix and heatmap provide a clear visual summary of the relationships, giving insight into the most interconnected factors. Together, these visualizations aid in understanding how various elements contribute to user satisfaction, aligning with Ranganathan's Second Law, "Every Reader Their Book," by indicating that personalized and accessible services enhance satisfaction. The analysis strongly backs the research question that factors such as frequency of library visits, staff help, ease of finding materials, online resources, and website usability greatly affect user satisfaction.

RQ3: How do staff helpfulness, ease of finding materials, and satisfaction with online resources influence user engagement and resource utilization, thereby validating Ranganathan's Third Law of Library Science, "Every Book Its Reader"?

The research question is designed to explore the critical factors that ensure library resources are used effectively and reach their intended users. Ranganathan's Third Law emphasizes that every book (or resource) must have a reader, and this study investigates how library services—such as staff assistance, resource discoverability, and online resource usability—contribute to this goal. By analyzing these factors, the research aims to identify actionable insights that can enhance user engagement and ensure that library resources are accessible and beneficial to all users.

Table 2. Correlation Matrix of Key Library Service Factors

Factor	Staff Helpfulness	Find Materials	Satisfied Online Resources	Satisfaction Rating
Staff Helpfulness	1.000	0.467	0.456	0.554
Find Materials	0.467	1.000	0.000	0.512
Satisfied Online Resources	0.456	0.000	1.000	0.532
Satisfaction Rating	0.554	0.512	0.532	1.000

Table 2 shows the link between how helpful staff are, how easy it is to find materials, satisfaction with online resources, and the overall satisfaction score. Higher numbers point to a stronger connection, backing the idea that better library services lead to happier users, which supports Ranganathan's Third Law, "Every Book Its Reader." The correlation matrix gives numerical proof of how key library service elements relate to user satisfaction, uncovering important findings. Staff helpfulness has a strong positive correlation with satisfaction score at 0.554, meaning users who see library staff as helpful are more likely to be satisfied. This highlights how crucial staff support is for connecting users to the correct resources, reflecting the idea of every book its reader. The ability to find materials also has a moderate positive correlation with the satisfaction score at 0.512, indicating users who easily find resources tend to be more satisfied. This ease of finding resources directly affects user engagement and use of materials, in line with the Third Law of library science. Moreover, satisfaction with online resources has a strong positive correlation with satisfaction score at 0.532, showing the increasing importance of digital resources in today's libraries. Users satisfied with online materials are more likely to interact with the library, ensuring digital resources reach those who need them. Furthermore, the correlations between factors show significant links: staff helpfulness and finding materials correlate at 0.467, while staff helpfulness and online resource satisfaction correlate at 0.456. These links suggest that staff assistance and satisfaction with online resources are related and both play a major role in a positive user experience. Overall, these results highlight the need for staff support, easy access to resources, and digital services to boost user satisfaction in libraries.

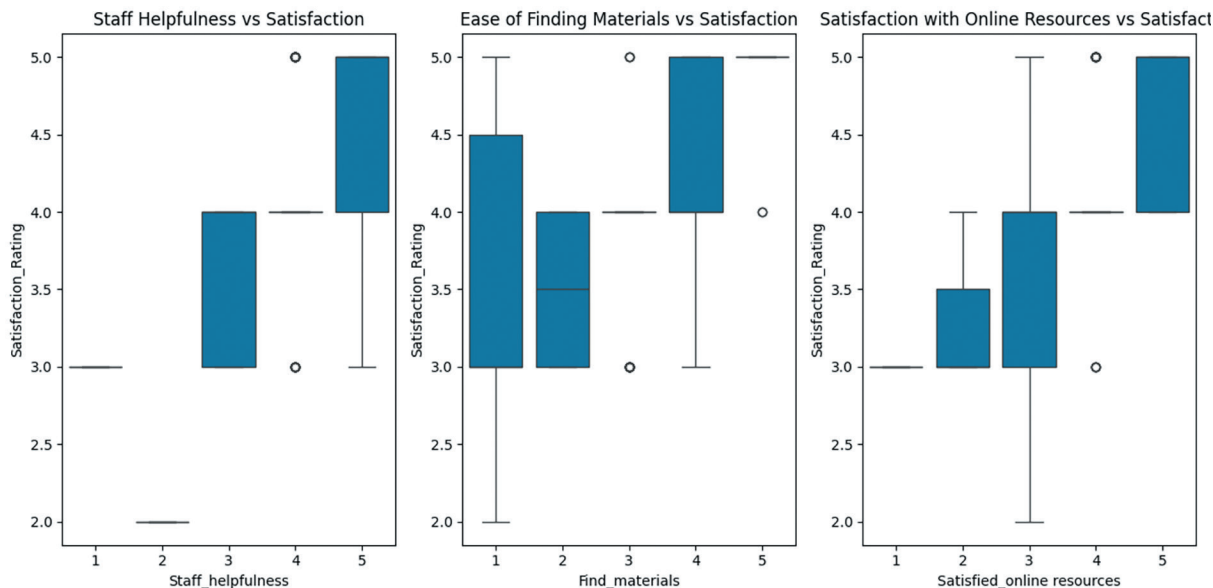


Figure 4. Boxplot.

The boxplots in Figure 4 give a glimpse at how important library service factors relate to user satisfaction. When looking at staff helpfulness and satisfaction, the boxplot shows that when staff are more helpful, users are more satisfied, with less difference in satisfaction when staff help is high. This suggests that a strong staff presence leads to a better experience. The boxplot showing how easy it is to find materials also indicates that users who can quickly locate items tend to report higher and more stable satisfaction levels, which points to the need for easy access to resources to improve user contentment. Moreover, the boxplot on satisfaction with online resources indicates that users who like digital resources generally have higher overall satisfaction, with a smaller range of ratings at higher satisfaction levels, showing how important online resources are for today's library services. These visuals together show how staff support, access to resources, and digital services all affect user satisfaction. The examination of staff helpfulness, how easy it is to find materials, and satisfaction with online resources supports Ranganathan's Third Law, "Every Book Its Reader." The strong links between these factors and user satisfaction show that good staff support, easy-to-find resources, and accessible online tools are key to making sure library resources connect with the right users. The visuals—including the correlation heatmap and boxplots—further reveal how these factors work together and affect user engagement. Libraries can use these findings to focus on staff training, improve how resources are arranged, and boost digital services, ensuring that all resources, whether physical or digital, reach their users. By tackling these areas, libraries can meet their goal of providing fair access to knowledge and promoting lifelong learning.

Table 3. Correlation Matrix of RFID Services and Satisfaction

Factor	Convenience Check-in/Check-out RFID	Self-service RFID	Satisfaction Rating
Convenience Check-in/Check-out RFID	1.000	0.412	0.486
Self-service RFID	0.412	1.000	0.459
Satisfaction Rating	0.486	0.459	1.000

RQ4: How do RFID-based check-in/check-out convenience, self-service options, and user feedback on RFID improvements influence user satisfaction and save readers' time, thereby validating Ranganathan's Fourth Law of Library Science, "Save the Reader's Time"?

The research question examines how RFID-based check-in/check-out convenience, self-service options, and user feedback on RFID improvements impact user satisfaction and time efficiency, ultimately validating Ranganathan's Fourth Law, "Save the Reader's Time."

Table 3 shows the correlation values between RFID library services and user satisfaction. The correlation matrix gives numerical evidence of the links between RFID ease, self-service options, and user satisfaction, showing some important points. The convenience of check-in/check-out RFID has a moderate positive correlation with satisfaction rating at 0.486, meaning users who find RFID check-in/check-out easy are more likely to report higher satisfaction. This shows how effective RFID systems save users time by cutting down on manual tasks and lessening wait times, similar to findings in self-operating systems where real-time processing improves user experience. Likewise, self-service RFID has a moderate positive correlation with satisfaction rating at 0.459, indicating that users who use self-service options are often more satisfied. Self-service systems allow users to manage their transactions on their own, increasing ease and saving time, which fits with recent studies on user-driven technologies. Furthermore, the correlation between convenience check-in/check-out RFID and self-service RFID is 0.412, which means these two elements are linked, both aiding in a smooth and time-saving library experience. Altogether, these results underline how RFID technology and self-service options enhance user satisfaction by streamlining library operations and increasing ease.

The scientific grid plot (PairGrid) in Figure 5 shows visuals of the links between RFID convenience, self-service options, and satisfaction ratings, giving key insights into how they affect each other. In the upper triangle, scatter plots indicate a positive trend, meaning that more RFID convenience and self-service use lead to higher satisfaction ratings. This shows a clear connection between these factors and user contentment. In the lower triangle, DE (Kernel Density Estimation) plots exhibit the density of the data, revealing areas of high satisfaction linked to better RFID convenience and self-service use, further showing how important these technologies are for improving user experience. The diagonal bars illustrate the spread of each variable, showing that higher scores in RFID convenience and self-service options are related to better overall satisfaction ratings. This emphasizes the important function these factors have in creating positive user experiences. Together, these visuals provide strong proof of the worth of RFID convenience and self-service options in boosting satisfaction and making library services more efficient. The analysis backs up Ranganathan's Fourth Law, to "Save the Reader's Time." The moderate positive ties between RFID convenience, self-service use, and user satisfaction show that these technologies improve efficiency by cutting delays and simplifying library interactions. The PairGrid visuals further confirm these outcomes, showing clear trends between the improvements in RFID services and users' satisfaction levels. Libraries can take these insights to focus on technology-driven solutions that make things easier for users, ensuring readers spend less time on administrative tasks and more time with resources. By investing in RFID check-in/check-out systems and self-service options, libraries can boost user satisfaction, align with Ranganathan's goal of saving readers time, and keep meeting their mission of offering accessible and efficient services.

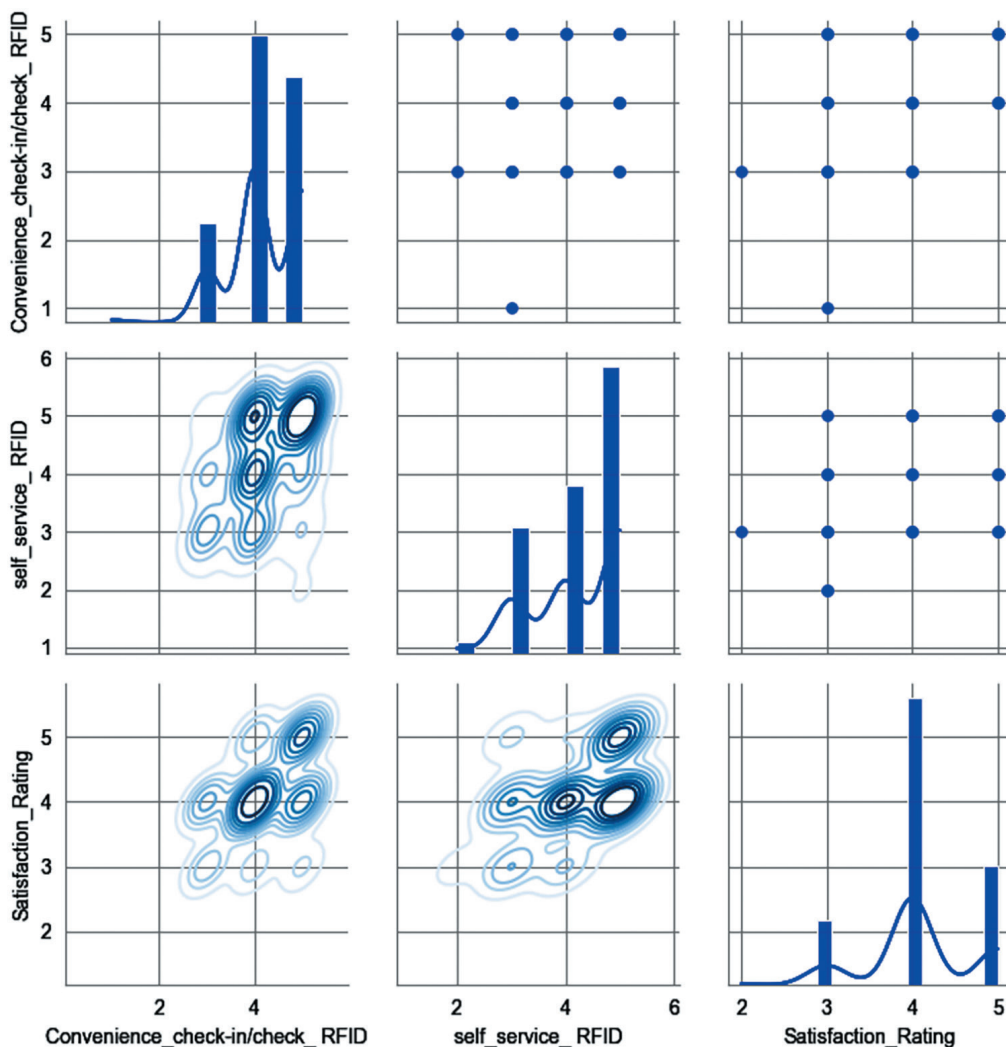


Figure 5. PairGrid visualization.

RQ5: How do user engagement, technological advancements, and adaptability to changing user needs reflect the growth and evolution of libraries, thereby validating Ranganathan's Fifth Law of Library Science, "A library Is a Growing Organism"?

Ranganathan's Fifth Law posits that "A Library Is a Growing Organism," emphasizing the need for libraries to adapt and evolve in response to changing user needs and technological advancements. The analysis leverages multiple linear regression and visualizations to explore the relationship between key factors such as RFID-based convenience, website usability, satisfaction with online resources, and overall user satisfaction. The findings from the regression results and diagnostic statistics, along with the generated plots, provide empirical evidence to support Ranganathan's Fifth Law, which emphasizes that libraries must continuously evolve by expanding resources, adopting technology, and adapting to user needs to remain relevant and effective.

Table 4. Correlation Matrix for Library Growth and User Satisfaction

Feature	Improvement RFID	Website Usability	Satisfied Online Resources	Satisfaction Rating
Improvement RFID	1.000000	0.244726	0.188661	0.313443
Website Usability	0.244726	1.000000	0.530959	0.530959
Satisfied Online Resources	0.188661	0.530959	1.000000	0.531503
Satisfaction Rating	0.313443	0.530959	0.531503	1.000000

The correlation matrix in Table 4 shows clear connections among important elements that affect library growth and user satisfaction. For example, the correlation between Website Usability and Satisfaction Rating is strong (0.530959), suggesting that websites that are easy to use greatly boost user satisfaction. This is backed by evidence showing how digital technologies help service delivery across various areas. Additionally, Satisfied Online Resources and Satisfaction Rating also have a strong positive correlation (0.531503), pointing out the crucial role of digital resources in today's libraries. The Improvement RFID has a moderate positive correlation with Satisfaction Rating (0.313443), indicating that technology upgrades like RFID systems enhance the user experience by making processes smoother, a concept supported by studies that stress the significance of efficient resource management and technology use in organizations. These relationships imply that libraries making investments in technology, such as RFID systems and easy-to-navigate websites, and focusing on digital resources, are more likely to fulfill user needs and improve satisfaction levels. This is consistent with Ranganathan's Fifth Law, which states that libraries need to grow and change to stay relevant.

Table 5. Multiple Linear Regression Results

OLS Regression Results	
Metric	Value
Dependent Variable	Satisfaction_Rating
R-squared	0.397
Adjusted R-squared	0.385
F-statistic	33.14
Prob (F-statistic)	1.63e-16
Log-Likelihood	-110.16
Number of Observations	155
AIC (Akaike Information Criterion)	228.3
BIC (Bayesian Information Criterion)	240.5
Df Residuals	151
Df Model	3
Covariance Type	nonrobust

Diagnostic Statistics						
	Statistic			Value		
	Omnibus			0.550		
	Durbin-Watson			1.983		
	Prob (Omnibus)			0.759		
	Jarque-Bera (JB)			0.504		
	Skew			-0.138		
	Prob(JB)			0.777		
	Kurtosis			2.954		
	coef	std err	t	P> t	[0.025	0.975]
const	1.6008	0.262	6.105	0.000	1.083	2.119
Improvement_RFID	0.1210	0.045	2.670	0.008	0.031	0.211
website_usability	0.2607	0.063	4.107	0.000	0.135	0.386
Satisfied_online_resources	0.2591	0.058	4.455	0.000	0.144	0.374

The multiple linear regression outcomes in Table 5 provide important information about what affects user satisfaction and library growth. The regression model shows an R-squared value of 0.397, meaning that about 39.7% of the variation in satisfaction scores is explained by the independent variables: Improvement_RFID, website_usability, and Satisfied_online_resources. The Adjusted R-squared value of 0.385 adds to the model's trustworthiness, considering the number of predictors included. The F-statistic of 33.14 with a p-value of 1.63e-16 indicates that the model is statistically significant, suggesting that the predictors together have an important effect on satisfaction ratings. The coefficients from the regression table outline the contributions of each factor: Improvement_RFID (coef = 0.1210, p = 0.008): RFID improvements like self-service systems positively affect user satisfaction. This supports the notion that tech advancements help users save time and make processes easier, aiding library growth and change. website_usability (coef = 0.2607, p = 0.000): Website usability has the most substantial positive effect on satisfaction, highlighting how vital digital changes are for today's libraries. A user-friendly website provides easy access to resources, showing how the library adapts to technology. Satisfied_online_resources (coef = 0.2591, p = 0.000): Satisfaction with online resources significantly enhances user satisfaction, underlining the increased importance of digital collections and e-resources in fulfilling what users want. The confidence intervals for these coefficients (e.g., [0.135, 0.386] for website usability) further affirm their reliability since none of the intervals include zero. Diagnostic statistics like the Durbin-Watson value of 1.983 point to no significant autocorrelation in residuals, and the Jarque-Bera test (p = 0.777) shows that the residuals follow a normal distribution, supporting the assumptions of the model.

The scatter plot in Figure 6, together with a regression line, shows a clear positive link between website usability and satisfaction scores. Libraries with better website usability scores usually have users who report more satisfaction, highlighting how digital accessibility improves user experiences. This plot compares the predicted satisfaction scores from the regression model with actual satisfaction ratings. The close grouping of points along the regression line suggests that the model effectively predicts user satisfaction, further supporting the importance of the predictors. This analysis gives strong evidence that supports Ranganathan's Fifth Law, "A Library Is

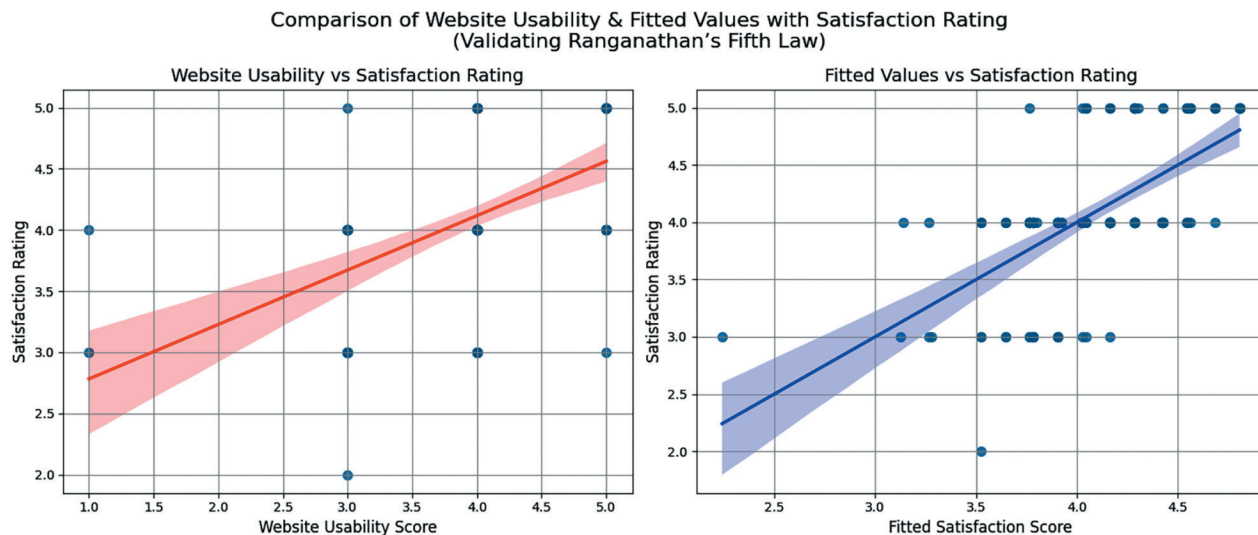


Figure 6. Comparison of Website Usability and Fitted Values with Satisfaction Rating (Validating Ranganathan's Fifth Law).

a Growing Organism.” The results show that libraries change by using new technologies, improving accessibility, and meeting user needs. Important points include the following:

Technological advancements: RFID systems and self-service options boost efficiency and make it easier for users, saving time and increasing satisfaction.

Digital transformation: Website usability and online resources are crucial in modern libraries, helping users easily access and use digital collections.

User-centric growth: Libraries that focus on user engagement and satisfaction through ongoing improvements in services and resources grow as active, changing institutions.

The data-backed analysis shows that libraries need to accept growth and flexibility to stay relevant in a fast-paced world. By broadening resources, adopting technology, and paying attention to user needs, libraries align with Ranganathan's idea of a growing organism, ensuring they stay relevant and effective in serving their communities. The findings stress the significance of ongoing innovation and user-focused strategies in keeping libraries as essential institutions for spreading knowledge and promoting lifelong learning.

Conclusions

The study on how often people go to libraries, why they go, and how satisfied they are supports Ranganathan's First Law of Library Science, which says “Books Are for Use.” The findings indicate that people who visit libraries regularly (e.g., daily or weekly) have much higher satisfaction ratings (around 4.00–4.50) compared with those who go less often (around 3.00–3.75). This shows the importance of keeping libraries available and encouraging users to actively use resources to raise satisfaction levels. Activities such as research and borrowing books often lead to higher satisfaction scores, indicating that libraries should promote regular usage and adjust services to meet different user needs. The violin plot backs this up, showing that continuous access to resources leads to better user experiences. These results reinforce Ranganathan's First Law, suggesting that libraries thrive when their resources are used regularly. Future research

may explore targeted outreach to engage those who use the library less often. This study also supports Ranganathan's Second Law, "Every Reader Their Book," by looking at how visit frequency, assistance from staff, ease of finding items, online resources, and website usability affect satisfaction. The boxplots and scatter plots with regression lines illustrate that factors like helpful staff and easy access to materials significantly enhance user satisfaction (cite0). Regular visits and personalized access aid users in finding what they need, aligning with the Second Law. The study hints that libraries should invest in staff training, better resource organization, and improving digital platforms to meet individual user needs. Future research might explore the impact of personalized recommendations and resource allocation tailored to users in further supporting this law. Ranganathan's Third Law, "Every Book Its Reader," is shown through the analysis of staff help, ease of finding resources, and satisfaction with online tools. The correlation matrix indicates strong positive connections between these elements and user satisfaction, especially regarding staff helpfulness (0.554) and online satisfaction (0.532). The boxplots demonstrate that users who find resources easily and receive good staff support report higher satisfaction. This proves that accessible resources and staff assistance are key in ensuring every resource finds its user. Future research could explore how digital literacy initiatives and improved search functions affect resource discoverability and user engagement (cite0). The study also supports Ranganathan's Fourth Law, "Save the Reader's Time," by analyzing how the convenience of RFID check-in/check-out, self-service options, and user feedback on RFID enhancements impact satisfaction. The correlation matrix and PairGrid visualization reveal moderate positive links between RFID convenience (0.486) and self-service (0.459) with user satisfaction. These findings highlight how technology makes library processes easier for users. Libraries focusing on RFID and self-service methods save time for users, consistent with the Fourth Law. Future studies could investigate adding technologies like AI chatbots and mobile applications to improve efficiency and satisfaction further. Lastly, the study backs Ranganathan's Fifth Law, "A Library Is a Growing Organism," by examining user engagement, tech improvements, and responses to user needs. The correlation matrix and regression analysis show strong positive links between website usability (0.530959), satisfaction with online resources (0.531503), and overall user satisfaction. The regression model demonstrates that usability (coef = 0.2607) and online resources (coef = 0.2591) strongly affect satisfaction, underscoring the need for digital advancements in today's libraries. The scatter plots confirm that libraries with user-friendly websites and robust digital collections achieve higher satisfaction ratings. This upholds the Fifth Law and stresses the need for libraries to keep evolving and adopting new technologies and services. Future research could consider the long-term effects of technologies like virtual reality and blockchain on library development and user interaction. In summary, the study provides convincing evidence for Ranganathan's Five Laws of Library Science. The results emphasize the importance of access, tailored services, technology improvements, and ongoing adaptation to enhance user satisfaction and ensure libraries remain relevant in a rapidly changing world. Future research should focus on innovative technologies, targeted outreach, and user-centered strategies to better align library practices with Ranganathan's vision. By embracing growth and adaptability, libraries can continue to serve as evolving institutions that ensure fair access to knowledge and support lifelong learning.

The Future of Library Services with Ongoing Technological Advancements

The ongoing growth of technology is changing library services, increasing user engagement while sticking to the core ideas found in Ranganathan's Five Laws of Library Science. As libraries turn into

lively digital spaces, they need to adopt automation and data management tools to make operations easier and improve service delivery. Technology helps librarians move beyond traditional roles; they are no longer just keepers of collections but become guides of knowledge in a quickly changing world. This change goes along with the idea that smart libraries can have an important impact on the future of education and knowledge management. Smart libraries are poised to play a transformative role in the future of education and knowledge management. Through automation, they simplify routine operations such as book borrowing, returns, and inventory management, freeing librarians to focus on more specialized roles like curation and user engagement. Also, the move to digital highlights how important it is for information to be easy to access, letting users connect with a huge range of resources worldwide.²¹ In the end, by using these technological improvements, libraries will stay important, adaptable, and vital to their communities even as the way information is consumed keeps changing.

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APPENDIX. User Feedback and Satisfaction Survey

A. Personal Information:

1. Name:
2. Department:
3. Email:
4. Are you a Post-Student? Graduate Under Graduate
5. Semester: 2nd 4th
6. Gender: Female Male

B. Library Usage:

1. How often do you visit the library?
 - Daily
 - Weekly
 - Monthly
 - Occasionally
 - Rarely
2. What is the primary purpose of your visits to the library?
 - Borrowing books, studying or research
 - Using library computers and the internet
 - Attending events

C. Staff Assistance:

1. How would you rate the library's staff in terms of helpfulness and knowledge?

Excellent

Good

Average

Poor

Very Poor

D. Accessibility of Materials:

1. Can you find the materials you are looking for quickly?

Always

Most of the time

Sometimes

Rarely

Never

E. Online Resources and Services:

1. How satisfied are you with the library's online resources and digital services?

Very satisfied

Satisfied

Neutral

Dissatisfied

Very dissatisfied

2. How would you rate the library's website or online catalogue in terms of usability?

- Excellent
- Good
- Average
- Poor
- Very poor

F. RFID System:

1. How would you rate the convenience of the check-in/check-out process with the RFID system?

- Very convenient
- Convenient
- Neutral
- Inconvenient
- Very Inconvenient

2. Have you noticed any improvement in the time to complete book transactions (check-in/check-out) since implementing the RFID system?

- Yes, significant improvement
- Yes, some improvement
- No noticeable difference

Signature of the Respondent with the date

Feature

How Librarians' Personality Traits Shape User-Librarian Interaction in Public Libraries

A Qualitative Model

Vida Seifouri and Asie Moradi

Abstract

Effective user-librarian interaction is central to the mission of public libraries, where service quality is closely tied to everyday communication encounters. Although communication skills have been widely discussed in library and information science, less attention has been given to the role of librarians' personality traits in shaping professional interactional behaviors. This study explores how librarians' personality traits are translated into communication practices that influence user-librarian interactions in public libraries.

Adopting a qualitative research design, this study employed a meta-composite approach to integrate insights derived from in-depth, semi-structured interviews with twenty-four public library librarians in Kermanshah, Iran. Participants were selected through purposive and snowball sampling, and data collection continued until conceptual saturation was reached. Interview transcripts were analyzed through open and axial coding, supported by MAXQDA software, to identify recurring interactional patterns and personality-driven dimensions.

The findings reveal that user-librarian interaction is shaped by a set of interconnected personality-related characteristics, including accessibility, extroversion, conscientiousness, flexibility, responsibility, empathy, trust, self-control, verbal and non-verbal expressiveness, respect, and positive attitude. These traits are enacted through professional communication behaviors and collectively influence how librarians manage user needs, emotional situations, and service encounters. The resulting qualitative model illustrates communication as a relational and personality-informed professional practice rather than a purely technical skill.

The study highlights the importance of incorporating personality-aware perspectives into librarian training, professional development, and human resource planning. By emphasizing the interactional role of personality traits, the findings offer practical insights for enhancing user experience and service quality in public library contexts.

Introduction

Public libraries are fundamentally service-oriented institutions whose effectiveness depends largely on the quality of interactions between librarians and users.¹ Users' satisfaction with library services is shaped not only by access to information resources, but also by the manner in which services are delivered and communicated.² In many cases, a positive interaction with a librarian can

compensate for limitations in resources, while ineffective communication may discourage users from returning to the library.

Communication in library settings is not a one-dimensional or purely technical process. Rather, it is a dynamic professional practice that involves understanding users' needs, interpreting verbal and non-verbal cues, managing emotions, and responding appropriately within diverse social contexts. Public library librarians, in particular, engage daily with users from heterogeneous cultural, educational, and social backgrounds, making effective communication a critical component of their professional role.³

Although communication skills are widely acknowledged as essential for librarians, existing research has primarily focused on observable skills such as verbal expression, listening, and non-verbal behavior. Less attention has been given to the deeper personal characteristics that shape how these skills are enacted in real-life interactions. Personality traits influence how individuals perceive situations, regulate emotions, respond to others, and adapt to interpersonal challenges. Consequently, communication behaviors in professional settings cannot be fully understood without considering the role of personality.⁴

From this perspective, librarians' personality traits can be viewed as underlying drivers that influence their professional communication practices.⁵ Traits such as empathy, responsibility, flexibility, and emotional self-control may determine how librarians manage user expectations, handle challenging interactions, and create a welcoming service environment.⁶

Understanding this relationship is particularly important in public libraries, where sustained user engagement and trust are essential for fulfilling educational and cultural missions.

Previous studies in library and information science have examined communication skills, interpersonal relations, and user satisfaction, often emphasizing training programs and organizational factors. However, there remains a gap in research addressing how personality-related characteristics translate into day-to-day communication behaviors in public library contexts. Addressing this gap can provide valuable insights for improving librarian training, recruitment, and professional development strategies.

Accordingly, this study aims to explore how librarians' personality traits are reflected in their professional communication behaviors during interactions with users in public libraries. By adopting a qualitative meta-composite approach, the research seeks to develop a contextualized understanding of communication as a personality-informed professional practice, rather than merely a set of isolated skills.

Personality-Informed Communication Practices in User-Librarian Interaction

Communication in public libraries is not merely a technical skill acquired through formal training, but a professional practice that is enacted through daily interactions between librarians and users.⁷ Research in library and information science consistently shows that the quality of librarian-user communication plays a central role in users' satisfaction, trust, and continued engagement with library services.⁸ From an interactional perspective, communication skills are expressed through observable behaviors such as attentive listening, clarity of verbal expression, effective use of non-verbal cues, and emotional regulation during service encounters.⁶ These behaviors enable librarians to interpret users' information needs, manage diverse interactional situations, and facilitate

meaningful exchanges. Accordingly, communication effectiveness cannot be fully understood without considering the personal characteristics that shape how librarians perceive and respond to social cues.

Psychological approaches to personality emphasize that relatively stable traits influence patterns of behavior across interpersonal contexts.⁹ Traits such as empathy, conscientiousness, flexibility, emotional self-control, and openness have been shown to affect how individuals engage in social interactions, particularly in service-oriented professions that require frequent and emotionally nuanced communication.¹⁰ Rather than treating communication skills and personality traits as separate constructs, applied psychological research highlights their interdependence. Verbal and non-verbal communication behaviors are expressions of underlying personality-related tendencies that guide attentional focus, emotional responses, and interpersonal sensitivity.⁶ For example, effective listening reflects not only a learned communicative skill but also a dispositional orientation toward empathy and respect for others' perspectives. Similarly, emotional self-control enables professionals to manage challenging interactions and sustain constructive dialogue under stressful conditions.¹¹

Broad personality frameworks, such as the Big Five model, provide a useful foundation for understanding individual differences; however, their relevance in professional settings lies in how these traits are translated into practice.¹² In library contexts, extraversion may be enacted through approachability and proactive engagement with users, while agreeableness is reflected in respectful and supportive communication behaviors. Conscientiousness contributes to responsible and reliable service delivery, reinforcing users' confidence in librarians' professional competence.⁸

In public libraries, communication is a relational and context-dependent process shaped by both situational demands and individual characteristics. Librarians function as intermediaries between users and information resources, and their effectiveness depends largely on how personality-driven behaviors are enacted in real-time interactions.¹³ Understanding communication as a personality-informed professional practice therefore offers a more nuanced theoretical perspective than approaches that conceptualize communication solely as a set of discrete, trainable skills.

By integrating insights from communication studies and applied personality psychology, this study conceptualizes user-librarian interaction as a dynamic process in which personality traits are continuously expressed through professional communication behaviors. This integrated framework provides a theoretical foundation for examining how librarians' personality characteristics shape interactional patterns in public libraries and supports the development of context-sensitive models of communication in library practice.

Research Background

Previous studies in library and information science have emphasized the importance of communication skills as a fundamental component of librarians' professional performance, particularly in managing interpersonal interactions within library environments. Bahmani Chobbasti and Seyedin¹⁴ highlighted the influence of librarians' communication skills on interpersonal communication and conflict management strategies in libraries. Their findings demonstrated that various components of communication skills significantly affect both interpersonal communication processes and librarians' approaches to managing conflicts in library settings.

From a broader professional perspective, attention has also been directed toward librarians' personality-based characteristics. Bano, Mehraj, and Rehman,¹⁵ in their theoretical study on

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librarians' distinctive personality traits in the twenty-first-century digital era, argued that the professional role of librarians has evolved beyond traditional information dissemination. They emphasized that contemporary librarians function as innovators, technological experts, and strategic actors, requiring dynamic personality traits rather than relying solely on basic soft skills. Using the 16 Personality Factor (16PF) framework, their study identified a range of personality-based traits relevant to librarianship, including emotional stability, social boldness, self-reliance, openness to change, and conscientiousness, all of which may shape professional interaction in library contexts.

Empirical research in public libraries has further examined specific dimensions of communication skills. Salimi and Salimi,¹⁶ in their study of librarians' communication skills in public libraries of Ardabil, found that verbal communication and feedback skills were above average, while listening skills were relatively moderate. Their findings suggested that communication skills are not significantly associated with demographic variables such as education level or field of study, indicating that professional communication competencies require targeted training rather than reliance on academic background or experience. They also emphasized the role of organizational and managerial factors in shaping communication practices within libraries.

Similarly, Mirhosseini, Dastaran, and Sepehr¹⁷ investigated the relationship between demographic characteristics and communication skills among librarians of public libraries in Khuzestan Province. Their results showed no meaningful relationship between gender, marital status, age, city of service, or work experience and verbal, non-verbal, or interpersonal communication skills. Although a weak relationship was observed between education level and communication skills, the overall findings suggested that communication competence is not inherently determined by demographic factors but is instead shaped by other professional and contextual influences.

Psychological dimensions related to communication have also been explored. Afkhami et al.,¹⁸ in their study on positive thinking among librarians in Mashhad public libraries, demonstrated that certain components of positive thinking significantly influence verbal and non-verbal communication skills. Their findings indicated that positive daily thinking and others' evaluations of self had the strongest effects on verbal communication skills, while others' evaluations of self had the greatest impact on non-verbal communication skills. In contrast, self-confidence showed the least influence on communication skills, highlighting the complex relationship between psychological traits and communicative behavior.

Beyond public libraries, the relationship between interpersonal skills and professional development has been examined in academic library settings. Ekeruche and Echedom¹⁹ found a strong positive relationship between librarians' interpersonal skills and career development in academic libraries in South-South Nigeria. Their study revealed that higher levels of interpersonal skills significantly enhance career development, while work experience showed a low negative relationship with career advancement, underscoring the importance of interactional competencies over tenure alone.

A review of the existing literature indicates that although several studies have addressed librarians' communication skills and personality-related characteristics, research remains limited, particularly in public library contexts. Many existing studies have focused on isolated dimensions such as verbal or non-verbal skills, demographic variables, or psychological traits, rather than examining communication as an interactional process shaped by personality in real service encounters. Given the diverse user populations and complex social interactions characteristic of public libraries, further research is needed to explore how librarians' personality traits are enacted through communication practices and how these interactional dynamics shape user-librarian relationships.

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Research method: This study adopts a qualitative research design to explore how librarians' personality traits shape professional interactions with users in public library settings. Given the exploratory nature of the research and its focus on lived experiences and interactional practices, a qualitative meta-composite approach was employed. This approach allows for the integration of recurring concepts and patterns, derived from multiple individual experiences, into a coherent and interpretive model.

The study is applied in purpose and is descriptive-analytical in orientation, aiming to generate practical insights into professional communication practices in public libraries rather than to test predefined hypotheses.

Participants and sampling: The study population consisted of public library librarians working in Kermanshah, Iran. Participants were selected using purposive and snowball sampling techniques to ensure the inclusion of librarians with diverse professional backgrounds, levels of experience, and educational qualifications. Data collection continued until theoretical saturation was achieved, meaning that additional interviews no longer yielded new conceptual insights. In total, 24 librarians participated in the study.

Data collection: Data were collected through semi-structured, in-depth interviews designed to capture librarians' experiences of interacting with users in everyday professional contexts. Interview questions focused on communication situations, user-librarian interactions, emotional and behavioral responses, and personal characteristics perceived to influence communication practices. This flexible interview format allowed participants to reflect on both routine and challenging interactional experiences.

All interviews were conducted individually, recorded with participants' consent, and transcribed verbatim for analysis.

Data analysis: Data analysis followed a systematic qualitative coding process. First, interview transcripts were subjected to open coding using a key-point coding method to identify meaningful units related to communication behaviors and underlying personality-related characteristics. This process resulted in the extraction of initial concepts grounded in participants' narratives.

Next, related codes were grouped into higher-order categories through axial coding, allowing for the identification of broader personality-driven dimensions influencing professional interactions. The analysis process was supported by MAXQDA software to ensure transparency, consistency, and traceability of the coding process.

The final stage involved integrating the extracted categories into a qualitative interactional model illustrating how personality traits are translated into observable communication behaviors in public library settings.

Trustworthiness: To ensure the rigor of the study, qualitative criteria of credibility and dependability were applied. Credibility was enhanced through prolonged engagement with the data, careful transcription, and iterative coding. Dependability was addressed by maintaining a clear audit trail of analytical decisions and coding procedures. These strategies strengthen the trustworthiness of the findings and support their interpretive validity.

Findings

Table 1 lists the frequency and percentage results from the sample demographic information.

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Table 1. Characteristics of Participating Librarians

Characteristic	Description
Gender	Participants included both female and male public librarians
Age range	Librarians represented early career to senior professionals
Education level	Participants held bachelor's, master's, or doctoral degrees
Professional experience	Work experience ranged from novice to highly experienced librarians
Workplace context	All participants were employed in public library settings

A total of twenty-four public library librarians participated in this study. The participants represented a range of demographic and professional backgrounds in terms of gender, age, educational level, and work experience. Female librarians constituted the majority of participants. Most librarians were between 30 and 40 years of age and held at least a master's degree. Work experience ranged from less than ten years to more than twenty years, allowing for the inclusion of both early career and experienced professionals. This diversity provided a rich foundation for exploring varied interactional experiences between librarians and users.

Table 2. Core Interactional Dimensions Shaped by Librarians' Personality Traits

Interview Code	Description of Interactional Meaning	Dimension
Interviewee #1	Each client has his or her own information needs, which can be simple or complex. To meet the need for complex information, skilled librarians are needed to provide the client with the information needed as quickly as possible by solving the existing ambiguities.	Accessibility Expertise Work conscience
Interviewee #2	In my opinion, in successful verbal communication, whether with a client or a colleague, we should not do anything else so that we can focus on what he or she is saying. It means to have an effective verbal communication with the client.	Flexibility Verbal communication Respect
Interviewee #3	Correct communication skills make people self-actualize and use different capacities as people. If a person is dissatisfied with the library, they may not visit again if they do not have to.	Compatibility Friendly relations Self-control
Interviewee #4	The librarian uses eye contact, nods in approval, smiles, shows agreement or agreement with the speaker, and by saying words such as "yes" or "that's right," can encourage the speaker to continue speaking.	Non-verbal communication Flexibility Trust
Interviewee #5	When the librarian is calm and self-confident, it creates a positive organizational dignity for the librarian and makes the library a welcoming environment for visitors, and a good social image of the library is drawn in the user's mind.	Work conscience Expertise Obligation
Interviewee #6	In face-to-face communication, it is very important to pay attention to the users; you should not be indifferent to the users or wait for him/her to request assistance; rather, one should value the user from the very beginning and turn the head as a sign of attention when the user approaches and maintain the continuity of communication with the user until the desired result is achieved.	Empathy with the user Friendly relations Respect Extroversion
Interviewee #7	If the client's work requires a wait time, be sure to explain the reason for this wait, the expected duration, and thank the client after completing the task. Express appropriate feelings in response to the client's expression of feelings.	Empathy with the user Obligation Wisdom

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Interview Code	Description of Interactional Meaning	Dimension
Interviewee #8	Inappropriate behavior in society is propagated by people, which means that when a person shows anger toward you as a librarian, they may spread it to another person. While the librarian should strengthen the feeling of satisfaction in the audience and society, the librarian must be patient in communicating with the users.	Compatibility Flexibility Work conscience
Interviewee #9	The librarian's skill in asking the client open-ended questions to reveal their real needs is very important.	Follow up Responsibility
Interviewee #10	The prevailing atmosphere of public libraries indicates that librarians work in an open system. In other words, there is no separation of manpower in separate rooms in this environment. This factor makes experienced and less-experienced people think and act freely next to each other, express their opinions and views in the field of work, and benefit from the opinions and experiences of others.	Extroversion Experience Expertise
Interviewee #11	In my opinion, the users' understanding of the quality of the services provided and their satisfaction is influenced by the librarians' behavior and attitude.	Responsibility
Interviewee #12	As local gateways to knowledge, public libraries provide basic conditions for lifelong learning, independent decision making, and cultural development for individuals and social groups. In the meantime, librarians are a vital resource in the operation of a library and are essential in helping the client to resolve ambiguity.	Help the client
Interviewee #13	Since librarians of public libraries are related to all sections of society, having communication skills is important. As information mediators, librarians play an undeniable role in the flow of information. It is possible that the resources needed by the patrons are available in the library, but the lack of communication skills prevents them from reaching the necessary and timely information.	Work conscience
Interviewee #14	When trying to provide an answer, the librarian puts himself in the mental and intellectual frame of the user, and he or she should avoid providing very specialized or very basic information.	Expertise Validity of information
Interviewee #15	When the user gets angry or upset because the librarian is not meeting their expectations, the librarian should welcome their complaints and listen to them with appropriate methods.	Self-control Respect Sympathy
Interviewee #16	The librarian uses a sense of humor to reduce the nervous pressure and anxiety of the audience. He or she can use sentences to get familiar and avoid guessing about the real need of the client.	Friendly relations Wisdom
Interviewee #17	Age, gender, and class differences between the librarian and the user should not create a problem in communication.	Trust Emotional stability
Interviewee #18	The librarian can seek advice from experts in the field who know communication skills.	Wisdom Honesty
Interviewee #19	If the user cannot find empathy and a rapport with the librarian, it will be difficult to express their information needs, and on the other hand, the librarian will not be able to find what the user wants. We should also respect the value of the clients' time.	Empathy with the user Respect
Interviewee #20	The librarian should take the initiative to help resolve the user's questions and needs.	Friendly relations Work commitment

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Interview Code	Description of Interactional Meaning	Dimension
Interviewee #21	In addition to encouraging people to study and use library services, librarians' positive and appropriate attitude also creates freshness and vitality and turns the library into a calm, safe, and friendly environment.	Thinking positive
Interviewee #22	Some of the factors that can result in failure to establish a proper relationship with the user are lack of enthusiasm, criticism of the user, and a low threshold of patience for people, which librarians should pay attention to.	Self-control Compatibility
Interviewee #23	The existential philosophy and specialized functions of libraries are to meet the needs of users. For this reason, the criteria for judging libraries are the amount and quality of their services. Since library services are diverse, and many of the services provided require librarians to communicate with patrons, this communication is very important and valuable.	Expertise Work commitment Responsibility
Interviewee #24	The type of attitude and positive thinking in library staff can improve the quality and quantity of services provided.	Thinking positive Flexibility Work conscience

The open coding of the interview is presented after editing. These codes were adapted from the writings. From the analysis of 24 interviews, 192 sentences were extracted and a total of 96 open codes were obtained, and then the extracted open codes were converted into 13 axial codes.

Table 3. Illustrative Quotations Reflecting User-Librarian Interaction Patterns Dimension

Dimension	Illustrative Quotation
Accessibility	When users feel that I am available and attentive, they explain their real needs more clearly.
Verbal communication	I focus completely on what the user says so that no part of their request is missed.
Non-verbal communication	Eye contact and nodding encourage users to continue speaking.
Empathy	I try to put myself in the user's position before giving an answer.
Self-control	Even when users are upset, staying calm helps prevent conflict.
Responsibility	I feel responsible for resolving the user's problem, not just answering a question.
Positive attitude	A positive attitude makes the library feel safe and welcoming for users.

From the analysis of 24 interviews, 192 meaningful statements were extracted. Through open coding, 96 initial codes were identified, which were subsequently organized into 13 core dimensions through axial coding. These dimensions collectively form a qualitative interactional model illustrating how personality traits are translated into observable communication practices in public libraries.

The findings indicate that user-librarian interaction is shaped by the following key dimensions:

Accessibility

Librarians emphasized the importance of being approachable and available to users. Accessibility was reflected in behaviors such as initiating contact, maintaining eye contact, and demonstrating readiness to assist. Participants noted that users were more willing to express their information needs when librarians appeared open and attentive.

Extroversion and Engagement

Extroversion emerged as a facilitating factor in initiating and sustaining interactions. Librarians with higher levels of social engagement described greater ease in starting conversations, encouraging users to ask questions, and creating a friendly interactional atmosphere.

Conscientiousness and Responsibility

Conscientiousness was reflected in librarians' sense of professional duty and commitment to accurate and timely service. Participants associated responsible behavior with users' trust and satisfaction, emphasizing that careful attention to users' needs enhances the credibility of library services.

Flexibility and Adaptability

Flexibility played a central role in managing diverse user expectations. Librarians described adjusting their communication style based on user's age, educational background, emotional state, and information literacy level. This adaptability was seen as essential in avoiding misunderstandings and frustration.

Verbal and Non-verbal Expressiveness

Effective interaction was strongly linked to librarians' ability to use clear verbal explanations alongside supportive non-verbal cues such as gestures, facial expressions, and tone of voice. Participants noted that non-verbal communication often conveyed respect, patience, and encouragement more powerfully than words alone.

Empathy and Respect

Empathy emerged as a foundational dimension of meaningful user-librarian interaction. Librarians described placing themselves in users' positions, listening attentively, and responding without judgment. Respectful communication fostered user confidence and facilitated clearer expression of information needs.

Self-Control and Emotional Regulation

Managing emotional responses was identified as particularly important in challenging interactions. Librarians emphasized maintaining calmness, patience, and professionalism when faced with user frustration or dissatisfaction. Emotional self-control was perceived as essential for sustaining positive interactions and preventing conflict escalation.

Trust and Positive Attitude

Trust develops through consistent, honest, and supportive communication behaviors. A positive attitude contributed to creating a welcoming library environment, reinforcing users' perceptions of the library as a safe and supportive space.

Discussion

Analysis of the interview data revealed that librarians' interactions with users are shaped by a set of interconnected personality-driven characteristics that are consistently enacted through professional communication behaviors. Rather than functioning independently, these characteristics interact dynamically to influence how librarians engage with users, manage communication situations, and deliver services.

The research results in the demographic findings section show that there is no significant difference between age and communication skills. Therefore, it is not important to consider a librarian's age in considering library staffing. In other words, it can be stated that people of young or old age can work together in different sections of the library, especially the reference and lending section, where most of the communication is face to face.

The findings of the present research showed that the employment of human resources in public libraries does not make much difference in terms of gender. In this way, both sexes can be used in recruiting the required staff of libraries.

The prevailing physical layout of public libraries indicates to users that librarians work in an open system, and there is no separation of staff in separate rooms in this environment. This factor makes experienced and less-experienced people think and act freely next to each other, express their opinions and views in the field of work, and benefit from the opinions and experiences of others. As a result, the gap between experienced and less-experienced people is reduced in terms of knowledge and mastery of the field of work, and the grounds for growth and strengthening of communication skills are provided. In this regard, clients are looking for librarians whose attitude and new vision will help them solve their information needs. Sometimes it is observed that librarians with little experience are more dedicated to meeting the information needs of clients than librarians with longer service experience.

Also, one of the most important factors in communication is a librarian's level of education. According to the findings of this research, librarians who have higher levels of education have higher communication skills. Educated librarians can communicate using different methods and attract users to public libraries.

The second part of the results relates to the personality dimensions of the librarians and their effect on the librarians' communication skills with patrons. The cultural diversity of public library patrons is one of the major factors experienced by librarians. Because of this complexity, public library librarians need a high level of communication skills to manage interactions with clients, and the existence of these skills depends on the librarians' personality characteristics.

Librarians' communication skills can be more effective than their other skills, and communicating effectively with users is one of the most vital and key skills for librarians in public libraries. By considering the role and importance of personality dimensions in communication skills, this study aimed to design a model of personality dimensions effective on the level of communication skills of librarians.

Personality is a set of characteristics that distinguishes people from each other and affects the way they communicate with others. Also, personality shows how a person thinks, feels, and acts. Since personality issues can affect peoples' attitudes and behaviors, librarians who have a higher amount of personality dimensions in this research have higher and better communication skills

because they are more comfortable in social interactions and are more involved in effective verbal communication and actively listen to others.

With the mentioned components, librarians have the ability to understand and manage their own and others' feelings, and this enables them to communicate effectively with empathy, understand non-verbal cues, and respond appropriately to the various needs of clients. Librarians who are open to new experiences are often more curious, creative, and adaptable, and this personality dimension allows them to be open-minded to feedback and willing to explore different perspectives in communication. Librarians who have a combination of the 13 components of this research probably have high-level communication skills.

Conclusion

This study demonstrates that user-librarian interactions in public libraries are shaped not only by communication techniques, but also by librarians' personality traits as they are enacted through professional practice. The findings highlight that traits such as empathy, responsibility, flexibility, emotional self-control, and positive attitude influence how librarians interpret users' needs and manage interactional situations.

The qualitative model developed in this research conceptualizes communication as a relational and personality-informed process embedded in everyday service encounters. By focusing on interactional practices rather than isolated skills or traits, the study provides a nuanced understanding of professional communication in public library contexts.

These findings suggest that librarian education and professional development programs may benefit from adopting personality-aware and interaction-focused approaches. Future research may extend this interactional framework to other library settings or examine how organizational factors shape the enactment of personality traits in professional communication.

This study has limitations, and accordingly, due care should be taken in generalizing its results, and its limitations should be considered. One important limitation of this study is the small size of the research community: the librarians of public libraries in Kermanshah. Another important limitation of this study is that no research on the 13 personality dimensions affecting the communication skills of librarians exists, which prevented the comparison of these findings with the current research. Therefore, it is recommended that more research on personality dimensions affecting librarians' communication skills, such as their effectiveness, be carried out.

To improve the communication skills of librarians, we can provide the basis for increasing and developing their personality dimensions through improving working conditions and training workshops. Library and information science education does not have a special program to strengthen these types of skills among its graduates, and librarians who enter the work environment in public libraries do not receive the necessary training. Therefore, theoretical and practical training should be combined to cultivate capable librarians. Librarians and librarian students should take advantage of the opportunities and situations created by formal and informal education, with the help of individual studies and follow-up on the latest advances in information technology, to keep their knowledge up-to-date and acquire the necessary skills and abilities in future society. Also, staff in libraries should be periodically assigned to work in different parts of the library to increase productivity and to help identify their personality traits and the most suitable department and service for each of the librarians. In this regard, the job rotation of librarians can be a suitable measure.

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