

# In Bed with the Library: A Critical Exploration of Embedded Librarianship at the City University of New York

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## Abstract

This project considers the efficacy and scalability of embedded librarianship initiatives within the City University of New York (CUNY) library system and presents findings of an original research study conducted in 2015. Through an analysis of recent LIS literature on embedment, response data from a survey of librarians, and a selection of library position descriptions, this article examines the implications of embedment practices for librarians and libraries. By shedding light on the extent and context of embedment, the platforms used in virtual embedment scenarios, and obstacles that librarians presently face, this study aims to pinpoint strategies for embedded librarianship initiatives and begin a productive dialogue about the future of library integration in classrooms and educational technology platforms.

*Keywords:* embedded librarianship; educational technology; information literacy

Almeida, N. & Pollack, J. (2017). In bed with the library: A critical exploration of embedded librarianship at the City University of New York. *Communications in Information Literacy*, 11(1), 122-146.

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# In Bed with the Library: A Critical Exploration of Embedded Librarianship at the City University of New York

## Introduction

*Embedded librarianship can be many things, but always includes some kind of ongoing relationship between the librarian and a class, either electronically or in person. I think it requires the librarian entering class spaces rather than the class entering library spaces.*

*Embedded librarianship involves establishing a relationship with students to assist them.*

*Embedded librarianship can mean virtually inserting library services in an online learning environment (usually a CMS).*

*Embedded librarianship entails assisting faculty and students with additional research after classroom instruction.*

*Embedded librarianship refers to strategies and methods academic librarians implement to collaborate with subject faculty in team-teaching initiatives.*

*Embedded librarianship refers to instruction or other library services which are integrated into curriculum and/or take place outside of the geographic boundaries of the library.*

The definitions of embedded librarianship highlighted above were supplied by academic librarians at the City University of New York (CUNY). These quotes were selected from more than 50 responses to the anonymous, open-ended survey question: “How would you define embedded librarianship?” They illustrate the variety of ways that embedment can be defined within the context of a single university system. Some librarians privilege direct interaction between librarians, faculty, and students while others emphasize library service integration. Some respondents conceptualize embedded librarianship as closely tied to online education or situated in the context of a specific course. Others conceive of embedded librarianship more broadly as a flexible model for collaborative interaction. Most respondents consider the role of the librarian outside of the geographic boundaries of the library. Several librarians reference collaborative teaching and curricular development. These basic tenants of embedded librarianship—geographic elsewhere and pedagogical

partnerships—introduce potential opportunities for libraries to be more holistically integrated in the political, technological, and curricular ecology of institutions. However, embedded initiatives also pose interesting challenges for librarians, who often struggle to be viewed as full instructional partners by teaching faculty, who are frequently left out of educational technology decision making processes, and whose formal job responsibilities may not include extra-library work.

In light of these opportunities and challenges, the authors explore the efficacy and scalability of embedded librarianship practices through an institutional case study. While evidence suggests that librarians within CUNY have, to various degrees, been embedding in courses and in educational technology platforms for years, no comprehensive study has previously been conducted to determine the extent and context of embedment, the platforms used in virtual embedment scenarios, and the implications for CUNY libraries and the CUNY academic community. In the absence of institutional best practices, embedded initiatives are likely not scalable, iterative, or uniformly implemented. While focused on the CUNY library system, the findings of this study have applicability beyond this institutional context. Enrollment trends and student demographics at CUNY mirror broader enrollment and demographic patterns at colleges and universities across the United States (U.S. Department of Education, 2014). Further, the authors' examination of recent literature on embedded librarianship reveals that many institutions are struggling with similar environmental challenges and uncertainties. Through the institutional case study presented here, the authors hope to draw conclusions about the current landscape of embedment in academic libraries and begin a productive dialogue about the future of library integration in classrooms and educational technology platforms.

## **Context and Problem**

With 24 campuses and 31 libraries, CUNY is one of the largest and most diverse university systems in the United States. Demographically, student populations at CUNY “reflect the university’s mission to provide affordable opportunities for higher education to historically underserved populations in New York City” (Regalado & Smale, 2014, p. 2). CUNY students often face economic and socio-cultural challenges that can directly impact educational outcomes, particularly in the face of institutional environments that increasingly rely on information and communications technology (ICT). In five-year master plan draft released in May 2016 CUNY administrators called for campuses to increase “online education”

offerings in order to expand “portals of opportunity and access” (p. iii). However, librarians Maura Smale and Mariana Regalado (2014) found in a recent ethnographic study of CUNY students that, “economic constraints impose real limits on [student] access to and use of technology” even as “the undergraduate experience is increasingly reliant on ICT, from the simple need to send an email to a professor to the required use of complex course management systems to the need to find and evaluate relevant information from online sources and use it responsibly” (p. 16). A series of state budget cuts have also constrained the university’s ability to adequately support students’ digital and informational needs (Chen, 2016, p. A1). This environmental context, while not the focus of this study, importantly affects CUNY libraries and informs staffing models, resource budgets, and student service offerings.

CUNY libraries collectively serve more than 269,000 students and employ more than 350 professional librarians. The libraries are part of a unique consortium in which they largely operate as autonomous entities but share licenses to a number of resources. CUNY librarians routinely collaborate, participate in inter-institutional committees, and operate under the guidance of a centralized Office of Library Services (OLS) (Libraries, 2016). Beyond providing resources and traditional library services, librarians are deeply involved in the pedagogical and scholarly life of the university. Most campus libraries have a robust instruction program and several campuses offer credit-bearing courses. Librarians also serve on college and university committees and are, as university faculty, formally involved in governance and decision making processes outside of the library. However, in urban commuter settings, with disaggregated adjunct faculty populations and a large number of low-income and ESOL students, as well as students in need of remediation, CUNY librarians face challenges when it comes to reaching all students and faculty. These challenges are exacerbated by swelling campus populations, shrinking budgets, rapidly evolving degree programs, and increased online and hybrid course offerings.

The university has a centralized Computing and Information Services (CIS) department and CIS staff manage consortial educational platforms. The largest and most ubiquitous of these platforms is Blackboard, a globally licensed Course Management System (CMS). While usage and adoption of Blackboard varies widely, templates are automatically generated in there for every course offered by CUNY, and it is the de-facto platform used for hybrid and online courses. In fall 2015, over 50,000 course shells were created and more than 50% of

those were activated and used. In fall 2015, an average of 85,500 students and faculty logged in every day and peak usage topped 115,200 unique logins in a single day. As is the case with many consortial institutions, the educational and library technology landscape at CUNY is vast and complex, which necessitates regular collaboration between university and campus-level constituents. However, these collaborations do not always equate to real integration of the library in education technology. Instead, bureaucratic hierarchies and the interference of multiple stakeholders with competing priorities can impede communication and introduce political obstacles. Furthermore, institutional expectations for library representation in educational technology platforms are not always aligned with economic, labor, or technological realities; the authors will attempt to expose and address some of these schisms.

The authors developed this study in response to two challenges: the first concerning the presence (or lack thereof) of the library in Blackboard, and the second concerning efforts to formally and broadly integrate information literacy skills into university curricula. There are several ongoing efforts within the CUNY library community to explore and advocate for library involvement in curricular activities and in educational technology platforms. CUNY Library Information Literacy Advisory Committee (LILAC) (established in 2004) members maintain an active advocacy campaign, host public programs, and have developed a set of information literacy standards. The more recently formed Library Blackboard Working Group (LBWG) (established in 2014) and the Library Technology Subcommittee of the CUNY Committee on Academic Technology (established in 2015) reflect renewed efforts by the CUNY library community to become an integral part of campus discussions about educational technology and digital literacy. In 2015, LBWG members collaborated with CUNY CIS staff to develop a custom course role for librarians in Blackboard and subsequently ran a pilot program to recruit librarians to embed and share their experiences. In spite of this pilot program and university level committee work, the size of the CUNY library system and the relative autonomy of campus library operations has resulted in a lack of any comprehensive picture of the role embedded CUNY librarians serve in classrooms and educational technology platforms. The authors designed this study to illuminate those roles and a path forward for librarians exploring or assessing embedded services at CUNY and beyond.

## Literature Review

Embedded librarianship is a phrase ascribed to a variety of service models and contexts. In fact, before adopting it as an object of study, most articles about embedded librarianship begin by acknowledging that the phrase is problematically and variously leveled at different service paradigms (see: Shumaker & Talley, 2009; Brower, 2011; Drewes & Hoffman, 2010; York & Vance, 2009). The word embed, etymologically a combination of in and bed, has been used since the 18<sup>th</sup> century to describe the act of situating something “firmly in a surrounding mass of some solid material” (“embed,” 2016). Like a germ or a lodged pebble, embeddedness implies both a process of dispersal and fixity—a kind of dislocation that is not freighted with out-of-placeness. If embedded librarianship is similarly characterized by principles of disaggregation, then the problem with defining it likely stems from the fact that embedded initiatives are often distributed, specific, and difficult to describe outside of the contexts in which they are implemented. Embedded librarianship has gained critical traction in the past decade, but this may be a novel semantic rather than conceptual formulation. In many of its critical formulations embedded librarianship is difficult to disentangle from discussions of course integrated librarianship, blended librarianship, and situated information literacy—arenas that also focus on the role of library interventions in extra-library spaces (See: Lindstrom & Shonrock, 2006; Bell & Shank, 2004; Farrell & Badke, 2015).

Embedment is largely presented as a positive, proactive model of engagement. However, upon closer examination, increased interest in embedment in academic libraries may reflect the fact that librarians are grappling to overcome systemic institutional disparities and a culture of exclusion. Barbara Dewey (2004), who many credit with coining the phrase “embedded librarian,” describes a “pervasive campus librarian” who is, by virtue of her role as an academic generalist and through her investment in “all sectors of the academic user community,” in a “unique position to become involved in core activities and initiatives” at a university (p.10). Dewey notes that in spite of this unique capacity of librarians, “administrators may not automatically consider that a librarian should be tapped or invited to participate on campus-wide projects” and suggests that librarians “must take it upon themselves to establish an acute sense of important campus agendas and propose involvement *including reasons why their perspective is important*” [emphasis ours] (p. 10). Like Dewey, many other librarians frame embedment as an outreach tool and a means to reassert

the relevance of librarians as essential constituents in the cultural and pedagogical life of a university (Kline, 2015; Andrews, 2015; Drewes & Hoffman, 2010; Tumbleson & Burke, 2010). Some of these same librarians also acknowledge that without institutional support, funding, and sufficient staff, embedment initiatives are difficult to sustain and embedment labor often goes unrecognized. The overall emphasis on scalability and best practices in critical literature (See: Drewes & Hoffman, 2010; Hoffman & Ramin, 2010; Daly, 2010; Burke & Tumbleson, 2010; York & Vance, 2009) illustrates that many academic librarians have concerns about workload, service sustainability, and scalability regardless of whether they are embedding in physical classrooms or in virtual spaces.

The increased focus on embedment in academic libraries is related to the uptick in studies addressing librarian-faculty partnerships. This trend is relevant in the wake of the adoption of the 2016 Association for College and Research Libraries Framework for Information Literacy, which explicitly calls for librarians to “collaborat[e] more extensively with faculty” (Andrews, 2015, p. 2; ACRL, 2016). The embedded librarianship service model is frequently analyzed in relationship to the one-shot information literacy instruction model and typically framed as either a sustained extension of a discrete information literacy intervention or as a viable alternative. Librarians are increasingly expected to collaborate with faculty and contribute to college curricula. In some cases they are even “held accountable for the academic success of students” (Andrews, 2014, p. 71). In such environments, pedagogical models that allow for prolonged engagement with students and faculty are often viewed as essential. Some librarians cite evidence that librarian-faculty collaboration leads to increased student success even as they acknowledge collaborative obstacles that librarians face (Booth, et al., 2015).

Other studies (See: Meulemans & Carr, 2013; Meredith & Mussell, 2014) on library / faculty partnerships illustrate that calls for “collaboration” do not easily translate into seamless pedagogical transformation. Administrative marginalization of the library is not an isolated phenomenon: it both enacts and reflects a culture of systematic exclusion from certain educational spaces, namely, classrooms and online learning environments. While “outsiderness” carries with it certain critical pedagogical benefits, this does little good if librarians have difficulty gaining access to students in the first place (Almeida, 2015). Cathy Eisenhower and Dolsy Smith (2009) argue that faculty often have the power to both dictate the context of library instructional encounters and physically control “access to classroom teaching” (p. 9). This problem has likely contributed to a proliferation of studies on “student



and faculty perceptions of librarian efficacy,” perhaps at the expense of studies that “demonstrat[e] the real effects of librarian contributions to learner understanding” (Booth et al., 2016, p. 635). In spite of the growing body of literature on perceptions of librarians, invisible labor in libraries, and library stereotypes, issues of contingency labor in higher education are often glossed over (See: Pagowsky & DeFrain, 2014; Meulemans & Carr, 2013; Eisenhower & Smith, 2009). It is unclear how issues of contingency or library faculty designation might complicate classroom power dynamics and librarian-faculty partnerships.

The majority of recent original research studies on embedded librarianship focus on virtual embedment models (See: Daly, 2010; Malnati & Boseman, 2012; Meredith & Mussell, 2014; Tumbleson & Burke, 2010; York and Vance, 2009). It is notable that many of these studies discuss embedment in Learning Management Systems for online or hybrid courses— contexts where students might not otherwise have access to library services. As early as 2004, practitioners have recognized that, “embedding the library into the teaching and learning mission of the university can be accomplished through positioning links within a campus online curriculum system such as WebCT and Blackboard” (Dewey, 2004, p. 15). However, there is a discernible gradient in levels of embedment with some institutions pursuing superficial technological integration and others initiating local and highly specialized interactions between librarians, faculty, and students in virtual spaces (York & Vance, 2009).

In spite of the focus on virtual embedment, an important collaborative dimension of library-CMS embedment that is often glossed over in literature is the collaboration between librarians and “instructional designers and CMS administrators” (York & Vance, 2009, p. 202). Library-CMS administrator partnerships that lead to automated integration of library resources in online learning environments may be key for the scalability of library embedment initiatives at some institutions (Daly, 2010). Other librarians posit that while scalability issues may persist, manual, course-level embedment allows for direct, personal interaction between librarians and students that may contribute to long-term literacy benefits and even increase retention (Hoffman & Ramin, 2010). While difficult to measure, these intangible benefits may be important for libraries struggling to connect with online students and part-time instructors. Most academic libraries pursuing embedment will have to practically negotiate a balance between personalized interaction and scalability.



Several embedment (or embedment adjacent) models at CUNY have confronted scalability issues without technological automation. In a networked embedment model, Shawnta Smith, a librarian at the CUNY Graduate Center, served as an embedded librarian in a Mapping the Futures course that encompassed several CUNY campuses and involved a nexus of several hundred students, faculty, and librarians. The course, designed as part of a fellowship program for Graduate Center students who both study and teach at CUNY, was conceived as a “interdisciplinary graduate class and network of undergraduate classes involving more than 365 students across ten CUNY colleges” (Futures Initiative, 2015). Smith was involved in both face-to-face and digital dimensions of the course and also coordinated with librarians at CUNY campuses who provided resources to support fellows and the dispersed network of their students (Smith, 2015). Perhaps more than any other case study, this initiative illustrates how a strategic embedment campaign at a programmatic level might allow librarians to capitalize on benefits of highly-specialized, discrete embedment models without succumbing to political and labor-related pitfalls. In “Situating Information Literacy in the Disciplines,” Robert Farrell, a librarian at Lehman College (CUNY), and William Badke (2015) from Trinity Western University, introduce a similarly rhizomic approach called “the CUNY model” that advances “a socio-cultural approach” to information literacy and “provides a way for librarians to move forward with disciplinary faculty on their ‘own turf’” (p. 2). Framed as a “systematic and practical” model, Farrell and Badke position librarians as “curricular consultants” who conduct “disciplinary faculty focus groups [...and] collaboratively design authentic, situated information literacy learning opportunities” to be deployed at the departmental level (p. 2). While Farrell and Badke have introduced the CUNY model as a practical and sustainable alternative to discrete, course level embedment, their emphasis on collaboration and extra-library intervention indicates that this model could fall under an embedment umbrella.

As new technology becomes available and instructional models evolve, the future of embedment might involve a redressing of how we conceive of “point of need” services in complex, politically fraught, and distributed academic environments. It remains unclear whether embedment can address some of the systemic issues with library marginalization in political and pedagogical arenas identified here. However, critical literature indicates that embedment offers new opportunities for library integration into extra-library spaces and introduces new avenues for librarians to improve student learning outcomes. Through this survey of literature, the authors find that there is a need for more documentation on

embedment—in the form of case studies, data, and critical discussion—particularly as library, educational technology, and pedagogical spaces evolve. Such documentation might contribute to the proliferation of new embedment models and may also shed light on existing institutional and pedagogical issues in ways that engender critical reflection and eventually, progress.

## Study Methodology

To measure the extent and variety of approaches to library embedment, the authors distributed a quantitative, anonymous, web-based survey via CULIBS, a CUNY-hosted listserv for librarians and professional library staff with 508 members at the time of distribution. Before distribution, the authors obtained permission from administrators at each CUNY library as well as the Institutional Review Boards at their respective campuses. The authors encouraged respondents to contribute their perceptions of embedment regardless of their respective institutional roles and level of experience with embedded librarianship. The authors included initial definitional and contextual questions to qualify the participants' responses. These questions provide important context about the following: perceptions of embedment, institutional culture, library organization, and the primary job responsibility of respondent librarians.

In the wake of accelerated online and hybrid course offerings and given the near ubiquitous use of educational technology in all instructional settings at CUNY, the authors incorporated several questions about embedment in Blackboard in order to assess if and how librarians use this tool. The authors used skip logic when designing the survey to ensure the maximum response rate, and as a result, librarians who indicated that they do not embed did not view or respond to survey questions about specific embedment platforms and activities. Additionally, respondents could opt to skip survey questions and the authors have included response percentages in the infographics included with a summary of the study findings. To supplement survey findings, the authors also analyzed 2015 CUNY library job posting to determine the extent that embedded related activities are represented in new librarian position descriptions. The authors reached out to the Metropolitan Library Council (METRO) to gather this data. METRO provided access to archived 2015 position descriptions from their digital job list and the authors subsequently conducted a keyword frequency analysis of the CUNY postings. The authors used keywords and subject headings

commonly employed in critical literature on embedded librarianship in the frequency analysis.

## Survey Findings

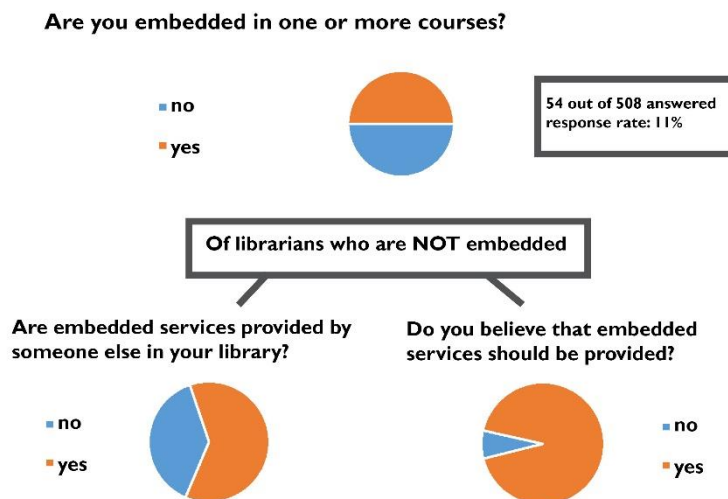
Fifty-five librarians out of a potential 508 responded to the survey, amounting to an 11% response rate. The relatively low response rate may reflect a population of librarians who consider embedment outside of their professional purview. Based on definitions of embedded librarianship provided by respondents, the authors infer that CUNY librarians not directly involved in pedagogy or instructional technology may not consider an embedment survey relevant. Additionally, the authors attribute the low response rate to the fact that the survey was distributed during the summer, a time when many librarians at CUNY take leave to work on research projects. The number of responses received validate assumptions about the uncertain space of embedded work and the ad hoc state of embedded initiatives in CUNY libraries to a certain degree.

Many survey respondents defined embedment as closely aligned with instruction, faculty collaboration, and educational technology. These definitions largely mirror those supplied in critical literature and institutional case studies. Thirty-seven survey respondents explicitly included references to “faculty” or “students” in their definition, seven referenced “collaboration” or “partnership,” eight included mentions of “curriculum” or “curricular,” 15 mentioned “IL” or “information literacy,” and 11 referenced “online,” “virtual,” “LMS,” or “Blackboard.” Overall, these definitional responses illustrate that librarians see embedment as connected to broader concerns about library representation in educational technology and classroom environments. Survey respondents also indirectly point to overlaps in conceptualizations of embedded librarianship, course integrated librarianship, blended librarianship, and situated information literacy initiatives in their supplied definitions.

Of the 11% of CUNY librarians that responded to our survey, 50% identified as being engaged in embedment. The authors infer that since librarians engaged in embedment or working in libraries with embedded services were more likely to respond to the survey, this statistical breakdown should not be projected on the CUNY library community as a whole. As Figure 1 illustrates, a majority of respondents who completed the survey but who have never embedded indicated that a colleague in their campus library was providing embedded services. All but two of these unembedded respondents thought that embedded services

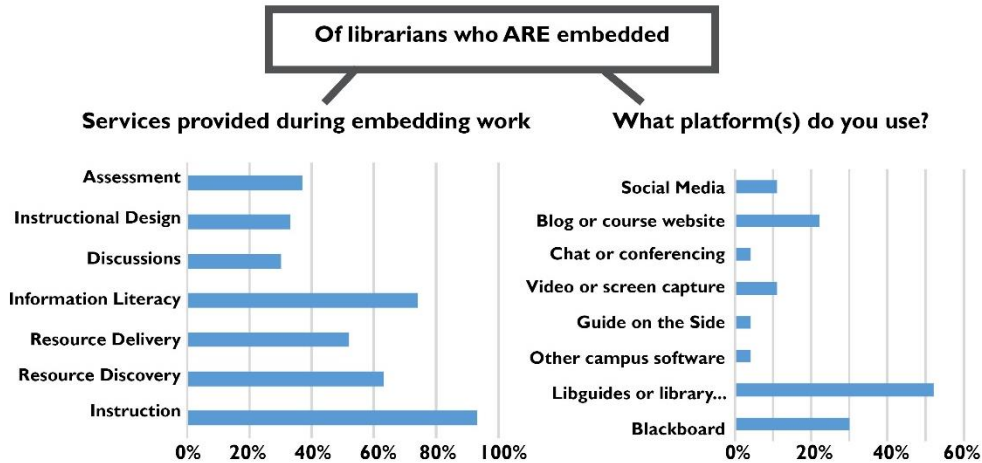
“should be” provided by their library. Without more qualitative data, it is unclear what librarian expectations for embedded services are or whether they believe that embedded services will increase the visibility and relevance of the library, mitigate issues with institutional marginalization, or positively affect student learning as critical literature suggests. Lack of faculty or administrative buy-in was one of the most cited obstacles to embedment; 40% of the respondents indicated that barriers to embedment were due to systemic resistance or indifference.

**Figure 1**



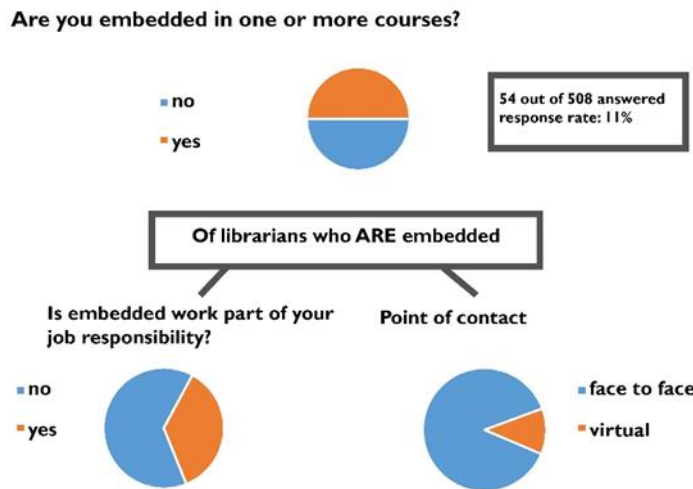
Almost all embedded librarian respondents identified information literacy and instruction as part of their practice. To a lesser extent, embedded librarians at CUNY assist with resource discovery, provide resource delivery, engage in assessment, contribute to instructional design, or participate in classroom discussions as part of their embedded work (see Figure 2). These findings suggest that librarians may be using embedment as an extension of teaching practices rather than a means to redefine the role of librarians in courses. Further, the more transformative, systemic models advocated by Smith (2015) and Farrell (2015) do not reflect embedment practices across the CUNY library system—at least not yet. However, embedment practices at CUNY are similar to those introduced by librarians in other institutional case studies, many of whom cite positive information literacy outcomes in embedded or co-teaching scenarios (See: Hoffman & Ramin, 2010; Booth, et. al, 2015).

Figure 2



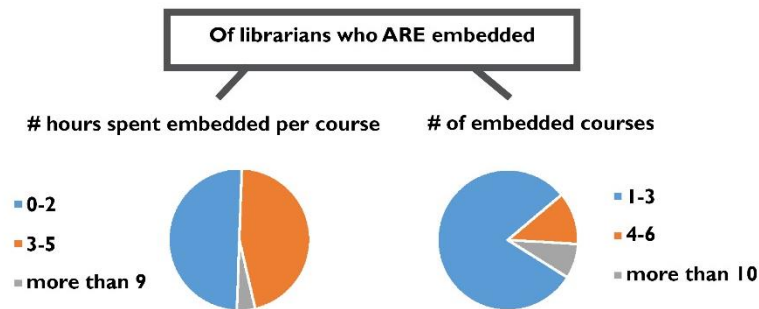
Sixty-four percent of embedded librarian respondents noted that embedded work is not a formal part of their job responsibility. Interestingly, a significant majority of these embedded librarians indicated that they provided face-to-face rather than virtual embedment services reflecting varying interpretations of what embedment entails (see Figure 3).

Figure 3



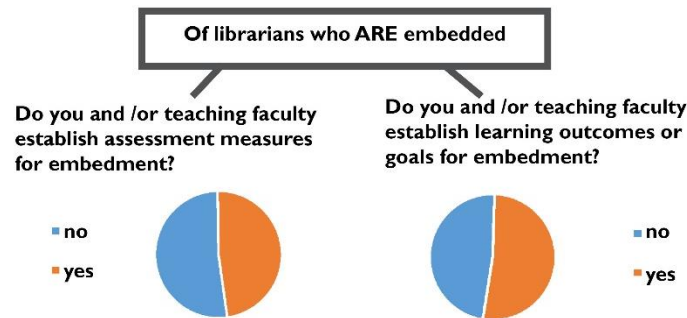
This finding is unusual given that most recent case studies focus on virtual embedment and many CUNY librarians mentioned educational technology in their definitions of embedded librarianship. Most respondents embedded in one-to-three courses per semester and spent zero-to-five hours working on embedded services per week (see Figure 4). Two respondents included they were embedded in more than 10 courses and one respondent spent more than nine hours working on embedment activities per week. About 40% of embedded librarians established learning outcomes in conjunction with their faculty collaborator. A similar percentage of embedded librarians established assessment measures to evaluate embedment practices.

**Figure 4**



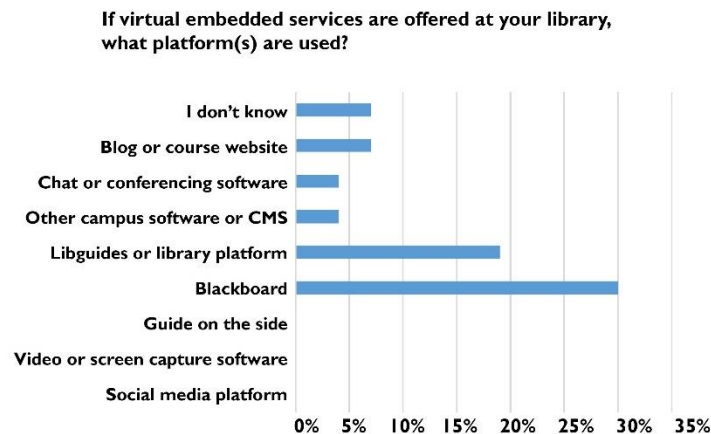
These findings underscore the ad hoc nature of embedded services at CUNY libraries, which are not formally reflected in librarian job responsibilities or routinely tied to learning outcomes. The low percentage of librarians assessing the efficacy of embedded interventions may be indicative of either lack of access to students or lack of formalization of service models. In either case, measuring the outcomes of these initiatives is an important arena for future study. Data illustrating tangible benefits to students could be used by librarians to mitigate obstacles with faculty buy-in and to provide leverage for institutional support in the form of staffing, funding, or technological infrastructure (see Figure 5).

Figure 5



Unembedded librarians cited Blackboard as the most used platform for virtual embedment, other platforms mentioned included: LibGuides, alternative CMS platforms, chat reference software, and blogging platforms (see Figure 6).

Figure 6

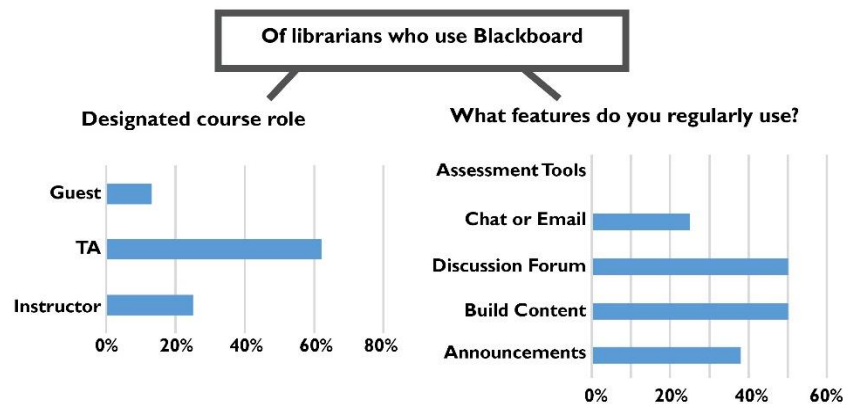


Unlike their unembedded counterparts, embedded librarians identified LibGuides as the main platform used for virtual embedment (see Figure 2, above). This discrepancy may reflect the perceived ubiquity of Blackboard at CUNY campuses by unembedded librarians and the lack of access embedded librarians actually have to educational technology platforms and CIS decision-making processes. Additionally, the perception that embedded librarians are (or should be) embedding in Blackboard may reflect an overall interest in supporting expanding numbers of hybrid and online students and providing “point of need” library services to disaggregated commuter students and part-time faculty.



While not the primary platform used, 30% of embedded survey respondents used Blackboard prior to the roll-out of the “librarian” course role. In a subset of survey questions, the authors inquired about embedding in Blackboard including course role designations and what specific tools librarians used. The survey instrument was distributed before the creation of a custom librarian course role in Blackboard and the authors hypothesize that the simple act of naming a space for librarians may increase embedment activities in Blackboard over time. Most librarians embedding in Blackboard (63%) were designated as a “TA” (teaching assistant) and a few other were assigned roles as an “Instructor” or “Guest” (see Figure 7).

**Figure 7**

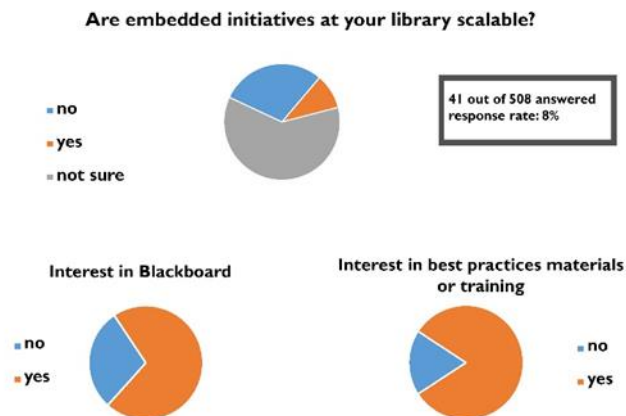


The creation of a custom role in Blackboard is a fairly minor innovation but librarians, who have faculty status at CUNY, may object to a comparably diminutive designation as a teaching assistant in a Blackboard course. Librarians may also worry about whether a “TA” course role impacts how they and their contributions are viewed by students. This concern is echoed in literature on student and faculty perceptions of librarians and their pedagogical contributions. The lack of a designated space for librarians in a pervasive, expensive educational technology platform like Blackboard supports the idea that librarians are marginalized in certain educational contexts. The interjection of librarians into spaces from which they are, by default, excluded may cause some faculty to view embedment as disruptive or as a mode of confrontation. Thus, embedment may perpetuate library marginalization rather than mitigate it. It is unclear whether a more systematic inclusion of the library in educational technology environments would alter these dynamics. It is also

unclear how these dynamics might be complicated by a more considered evaluation of contingency labor in universities including how adjunct faculty view the library and use library services, and how contingency within libraries affects service paradigms.

All survey respondents were asked about the scalability of embedment practices on their campuses. Forty-one out of 508 polled librarians answered this question giving us a response rate of 8%. Most of these respondents were “Not sure” whether or not embedded practices were scalable. Only 12 respondents out of 41 considered their embedment initiative scalable while two thirds of respondent librarians thought that initiatives could not be scaled or expressed concerns about scalability (see Figure 8).

**Figure 8**



While librarians expressed uncertainty about the scalability of service models already in place, it is also notable that in follow-up open ended qualitative question, 55% of respondents cited lack of time, staffing shortages, or workload concerns as an obstacle to implementing or expanding an embedded librarianship program at their campus. These findings largely echo scalability and sustainability concerns cited by librarians in many institutional case studies, even at universities where embedded librarianship programs had documented positive effects on student learning.

Overall the authors found that in spite of the widespread adoption of educational technology platforms at CUNY, these platforms are not being significantly utilized by librarians. Opportunities for interoperability between library platforms and Blackboard remain underexplored. The authors found that there is an overall lack of formalization of

embedment activities in CUNY Libraries. Additionally, the authors discovered that librarians at CUNY are concerned about levels of faculty engagement and administrative buy-in at their campuses. In light of survey findings, the authors believe that current embedment initiatives are not adequately tied to learning outcomes and issues of scalability are insufficiently considered by embedded librarians. In the absence of formal embedment service models that consider student achievement and employ assessment measures, the efficacy of library interventions at CUNY are difficult to quantify or even concretely define. Without documentation illustrating the outcomes of embedded librarianship, CUNY librarians may continue to struggle to formalize embedded initiatives and gain administrative support.

### **Job Posting Analysis**

To supplement and contextualize survey responses, the authors conducted a keyword frequency analysis of recent CUNY library job postings to determine if CUNY library administrators value professional experience with embedment or competency with educational technology. In 2015, 35 CUNY library positions were posted on the METRO job list, 31 of these were professional positions requiring an MLS and four were paraprofessional or internship positions. For the purpose of this study, the authors only analyzed the 31 professional positions. The vast majority (21 out of 31) of these were instruction / reference librarian positions, with 10 of these positions listing secondary functional areas such as disciplinary specialist, outreach, or emerging technologist. The remainder of the job posting included administrative, web services, systems, and technical services positions.

Only one posting listed “embed” “embedded” or “embedment” in the position description—this was for an instruction / reference librarian with a secondary functional role as an outreach specialist. A frequency analysis of “instructional technology” “instructional tech” “educational technology” or “educational tech” returned four postings: two instruction / reference positions, one systems position, and one emerging technologist. Similarly, a frequency analysis of “instructional design” also returned four postings: two instruction / reference positions, one web services position, and one emerging technologist. Lastly, a frequency analysis of “LMS” “Learning Management” “Course Management” or “Blackboard” returned only two postings: one emerging technologist and one web services position.

This data reveals that a small percentage of recent CUNY library postings list embedment or embedment related activities as a formal job requirement. Further, most recently advertised CUNY library positions do not list instructional design or educational technology engagement as a responsibility. Interestingly, while the authors found that instruction / reference librarians are the most likely population to engage in virtual embedment, none of the 21 instruction / reference positions listed in 2015 mentioned Blackboard or an educational technology platform explicitly, and only one of these positions directly mentioned embedment. The authors believe that these findings, in conjunction with their survey findings, illustrate that embedded librarianship is not widely institutionally supported and that embedment related labor is not designated in the majority of recently listed librarian positions at CUNY. While job responsibilities in academic libraries are rarely static and may evolve to incorporate new service paradigms, the overall lack of formalization of embedment practices at CUNY raises questions about labor and sustainability.

In light of the findings of both the survey and job posting analysis, it is particularly notable that in a section of the CUNY five-year master plan draft (2016), university administrators explicitly call for “librarians across the system [to] become more ‘embedded’ in non-library courses by collaborating in Blackboard spaces, participating in classes along with CUNY’s students and assisting discipline faculty with developing assignments that enhance student learning” (p. 87). It is unclear what measures CUNY libraries, many of which are currently understaffed due to budgetary constraints, will take to address this mandate. However, the explicit mention of the LBWG pilot initiative and the “CUNY Model” advocated by Farrell (2015) in the master plan may lend embedment initiatives visibility and prompt discussions on CUNY campuses about measures to support students and provide “easier access to the resources offered by CUNY’s libraries” (p. 86).

## Conclusions

Through the course of this investigation, the authors found that a subset of CUNY librarians are engaged in ad hoc embedment initiatives, which are predominantly used as an extension of teaching practices in face-to-face classroom settings. The majority of CUNY librarians surveyed believe that embedment services “should be” provided by CUNY libraries. However, there are clear obstacles to formalizing and expanding embedded librarianship initiatives even as institutional administrators have called for increased library

participation in educational technology platforms, classrooms, and curricular design activities. Overall, a lack of cohesion in defining embedded librarianship and articulating embedded service models by librarians at CUNY has likely hindered progress in this arena. Librarians also cite a widespread lack of buy-in at both the departmental and institutional level. The low response rate to the authors' survey suggests that a vast majority of librarians do not consider embedment within the scope of their work—an assumption that is supported by the job posting analysis. Embedded librarians express concerns about workload including worries about managing time and faculty / student expectations. In addition to these labor-related concerns, librarians cite collaborative problems as obstacles to pedagogical integration and technological interoperability. Additionally, the authors found that libraries are not fully exploring options for integration in educational technology environments and are not adequately using embedment as a means to redefine the role of librarians in courses.

Based on these study findings and an examination of recent literature on embedment, the authors propose that academic librarians at CUNY and at other universities who want to adopt or expand embedded librarianship services consider the six recommendations outlined below. The authors recognize that these recommendations are most relevant for academic librarians working in large, consortial environments, and they introduce these recommendations as general guidelines rather than prescriptions. The authors also acknowledge that different institutional contexts necessarily affect how embedment models are designed, implemented, and assessed.

1. Librarians should examine different embedded service models—including rhizomic, programmatic models like those advocated by Smith (2015) and Farrell (2015)—before implementation.
2. Librarians should outline goals for embedment initiatives that are communicable to institutional stakeholders and clearly articulate expectations and assessment protocols to faculty before pursuing embedment.
3. Libraries offering embedded services should leverage institutional mandates or calls for library / faculty collaboration like those outlined in the new ACRL Framework for Information Literacy for Higher Education (2016).
4. Librarians should petition to be included in curricular and educational technology decision-making processes at their institutions.

5. Librarians should pursue collaborations with IT departments and decision makers to further explore options for embedment in online environments and opportunities for interoperability between library and educational technology platforms.
6. Librarians should publicize embedment initiatives and assess embedment outcomes in order to increase buy-in and advocate for designated staffing and funding.

Further studies on library embedment are needed, particularly to address questions raised by this study about the future of the library in educational technology platforms. The current library and educational technology schism that exists at many academic libraries is difficult to broach. Even with a combined grassroots and policy level approach, many libraries still face obstacles to interoperability that are difficult to surmount. There is also a need for more research on the ways contingency labor in higher education environments effects library / faculty partnerships and library service models. A comprehensive study of staffing and funding models for embedment should be conducted by any institution exploring embedded librarianship to determine whether institutionally supported, programmatic initiatives will address the workload, labor invisibility, and scalability problems that many embedded librarians presently face. More research on the efficacy of library intervention in physical and virtual pedagogical spaces may also inform future priorities for library technology procurement and instructional service paradigms. In spite of the challenges that lay ahead, this study and an examination of recent literature reveals that many academic librarians believe that embedment is needed in light of changing educational environments. While the current state of embedded librarianship is evolving, the authors hope that this study will help librarians articulate a vision for embedment practices at their own institutions. Further, the authors hope that some of the issues raised here spark a broader dialogue about how labor issues and professional optics play a role in shaping services models, including embedment, in academic libraries.

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