

The role of an embedded librarian in modern academic environment

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Received: 29/04/2025

Accepted: 26/05/2025

Abstract:

The function of the librarian in supporting educational projects is likewise evolving as contemporary academic surroundings develop. Academic libraries are in a basic state thus it is imperative that librarians interact directly with faculty and students to guarantee reading, research, and learning results are improved. This paper addresses the course embedded model since it is the model with the most broad and deep experience and has larger applicability. Course embedded librarianship mostly consists in the librarian planning, creating, and presenting a set of information literacy courses for a given unit or course under academic direction.

Keywords: *Academic libraries; Embedded librarian; information literacy; librarianship; teaching academic*

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I. INTRODUCTION

The function of the librarian in supporting educational projects is likewise evolving as contemporary academic surroundings develop. Academic libraries are in a basic state thus it is imperative that librarians interact directly with faculty and students to guarantee reading, research, and learning results are improved. This essay will look at embedded librarianship—where librarians collaborate with academic communities—by means of literary analysis and personal experience. Maintaining relevance and keeping on adding value in academic libraries depends on one being aware of and actively involved in their dynamic character.

In academic environments, research and education are paramount. Members of academic communities will engage in reading, researching, and composing artifacts and replies to exhibit comprehension. In this setting, the embedded librarian is a proactive information specialist or facilitator who collaborates directly with academic communities in the creation, implementation, and evaluation of information-intensive learning experiences. The embedded librarian's participation can occur at the course level, collaborating with teaching staff for a given unit or course, or at the discipline level, engaging with a faculty area across multiple courses (Monroe-Gulick et al., 2013).

This research concentrates on the course-embedded model due to its extensive applicability and the most comprehensive experience associated with it. Course-embedded librarianship primarily entails the librarian collaborating with the teaching academic to create, develop, and present a series of information literacy workshops tailored to a certain unit or course. Embedded librarianship may serve as a remedy for the challenge faced by university libraries in improving their research and instructional services.

1. Historical Evolution of Academic Libraries :

Academic libraries continue to evolve. How academic libraries are situated in higher education institutions to best fulfill their mission is a question of continual negotiation, exploration, and experimentation. As the academic, social, cultural and technological landscape shifts, so too must libraries and their involvement in learning, teaching and research. As educational practices and spaces change, libraries move from purely traditional repository roles into a more active status as learning environments. The changes taking place in library services and spaces reflect broader changes in educational paradigms and the disruptive impact of technology (A. Ogunsola, 2011).

Good library services require an understanding of the needs of users and a commitment to meeting those needs. Sometimes called user-centred services, this need and responsiveness is paramount. Scholars sought the comfort of books, manuscripts and learned discussion in certain locations, early on determining the need for libraries in an academic context. Student interest in libraries has ebbed and flowed, but as scholarly research grew and libraries became more extensive, students were granted access, first to some collections and then to all, as institutions of higher education began to take shape (A. Ortiz, 1998). The notable milestones in academic library development intimately connected with these historical contexts paved the way to an understanding of how academic libraries came to be what they are today, and how, in turn, those libraries sought to accommodate the needs of scholars and, as time progressed, students. Then, as the 20th century drew to a close, library services became national services,

totally redefining how those services were delivered and access to them. The impact that digitalization has had on the very existence of library services is clear: a transformation from printed services provision to purely digital services. Libraries are becoming service free zones as a consequence of access to everything electronically and the growing digitization of collections. The dilemma of staffless libraries heavily underscores the importance of academic librarianship.(Drewes & Hoffman, 2010)

3. Definition and Concept of Embedded Librarianship

Embedded librarianship, in its essence, is a model whereby a librarian is integrated within an academic department or academic program. In this capacity, the librarian can deliver outreach and instructional efforts tailored to the specific needs of students and faculty within that embedded context. Essentially, embedded librarianship is about being proactive rather than reactive, being engaged rather than passive. An engaged and pro-active model of service, will mean meeting with faculty and students in their own context rather than waiting for them to come to the library (Rodriguez, 2018). The possibilities and implications of embedded librarianship will vary widely based on the individual institution's academic programs and culture.

While the concept of embedded librarianship has been around for some time, it continues to evolve in response to the changing needs of institutions of higher education. The models used and the language employed to describe them will differ from institution to institution. At its core, embedded librarianship means a librarian is “assigned to” or “embedded in” a particular academic department or program. The role of the embedded librarian may consist of a combination of some or all of the following activities: attending staff meetings, offering discipline-specific information literacy instruction, developing discipline-specific online research guides, providing one-on-one research consultations with students and faculty, attending departmental functions, or being actively involved in faculty teaching and curriculum development (R Andrews, 2015).

One of the basic tenets of the profession is that librarians enhance information literacy and research skills in the communities they serve. In keeping with that tenet, embedded librarians are being called upon to meet some or all of those responsibilities in the context of academic departments or programs. Embedded librarianship is an academic response to the need for that enhancement to be discipline-specific and contextualized. The concept of embedded librarianship continues to evolve as education, educators, and learners change. Embedded is a nuanced word and is therefore a nuanced concept. Embedded librarianship can take on several different forms ranging from simply a liaison relationship to a much deeper partnership or collaboration, and it is in that sense that the concept will be explored.(Burke & Tumbleson, 2016)

4. Benefits of Embedded Librarianship in Academic Environments

Embedded librarianship is a “partnership between librarians and faculty in which the librarian is fully integrated into the course.” In recent years, academic librarianship has changed rapidly. Increased prioritization of student-centered learning necessitates academic librarians to rethink their roles in higher education institutions. Embedded librarianship, an innovative paradigm shift, is one answer to this rethinking. Embedded librarianship brings librarians into the heart of departments and curricula, effectively integrating library services with specific

subject disciplines. Embedded librarianship models have been implemented at various academic institutions across the world, often involving academic librarians embedding themselves within colleges, departments, or courses. These models can take many forms, from highly structured courses taught by librarians to informal, drop-in services embedded within departments.(Schulte, 2012)

The primary benefit of embedded librarianship is enhanced collaboration between librarians, faculty, and students. Closer collaboration fosters a supportive learning environment for students. As information specialists, embedded librarians can provide improved access to information resources tailored to the specific academic needs of each discipline. The presence of a librarian within a department can also enhance research productivity and student engagement while facilitating the development of stronger, more focused information literacy programs. Embedded librarianship models can take various forms, from informal partnerships to tightly woven collaborations between librarians and faculty incorporating information literacy principles into the heart of the curriculum (Monroe-Gulick et al., 2013). In general, as information literacy becomes widely recognized as an essential skill for academic success, coercive institutional isomorphism drives departments to employ embedded librarians. Similar to the increased efficacy of research and teaching with the involvement of pedagogical experts, the effective integration of information literacy skills requires input from library specialists. Most often, this input takes the form of library instruction sessions.

5. Challenges and Limitations of Embedded Librarianship

Despite the numerous benefits associated with librarianship, there are still challenges that must be considered. (Rodriguez, 2018) identifies common hurdles that emerging embedded librarians experience, including institutional barriers, lack of familiarity with the embedded librarian role, and time constraints. These hurdles are certainly relevant to the embedded experience. With so many competing obligations, it can often be difficult to find the time to work effectively with faculty and students to realize embedded opportunities. In many instances, these librarians are the only individuals filling that role, which can exacerbate these time-management-related challenges. Adding to the time obstacle is the potential of role ambiguity, particularly in situations where faculty librarians share information literacy instruction responsibilities with other faculty members. (R Andrews, 2015) identifies the same dilemma when different librarians fill similar embedded roles at different academic programs. This overlap and competition for classes may create a situation where one librarian acts as an embedded expert, while another librarian offers broader support for a program, resulting in role confusion.

Embedded librarianship is a relatively new concept that will require ongoing training to keep librarians abreast of learning outcomes, pedagogical trends, and technology being utilized by faculty. mentions this very challenge as it relates to keeping pace with continually-evolving academic programs and having the time to learn those new tools. If the intention is for the embedded librarian to teach alongside faculty, it is critical to understand the technology and approach being employed in the classroom. Measuring embedded librarian success and initiative impact can prove to be complicated as well. notes success can be difficult to quantify since some embedded initiatives do not lend themselves well to traditional assessment methods that focus on hard outcomes or numerical data. underscores the

importance of cultivating faculty relationships for the purpose of gathering feedback and assessing satisfaction levels. However, faculty may perceive ongoing informal discussions as being sufficient, so formal assessment avenues, e.g., surveys, may not happen unless requested.(Hamilton, 2012)

Finally, the most significant challenge embedded librarianship poses is the cultural shift needed for success. stresses that for librarians wishing to take on an embedded role, research must be done to create buy-in and support, particularly from administration. Embedded librarianship initiatives frequently require significant changes to academic library practices and policies, so it is crucial to ensure that all stakeholders understand the purpose of embedding and feel invested in the transition. If such efforts are made to implement embedded librarianship without administration support, there remains a valid risk that the desired changes will not happen or will be significantly altered, ultimately resulting in a less-effective model. Advocating for these changes at the administrative level and ensuring that expectations are understood is critical to ensuring that embedded efforts are grounded in a culture that recognizes and values that librarianship.(Hackman et al., 2017)

6. Key Skills and Competencies for Embedded Librarians

To be effective in the embedded librarian role, a number of basic skills and competencies are required. Some of these are essential, such as the ability to communicate and collaborate: “You will need to work closely with faculty and students, so being able to build working relationships is paramount,” (R Andrews, 2015) essential skills for the position. Understanding and responding to the different academic roles and needs is a valuable competency, too: “A good embedded librarian will have a grasp of the differences between undergraduate, graduate, and faculty expectations, for instance,” competency needed for embedded librarianship. Information technology proficiency is another key competency: Knowing how to use the various tools of academia is not just a necessity for existence; “many faculty and students expect librarians to be information technology experts, and with the digital landscape of academia, this request will only continue to grow” Here, too, some basic IT skills are the ground level; however, embedded librarianship does require deeper technology knowledge not necessarily required in other library roles. Research skills must be honed, as this is the basis for most embedded interactions: “Faculty and students often come with a specific need in mind, so providing help with understanding the parameters of the request and then finding targeted materials is crucial” research competency/library skill for embedded librarianship is addressed straight away. (Carlson & Kneale, 2011)Adaptability, thinking on your feet, and problem solving skills are important, too: “Every day is different in a classroom or lab setting, and what worked yesterday may not work today” need for adaptability and problem-solving skills in library management are stated. Cultural awareness is another important component: Being embedded means engaging and interacting with faculty and students from a variety of disciplines. “Understanding how the culture of a discipline affects information use is a challenge, but one that is interesting and rewarding” competency/cultural awareness needed in embedded librarianship. Familiarity with the discipline you are embedded in is key here, too; While many libraries have just one or two disciplines, others have responsibility for everything from the arts to the sciences. “Each discipline comes with its own language and workflow, and understanding how to navigate these is essential to engaging effectively” competency regarding discipline language and

workflow needed for embedded librarianship is pointed out. If embedding in a discipline outside of the library's comfort zone, having someone within the discipline to mentor you through the learning curve is a big help.(Carlson & Kneale, 2011)

7. Strategies for Successful Integration of Embedded Librarians

The concept of embedded librarianship involves the integration of a librarian within a department or program to enhance information literacy and library resource usage. Over the years, this approach has evolved from being a new concept to an implementation in academic institutions. Several strategies can facilitate the successful integration of an embedded librarian within an academic program. Building strong relationships with the faculty, department heads, and committees is crucial, as these relationships lay the foundation for facilitating embedded librarianship (R Andrews, 2015). These relationships can take time to nurture, particularly in large institutions. To foster rapport, it's important to meet with faculty members individually or in small groups to discuss needs, goals, and how the librarian can assist in achieving them. Serving on departmental committees is also beneficial for understanding the department's focus and needs.

Offering library services that align with curriculum needs and course outlines ensures these services are seen as relevant and valuable by faculty. To achieve this alignment, it's essential to request syllabi from faculty and find ways to incorporate appropriate resources. Delivering relevant training or workshops that address curricular goals reinforces the librarian's role in shaping library services. As embedding involves new roles for librarians, training and professional development opportunities are necessary to prepare them for these roles. These opportunities can be pursued through other institutions, associations, conferences, or in-house training programs. For some librarians, taking on an embedded role may require acquiring new skill sets, necessitating ongoing training for professional growth.(Luca, 2019)

It is essential to establish clear objectives for embedding librarianship and methods to evaluate these objectives to measure the success of the integration. Depending the institution, some objectives may need to be customized, while others may be directly applicable. Based on experience, creating awareness of the librarian's role in embedding amongst the students and faculty is critical for fostering collaboration. An information literacy session early in the semester can be one means of creating this awareness. In large institutions with multiple embedded librarians, it may be necessary to take extra steps, such as drafting an introductory letter for faculty and students, describing the librarian's role and how it assists in teaching or learning.(Munshi et al., 2024)

8. Case Studies of Successful Embedded Librarian Programs

Introduction to Embedded Librarian Case Studies Four librarians described recent embedded librarian projects that have greatly affected student engagement and outreach opportunities with academic departments. Stevens Memorial Library, located about 25 miles outside of Philadelphia, has three campuses and approximately 1,700 students. At the centralized Swarthmore campus, librarians offer embedded instruction with liberal arts seminar courses through in-person and online instruction. Each course has a one-hour class that incorporates hands-on exercises to teach students how to navigate research questions in databases. Engagement levels in these classes are routinely assessed through follow-up exercises.

At the Health Sciences Center in Phoenix, an embedded nursing librarian instructs literature review classes in an online doctoral nursing program. Class sessions emphasize how to find specific publication types, use advanced search strategies, and track citations through a database. Student learning has been assessed using anonymous quizzes. Results indicate that students prefer the embedded experience over one-time instruction. Overwhelmingly, students agree with a statement about the approach being a successful way to learn library skills.

At the University of Southern Indiana, librarians are embedded in the Nursing Department. A distance nursing program at the University of Southern Indiana includes a campus site in Indianapolis. An embedded nursing librarian attends classes in person and via video conferencing. During embedded time, faculty and the librarian collaborated and planned information literacy instruction for students enrolled in online courses. Priorities included focusing instruction on specific assignments, reinforcing skills over multiple classes, and providing assessment opportunities. Faculty noted a greater use of library resources in student projects. On the library side, more participation in curriculum design meetings with the department's faculty took place.

At Georgia Southwestern State University, Embedded Librarian sessions in nursing, education, and criminal justice use a library-designed blackboard tool that houses instructional materials, class examples, and evaluations to assess student learning. Embedded Librarian online modules include subject-specific databases, library web pages, live chat, and a new service allowing academic departments to embed a librarian in blackboard. With this service, the librarian works in the discipline from either the classroom or the library, tailoring information literacy experiences to each class and working closely with faculty to ensure alignment with course objectives (R Andrews, 2015) (R. Franzen & Sharkey, 2021).

9. Impact of Embedded Librarians on Student Success

The findings suggest that embedded librarians positively impact student success within academic environments. Students generally find value in the role of an embedded librarian in their study space, perceiving it as an asset to their learning and success. It has been discovered that students appreciate having their own librarian who is more accessible, viewing this arrangement as beneficial in creating a conducive environment for learning, inquiry, and discussion related to assessment tasks. Having someone knowledgeable and approachable, like a librarian, fosters a space where students feel comfortable seeking help. Most students express awareness of the embedded library service and, although some may not have fully utilized it, they recognize the benefits of this engagement. Research also indicates that students involved with an embedded librarian as part of their study group tend to have higher information literacy skills, as measured by an internal scoring rubric. This difference may imply that access to an embedded librarian can enhance students' confidence in conducting research and navigating library resources. (Saunders & W. Taylor, 2014) Consequently, these students are more likely to find the resources needed to successfully complete their assessment tasks. In general, the role of an embedded librarian aligns with five strategies, which include librarians proactively running drop-in sessions and/or appointments for students, integrating library training into the subject curriculum, proactively checking in with students and staff, and sitting in close proximity to teaching staff who directly embed a librarian in their subject. The effectiveness of these strategies varies depending on the context, subject, and teaching staff involved. However, the collaborative nature of the embedded

approach to these roles helps create a culture where teaching and academic staff feel compelled to support students outside of formal class learning. Therefore, regardless of these strategies' varying effectiveness, it is crucial that librarians take on these embedded roles and have the opportunity to teach outside formal library instruction (R Andrews, 2015). Finally, it is reiterated that librarians play a critical role in ensuring students successfully transition into higher education and acquire skills that will contribute to their employability and lifelong learning.

10. Collaboration between Embedded Librarians and Faculty

Discussions on embedding librarians in course areas invariably focus on the collaborative relationships formed between embedded librarians and faculty members. For embedded librarianship to flourish in an academic environment, it is vital that faculty understand and respect the role of the embedded librarian (Rodriguez, 2018). When the role is understood, there is potential for a fruitful partnership. Faculty and librarians often perceive collaboration differently. Librarians tend to think of collaboration in terms of a productive partnership for improved student outcomes, while faculty consider it to be about understanding their discipline (R. Matacio & Closser, 2017).

The insights librarians bring to the course design and implementation process as well as research initiatives could enable faculty to view the need for student learning outcomes beyond discipline-specific knowledge. Skills and attitudes that help students frame information problems, search for and evaluate information, and produce new knowledge based on information are integral to all disciplines. These are the unique understandings of course design that librarians bring, and when these are acknowledged by faculty, effective collaboration will enhance the curriculum by embedding information literacy and research skills systemically. (Azkagina & Irawati, 2024) However, there are barriers that hinder what could otherwise be impactful partnerships. Time constraints, the nature of academic workloads and differing priorities are key barriers. Faculty may perceive a need for collaboration as they prepare for a course; however, librarians are often assigned to multiple duties. Because academics are required to write research publications while continuing to teach, the focus for many faculty is on embedding services at the point of need rather than at course development stages, where input from librarians could have more impact. (Leonard et al., 2023)

Also limiting is an embedded view of librarianship. Faculty design the course and invite librarians to include research and information literacy elements in it as an add-on. This paradigm is further exemplified by the different understandings of what constitutes collaboration, and while there are various initiatives throughout the academic year to promote collaboration between librarians and faculty, these only encourage low-level partnerships. Rather than being merely plans to share knowledge about library services with faculty, these initiatives should promote a joined-up approach to course design that considers student learning holistically. It is crucial that embedded librarianship systems at least consider this partnership in terms of faculty engagement in course design rather than librarian engagement at a lower level. Potential connections, partnerships and opportunities for collaboration that could lead to a more equitable model of engagement are shared, as well as frameworks for building strong connections and fostering effective communication. In closing, two case

examples are presented to highlight the significance and potential of connections between faculty and embedded librarians when working together to achieve a common goal—the learning experience of students.(Andrews, 2014)

11. Evaluation and Assessment of Embedded Librarian Programs

Evaluation and assessment are vital for the success of embedded librarian programs. Without clear and measurable objectives, determining how well a program is working becomes challenging. As such, programs should begin with their own guidelines, outlining their goals and expectations for success. Common research tools for assessment should then be employed to gather relevant data. Many new embedded librarianship initiatives likely face similar challenges in measuring success, including an emphasis on qualitative outcomes that are difficult to quantify. Programs should also outline how to use results, ensuring that planning for modifications is integral to the assessment process (Rodriguez, 2018)).

In the case of one initiative, the first semester of implementation focused primarily on gathering feedback from all stakeholders to measure success. As some programs matured, alternative assessment methods were employed to quantify their impact more heavily. In addition to stakeholder feedback, these findings also informed several modifications to the program. While each implementation context requires unique approaches to assessment, creating a straightforward evaluation mechanism is often essential for new programs. Programs with similar goals may benefit from these discussions, as they provide a framework for conducting meaningful assessments and ensure that embedded librarianship efforts are accountable. An embedded librarian initiative is a new service offering library instruction for a course through an embedded librarian partnership with faculty. Nevertheless, the sustainable success of any instructional initiative in academic libraries depends on thorough evaluation and assessment of its impact.(Spangler & Casper, 2023)

12. Future Trends and Innovations in Embedded Librarianship

Embedded librarianship is a philosophy that has grown into a practice having numerous definitions, approaches, models, and perspectives. Each institution determines the best approach to embedded librarianship to meet its needs. In 2010 and again in 2019, a survey of embedded practises in academic libraries went out to members of the Academic Libraries Section in the United States and Canada. This section analyzes and discusses the results of that survey, showing how embedded practises have grown and changed in the last ten years, and how libraries responded to an ever-evolving academic environment (Rodriguez, 2018). These questions were posed: How do you define embedded librarianship, and what does it look like in your library? What worries or challenges do you see for the future of embedded librarianship? What advice would you give to someone starting an embedded library program in their institution? Embedded librarianship has been around for decades, but the ways in which librarians are embedded in academia are numerous and varied. Many factors will influence how embedded librarianship develops new programs or reshapes old ones. Respondents to the 2019 survey are aware of the issues that face embedded librarianship, but most believe embedded librarianship will continue to grow. The discussions can be break into four main considerations: Defining Embedded Librarianship, Environment Matters, Change, and Advice. For those involved in embedded librarianship, or in starting it, these suggestions may help clarify embedded librarianship and consider many factors to be taken into account in shaping it to best fit a particular institution (R Andrews, 2015). A brief snapshot of the

evaluation done in 2019 of where embedded librarianship is at, along with suggestions on how to consider the path forward. As academic environments evolve, so the methods of embedded librarianship need to grow and expand, consider new and different approaches, and look to the future. Embedded librarianship is the greatest opportunity librarians have to be truly integral to the learning, understanding, and processing of information in academia. However, embedded librarianship has no guarantees of success or longevity. It is instead a constantly changing philosophy and practice, one that must be rethought regularly. Trends and Innovations considers emerging trends and innovations in embedded librarianship. As technology advances, so too do the roles of librarians in higher education, particularly in regard to digital resources and online learning environments. Data literacy and digital scholarship are both growing focuses in academia that point to new areas for librarians to be involved in. Examination of Trends in Embedded Librarianship looks at broader trends, such as increased collaboration between librarians and faculty and the growth of interdisciplinary initiatives.(Munshi et al., 2024) Embedded librarianship practices will be influenced by how education environments evolve and change. Finally, Continuing Education Opportunities discusses potential professional development opportunities to ensure librarians are equipped with evolving skill sets. Expanded roles in research support or instructional design are also considered. This section hopes to encapsulate where embedded librarianship is going, and the possibilities available through an outlook toward the future.(MBAGWU, 2020)

13. Conclusion and Recommendations

This essay examines embedded librarianship as a response to changes in academia, information, and library services. Centers of academic support address the evolving needs of students and faculty with technological advancements. Librarians embedded in educational environments provide effective library services by meeting faculty and student needs. The growing presence of embedded librarians results from multidisciplinary faculty efforts to engage librarians in courses and research projects. This research focuses on instructional embedded librarians, emphasizing their role in academic programs and with students. It discusses the benefits of embedding librarians in the learning environment, highlighting research findings. Embedded librarians build relationships and trust with groups, better understanding information needs and delivering relevant services. Embedded librarianship can enhance academic program development, course delivery, and student support. Examples of successful practices from various perspectives demonstrate this. Embedded librarianship benefits institutions, librarians, faculty, and students, providing tailored services and creating an atmosphere of cooperation and trust. Embedded librarianship is defined, describing developments in academic library settings and innovative embedded practices. The critical role of embedded librarians in supporting academic programs and student success is underlined (Monroe-Gulick et al., 2013). Recommendations for institutions include investing in professional development opportunities for librarians, fostering collaboration through workshops, and adopting a continuous assessment culture (R Andrews, 2015). Researching embedded librarianship practices is encouraged to help librarians adapt to changing educational environments. As academic environments evolve, the needs of faculties, students, and institutions change, necessitating flexible information delivery. Embedded librarians must explore and comprehend emerging faculty and student needs to remain relevant. Embedded librarianship is an academic library's natural evolution to meet institutional expectations, contributing to academic and professional development.

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