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# Librarian Integrated Workflows to Enhance Course Design & Development

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## Abstract

As the modes of course development in universities shift to be more team-based, librarians are now contributing core components of course development operations. This article outlines the ways that librarians at Capella University have been integrated systematically into course development. Adding librarians to specific points throughout the course development process has streamlined processes, saved materials costs, and better aligned research skills instruction with student needs. This systematic integration method is novel, compared to traditional models that pair librarians with individual faculty or offer ad hoc, or small pilot project assistance.

## Introduction

Just as college courses have shifted their delivery models from entirely in-person to a blended or entirely online format, the models used to develop those courses have also undergone an evolution. Course development is becoming increasingly team-based, with a variety of curriculum and design professionals working in conjunction with faculty or subject-matter experts (SMEs). Within this team-based, project-managed form of course development, there are many aspects of the process where librarians can provide services and support to enhance course design.

A review of the literature shows that in traditional course design, individual librarians have been paired with individual faculty. Another conventional design model entails librarians granting ad hoc assistance to faculty. At our University, librarians enhance nearly every phase of the course development process in a programmatic and intentional way: from the program ideation phase, through course development, and during course quality-assurance revisions. These multiple points of organized librarian contact have been integrated into the course development process.

An investment in partnership between the course development process and library teams can enhance processes and learning outcomes across curriculum production, resulting in academic benefits and organizational efficiency. This article will look at practices covered in the literature and the current state of library supported course development work streams at our home institution. The two major functions which will be covered are:

- Content Strategy - Services related to materials used in courses
- Information Literacy – Services for student research skill development

## Literature Review

### Models of Librarian Support

Connections between the library and other areas of the university have a long tradition. *Blended librarianship* was an early means of transforming librarianship by developing librarians' understanding of instructional design and the application of technology. Bell and Shank's *six principles of blended librarianship* provided a basic structure for librarians to use as they began to find ways to influence the rest of the university and integrate information literacy in the curriculum (Bell & Shank, 2004). These principles emphasized that librarians should go outside of the library to create "campus-wide information literacy initiatives" and building relationships with existing instructional designers, technologists, and faculty "to assist them in integrating technology and library resources into (hybrid/blended) courses" (Bell & Shank, 2004, p. 374). This outward-looking, collaborative role for the librarian was certainly a necessary development. Academic library collections faced possible marginalization, even though much academic journal subscription content is not accessible via open web search engines, like Google. In addition, librarians offer instruction in critical digital literacy and information research skills for both subscription and open web environments.

If libraries choose to remain external to course development, marginalization can occur-- despite recent estimates that half of resources continue to require payment by users, continuing the library's necessary role as an access point for research (Piwowar et al., 2018). Without a connection between the library and the course design process, there may be fewer chances for students to: 1) access the breadth and depth of relevant academic and professional materials, 2) develop necessary information literacy skills, and 3) practice them in a disciplinary setting. The principles of blended librarianship did not specify the modes of collaboration and integration, nor did it delineate the library services and skills that should be included in a final, blended course. In practice, single librarians typically partnered with single faculty and had a short reach (Butera, Gomes, & Kakar, 2014; Kobzina, 2010; Lampert, 2005; Mullins, 2014).

The inclusion of librarians in courses has taken many forms. Pritchard (2010) divides librarian involvement in courses into three levels: *supplemental, integrated, and embedded* (pg. 377-378).

- In a **supplemental model**, the librarian provides the possibility of extra instruction for students, but it is developed by the library without specific course objectives in mind. It is not required, nor is it integrated in the course.
- The **integrated model** begins to move library instruction into the course, either in person or online. It is developed by the library with greater knowledge of the course's content, but without librarian influence on that content.
- The final, most collaborative form is the **embedded model**, which allows the librarian to work closely with the subject specialist/faculty in a variety of ways, including the development of information literacy instruction (Abrizah, Inuwa, & Afiqah-Izzati, 2016). In some cases this collaboration occurs as the course objectives and assignments are being designed. This model may even include the librarian as a supplemental instructor or grader.

### Macro and Micro Support

The multiple forms of integration, embeddedness and collaboration can be organized into Shank and Dewald's concepts of *macro and micro level involvement* (2003). These two levels help to differentiate the many ways librarians can impact a course. *Macro level involvement* pairs the course developers with the library to place a "generic, global library presence into the software" (p. 38). This most commonly manifests as links to library services, such as chat reference or document delivery information, or to tools, such as databases or the library catalog. Macro level involvement is supplemental, not customized, and requires limited maintenance by the library, although it may be included at specific points of need within a course.

Integrated and embedded models require *micro-level involvement*, where individual librarians are able to team with faculty and course developers "to participate in developing a customized library instruction and resource component for the courseware-enhanced courses" (Shank & Dewald, 2003, p. 38). It is in this intense collaborative environment that librarians have both the greatest opportunity to provide specific instruction to students, but also the greatest course-based workload. Tailored collections of library resources, outlines of instruction sessions, library help for specific assignments or research tasks, tutorials, librarian-managed message boards, and feedback forms are some of the ways that micro-level involvement can serve the embedded model.

### Current Librarian Support for Course Development

As librarians move into the course development process, each institution employs these models and involvement levels differently. In some cases, there are ad hoc collaborations between faculty and librarians for a specific educational goal (Butera, Gomes, & Kakar, 2014; Kobzina, 2010; Mullins, 2014), or between the library and an introductory or research-intensive course (Shell et al., 2010). As instructional designers are integrated into course design, they are also working collaboratively with librarians (Oldham & Skorina, 2009; Puziffero & Shelton, 2008; Sugar & Luterbach, 2016). Centralized course production provides an opportunity for the librarian to work with the entire course development team: designers, subject specialists, and faculty (Shepley, 2009). While these collaborations are typically focused on information literacy and library instruction, some collaborations focus on course materials, such as required readings (Cancilla, Glushko, Orfano, & Slaght, 2017). These two modes of librarian involvement can be differentiated as “Librarians as creators (information literacy instruction) and curators (course materials)” (Leeman, Guy, Dudek, & Coltrain, 2018).

Changes to the course development process are generating increased library support for course development. Centralization of course development continues, and new roles, such as the Learning Engineer, are being added to the existing positions of Course Developer and Instructional Designer (Lieberman, 2018). In the current course development environment, including the library proactively is both easier and more effective than ever before.

Librarians’ knowledge of the research process, research tools, the existing library collection of an institution, scholarly publishing metadata, and the landscape of academic publishing make them useful partners in myriad aspects of course and curriculum design. These collaborations have improved student experience and reduced costs. For instance, two different panels of librarians have described operational outcomes for course development involvement at Distance Library Services Conference (Evenser, McFadden, Long, & Knight, 2018; Thoms, Davis, Hill & Williams, 2018). In addition, Table 1 provides examples of the scope and types of collaboration implemented at a variety of universities. These collaborations include improved course materials usage, accreditation, faculty/staff support, the creation of learning objects, and librarians co-teaching courses.

**Table 1 Librarian Service Offerings that Enhance Course Development**

Support Area	Institutions	Examples
Course Materials & Open Educational Resources	Colorado Community Colleges Online	Supports rapid OER conversion of courses, assists in located resources, and provides copyright expertise (Leeman, Guy, Dudek, & Coltrain, 2018)
	Rasmussen College	Contributes to courses as resource experts (Leeman et al., 2018)
	Central Piedmont Community College	Curates materials used in courses (Leeman et al., 2018)
	Excelsior College	Identifies library sources for use in courses and works with SME, ID, and Program Director team to curate materials (Leeman et al., 2018)
	California State University, Northridge	Facilitates use of OER to decrease textbook costs (Borchard & Magnuson, 2017)
	Colorado State University	Reviews courses for TEACH Act compliance (Puziffero & Shelton, 2008)
Accreditation & Supportive Assessment Practices	Allen Community College	Aligned HLC's accreditation standards with library activities (Moore, 2018)
	Arizona State University	Created Comprehensive Plan for Library Support of Online Programs (Shell et al., 2010)
Faculty and Course Development Staff Support	Rasmussen College	Meets weekly with SME as detailed course content map is completed (Leeman et al., 2018)
	University of North Carolina Greensboro	Offers professional development sessions for faculty and staff designing courses (Leeman et al., 2018)
	George Washington University	Collaborated with faculty in an interdisciplinary team to develop curriculum for problem-based learning course (Butera, Gomes, & Kakar, 2014)

	California State University, Northridge	Co-development of an information literacy developmental learning outcome for a program (Lampert, 2005)
Creation of Instructional Tutorials, LMS Modular Learning Objects & Course Modules	Colorado Community Colleges Online	Provides assignment support through the creation of library learning objects that can be inserted directly in the course (Leeman et al., 2018)
	Rasmussen College	Creates instructional materials to be housed in the course (Leeman et al., 2018)
	Central Piedmont Community College	Adds library instructional content directly into courses (Leeman et al., 2018)
	Utah State University	Creates customized library research guides and research modules for courses (Leeman et al., 2018)
	University of North Carolina Greensboro	Embeds "Library Online Sessions" into courses (Leeman et al., 2018)
	Johns Hopkins University	Built "halo" of instructional modules and support that lies outside of online courseroom, but within programs' online environment (Johns & Oestreich, 2019)
	University of Florida	Partnered with faculty to assess student information literacy needs and build library instruction for an online course (Kumar, Ochoa, & Walker, 2013)
Librarians Acting as Teaching Faculty	University of Guelph	Embedded librarian partners in curriculum design and co-teaches information-literacy aspects of the course (Pritchard, 2010)
	University of California, Berkeley	Partnership between librarian and faculty to create library instruction sessions and research assignments in an introductory course (Kobzina, 2010)
	Andrews University	Librarian participation in course discussions, student consultations, and the LMS (Matacio & Closser, 2017)

## About Capella

Capella University enrolls 38,392 learners with the majority enrolled in graduate programs -- Masters' (47%) and Doctorate/EdS (23%). The University offers 53 degree programs, 129 graduate and undergraduate specializations, and 42 certificate programs. Courses are created using a backwards design course development model. Course development teams are comprised of instructional designers, subject matter experts, project managers, developmental editors, course producers, members of our media team, and a consulting liaison librarian. Each development cycle is typically 10 weeks with certain development milestones that lend themselves to library involvement. These milestones include the course kickoff meeting, course design phase, and pre-launch reviews. Librarians are involved at each of these milestones.

At Capella the librarians contribute in both the creator and the curator role. The library is integrated into any part of the course development process where library materials may be used (whether as course readings or by learners as part of an assignment), or where research skills are necessary. Table 2 lists the areas that Capella librarians provide support and the value associated with them. Every service point along the course development production lifecycle has individual operational and service level agreements and programmatic assessments tied to the service offering.

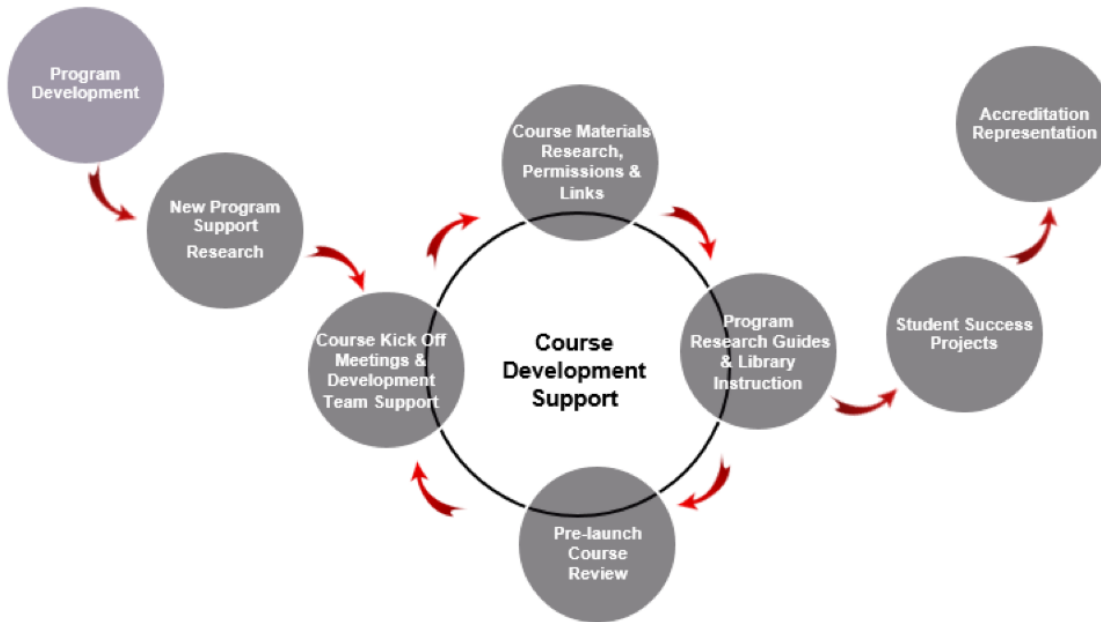
**Table 2: Areas of Librarian Support that Enhance Course Development**

	Support Area	Potential Value from Library Partnership
1	Course Outcomes	<ul style="list-style-type: none"> <li>-Integration of information literacy skills help and library resources that align with the outcomes of the course.</li> <li>-Information literacy is a university-wide learning outcome, and mapped to individual course competencies at the program level, as well.</li> </ul> <p>University outcome: “.graduates are expected to identify information needs, effectively locate, evaluate, use and communicate information using appropriate technologies with knowledge of the legal, ethical, social, professional and discipline-specific issues surrounding the creation, dissemination, and use of information.”</p> <p>Courses and programs individually restate and interpret this wider outcome, as appropriate, to be more discipline specific. E.g., “Apply information literacy and research skills to locate scholarly information in the field (or use) of [X].”</p>
2	Course Materials	<ul style="list-style-type: none"> <li>-Cost savings from greater use of library materials and Open Educational Resources (OER).</li> <li>-Streamlined licensing and web permissions processes.</li> <li>-Broken link and missing reading replacement.</li> </ul>
3	Accreditation	Improved compliance with information and communication requirements of accreditors.
4	Academic Success	<p>Increased student awareness of resources and available help.</p> <p>Information Literacy is defined as a core academic success skill and included in course objectives and assignment rubrics.</p> <p>Information research help provided at time of need.</p> <p>Scaffolding of specific skills within courses and assignments.</p>
5	Student Experience	<p>Research assignments that fit well with library collections and have tailored help already integrated in the course.</p> <p>Seamless connection to the library or library help via embedded materials, an embedded librarian, or quick links to resources and help.</p>

This supported integration of librarians into the course development process takes place at different times in the development cycle. Figure 1 outlines the overall support model, which includes both general activities by librarians that support the university (Content/Collection Development, Student Success Projects, Accreditation), support for programs (i.e. academic departments) within the university (Program Development and Program Research Guides) and the support that is tied to the development of specific courses (New Course Team Support and Course Reviews, Collection Strategy, Course Materials Research, Permissions & Links).

In this article we will focus on the activities of the Capella librarians in support of individual course development, versus the curriculum or program-level disciplinary initiatives. Support for courses involves both of the library-connected work streams: the provision of content for the courses and the development of information literacy skills within the context of the course.

**Figure 1      Conceptual Design of our Support Model**



## Content Strategy Support Services

**Background.** Libraries have traditionally been repositories of information, and as such, libraries are often seen as the natural home of content services related to course development. In most institutions this means that the library houses reserve readings for a course, which have been selected and requested by faculty. In some institutions the library also provides licensing services for materials that will be included in coursepacks.

At Capella we have moved beyond those faculty support services to include readings, research services, and permissions help for Internet content. By expanding our role in the procurement of assigned course materials, Capella librarians are able to maximize the use of the library's collection and avoid costly duplication of resources.

### Course Launch Meeting.

Liaison librarians are considered a standard team participant in all course "kick off" meetings, where new courses or course revisions are scoped out. The attending librarian uses the opportunity to promote appropriate library resources and services such as the Readings Research Request service and library research skills guides. Each liaison typically attends between 10-20 course kick off meetings per quarter to learn the goals of the revisions and the relevant research competencies. The liaisons also serve as a set point of contact for ongoing follow up regarding the course's needs. All kick off invitations are processed centrally through our help desk management system, so that liaisons can substitute for each other, as needed.

After the meeting, the liaison acts as a personal librarian for the course:

- triaging course materials issues
- referring to research or copyright licensing services
- answering library questions
- co-designing research assignments

Primarily, subject liaisons consult on the research assignment design, to ensure the language is accurate for our digital library services, and the assignments support our information literacy competency goals for each program, through fresh and current links to formative learning media.

### Link Requests for Library Content.

University affordability initiatives have led to an increased reliance on library content as course materials. As we move away from print textbooks to digital delivery, course development teams are increasingly looking to the library to fulfill course materials needs. The library requires course development teams to request persistent links to our content through the library. Doing so ensures the correct link is put in our online courses. When students in online programs encounter broken links to required readings, this is an extremely negative learning experience.

This process ensures link fidelity.

The service also allows us to make sure the content's license is appropriate for use in the course, and affords greater insight into how and where our content is being used. In 2013, the library fulfilled just over 2,000 link requests to use library materials in courses. By 2018, that number was almost 8,000; link requests grew nearly 300% in only five years.

**Readings Research Service.** At the outset of the development of a course, the faculty and course developers responsible for the content are encouraged to use our "Readings Research Request" service. They can fill out a request form with up to three topics that will be researched in the library by a dedicated librarian. The request form asks for information about the course and the required topics, and completed forms often include the specific objectives in the course that readings would need to cover. This form is also used to request more recent articles to replace ones that are considered out-of-date by the faculty or course developer, and has been used to fill gaps when a course's textbook is replaced.

The readings request librarian then searches through the library's collections of articles, reference works, and ebooks to find possible readings that can be used in the course. The librarian's in-depth knowledge of the library collections and search tools means that the university can fully utilize the materials that have already been purchased. This avoids costly duplication of resources by either avoiding the purchase or licensing of materials Capella already has, or by reducing the time spent acquiring copyright permissions when there is already an equivalent source within the library. Since this service utilizes the search skills of the librarians in collaboration with the content knowledge of faculty, it can also save time for faculty who can now focus on selecting the best resources, instead of trying to navigate through the library for the hardest-to-find topics in a course.

Not all courses use the Readings Research Request service, but it is used by quite a few of the course developers and faculty. There are approximately 100 requests made each year, with 282 topics researched in 2018. The librarian dedicated to these requests spends about an hour per topic, for a total of about 300 hours of librarian time spent on readings research.

**Licensing.** Increasingly, course development teams are looking to help learners achieve their educational goals by providing material in a variety of formats using multiple examples rather than a linear model of teaching the textbook. At times, faculty and instructional designers want to disaggregate content and use the most relevant pieces of information from a text rather than adopting the entire textbook. Additionally, streaming video is becoming an increasingly popular way of delivering content. Presenting students with multiple formats and examples reinforce learning, and the library can help by providing licensing services and copyright guidance.

Capella librarians provide advice on licensing issues ranging from weighing the cost of copyright permissions fees for e-reserves versus subscription costs to calculating the number of ebook licenses that will support enrollment.

Having this service under the library's purview enables us to provide the requested content in a centralized, cost-efficient way, and develop our collection to optimally support the programmatic needs of the schools.

**Web Permissions Service.** Provided sufficient staffing, libraries like ours can provide operational support for open web link permissions. Deep linking is still not a settled case of fair use. Requesting permission to include links to Internet resources helps ensure that organizations will not face future take-down requests or legal action, and it increases the likelihood that the link remains stable throughout the duration of the course. Librarians often have enhanced understanding of ADA accommodations, WCAG 2.0 regulations and Terms of Use contracts, which gives them certain expertise in managing review processes for open web and OER content.

One operational workflow model could run as follows. Instead of individual faculty members or course developers requesting permission for the items in their courses, they could fill out a request form that would be automatically added to an online, internal queue. A dedicated librarian and student workers could then evaluate the requests and send permission requests when necessary. Workflows can be engineered using software like SharePoint to automate much of the permission request language, using form-based fields. Since article licensing and database collections are already housed within libraries, this could allow for seamless movement of content between content request queues. Online articles that are also in the library's databases could be moved to the library links queue. Items that require licensing fees could be moved to the licensing queue.

The importance of checking open PDFs for ADA compliance cannot be over-stated. Centralizing the permission request services is wise, since it can allow for multi-layered benefits:

- PDFs and videos can be checked for ADA compliance, provided the librarian has ADA training and expertise
- ADA modification language can be included in content owner requests

- Special conditions placed on links by particular content owners can be tracked (such as required copyright statements)
- Permissions can be renewed at a regular cadence (e.g. every two years)
- Blanket permissions can be tracked
- Librarians are perhaps also the top experts at checking open access articles against the library's own collections, which are often more stable than open Internet links – particularly those hosted outside of a stable open access journal platform

Finally, librarians are able to use their research and evaluation skills to locate content owners or identify possible problems with chosen content. In an age of ephemeral and dynamic digital information, locating the owners and contact information for content authors can be difficult, at best. Librarians are trained to swiftly navigate both open and subscription web environments.

### **Information Literacy Support Services**

Librarians programmatically support the life-long and job-ready skill set known as Information Literacy. National information literacy standards have been described as the best way to comply with regional accreditation requirements (e.g., Malone & Nelson, 2006). At many institutions, the library also has to meet with teams and reviewers from program level and regional accreditation to show evidence of their information literacy program outcomes.

Information literacy instruction and familiarity with the library have been shown to have a high and clear impact on college student persistence. Our university holds an entirely competency based curriculum, with Information Literacy as the designated sixth University Learning Outcome. All program levels 'stream up' or are aligned to the University learning outcomes. This means the library team can generate curricular reports to see which program outcomes to focus our energy on in partnership with school leadership and faculty design teams.

**Library Guide & Tutorials Development.** Since 2013, many of those library resources consisted of course-specific LibGuides that Instruction Librarians created to go into the competency-based courses. LibGuides are a product from Springshare that allow for dynamic library content management. However, as the course-level guides became more numerous, it became clear that maintenance would become unscalable unless the information was kept generic enough for information boxes to be reused in multiple LibGuides. Due to both the maintenance cycle issues and requests from faculty, librarians started moving back to program-level guide creation.

The new program guides are an improvement over earlier guides as they include subject pages that focus on key specialization-specific resources and search strategies rather than only high-level program information. These new program guides strike a balance between the level of specificity and the depth of information that can be provided to learners in a course. They incorporate program-level performance criteria (e.g. the information skills to produce an environmental scan for human resources students). As we review courses and interact with faculty SMEs, we incorporate pages into the guides that can be linked as free-standing formative support for individual assignments. For instance, the *Seminal Authors* Ed.D page may be created and linked to support an assignment about finding seminal authors. Additional tutorial integration includes recordings made with Kaltura, Credo Instruct tutorials and modules created with internal interactive designers.

**Pre-Launch Review.** Each new and revised course receives a pre-launch review by the subject-specialist liaison librarian on the library's curriculum & instruction team. This means that before the course is launched, the librarian has several days to read through the course, and check aspects such as:

- Viability of links to existing readings listed in the course
- Feasibility of library and online research assignments
- Instructional support for library and online research assignments

The pre-launch review allows the liaison librarian to prevent problems before students encounter them. Course assignments often require research skills that students have not yet developed, or require resources that are not easily available. This mismatch can be a large barrier to student success, if proper support is not integrated into the course. This early review provides time for librarians to suggest instructional resources, create new tutorials and guides, and evaluate the library's collections in relation to specific assignments. Materials can then be purchased in advance of the course's launch, or assignments can be modified to fit available resources.

The liaison librarian also reviews the course before it goes to final editing to ensure that changes made to research assignments during the course development process are properly supported by the library.



## **Faculty Outreach and workshops around program guides**

**New SME & ID training.** As part of the library's integration in course development, Librarians from the Access Services and Instruction teams joined forces to provide training to new Instructional Designers (IDs). The trainings were intended to make IDs aware of the range of library resources and service as well as to help them understand how to locate the most appropriate library resources to include in courses. The goal of the trainings was to enable the course development teams to maximize the use of library resources and, ultimately, reduce costs and improve quality of programs for both the University and the learners.

**School Leadership and Faculty Partnership.** Liaison librarians work closely with program chairs and course development faculty to improve each program guide, according to course and program needs. Liaisons also share aggregated course-level information about students' reference questions with course development teams, in order to partner on guide improvements. The program guides allow for a smaller, but more honed, portfolio of library tutorials, in a platform optimized for dynamic, ongoing editing.

## **Effectiveness of the Support Model**

Researching the effectiveness of an enhanced level of job role in an organization can be methodologically difficult. The difficulty will be further outlined in the suggestions for future research. Internal survey data shows consistently high satisfaction with the full library support services of course development. Quarterly, the course development department surveys all role groups involved in course development on their level of satisfaction with different resources and areas. Historically, the library has been one of the top key strengths highlighted in the accompanying report summary of responses. For instance, in quarter 3, 2018, 81% of 51 respondents indicated that the Library resources "effectively supported their work." Respondents were mostly instructional designers. Library received the highest satisfaction among the nine support areas listed. Course development professionals rated the library higher than the course development management system as a support function.

In addition, internal research has shown high levels of persistence and student success from students who use library help services. In a study of non-library support learners versus those who have used library support, there was a greater than 10% difference in persistence for 2 out of 3 student levels (Bachelor's and Doctoral). This study is not publication-worthy, but along with other operational measures, such as service use and SLA trends, it gives leadership significant confidence in supporting our continued operational growth.

This internal study complemented the aggregation of research that shows that students who use libraries and library help services have greater persistence and student success. For instance, University of Minnesota researchers found that using the library at least one time in the first year of enrollment significantly increased the odds that student would graduate in four years OR remain enrolled after four years. They also found that students were 7.58 times more likely to re-enroll for Spring semester if they had participated in a library instructional class (Fransen, 2016 and Soria, Fransen, & Nackerud, 2013). This was controlled for 10 different demographic variables. Another example comes from Grand Valley State University. As Kelly notes, "Every year since 2012 a statistically significant positive correlation has been found between in-class library instruction led by a librarian and whether or not a student reenrolls the following fall semester" (2016, p.485). As learning analytics systems continue to query library traffic systems for signs of student engagement, and to the extent that privacy concerns can be assuaged, libraries will continue to demonstrate their strong links to student success.

## **Areas for Future Research**

It can be challenging for researchers to examine the operational and instructional impact of a certain job role in course development organizational contexts. Here are three methodologies that may be helpful for future researchers studying the effectiveness of this model. Adaptive management framework is a methodology for studying performance measures that bring change in operational performance. It is helpful for assessing program development and operation – "taking stock before unrecoverable costs become too great in decision-makers' minds to discourage them from switching tactics" (Curtis, et al. 2017, p. 95). Since team-based course development can operate on tight deadlines, with large-scale department-level considerations, this framework could offer a useful assessment lens.

Project management methodologies may also be useful, since many of the course development supports are triggered at the course project manager or instructional designer milestone level. Cameron, Sankaran and Scales offer a helpful overview of mixed methods in project management research (2015). Similar treatments could offer assessment methods that would match the project management structure for a given organization. Another useful introduction to the trends in this discipline is provided by Müller (2015).

Finally, instructional design research methods may be useful, since they often follow an iterative testing approach, which may more readily match a rapid prototyping or operational pilot environment. They also may typically formalize and validate a set of design heuristics. McPherson and Nunes cover some of the complexities of studying instructional design systems in e-learning environments (2008). There is also a movement to support what is known as “sustainable” practices for online learning education – in relation to this scope, meaning assessing practices that may be more supportive for large-scale operations (e.g., Sridharan, Deng & Corbitt, 2008). Casanova, Price and Avery write: “One of the important aspects of developing any online learning innovation is having a vision for sustainability from the outset” (2018, p. 336). Librarians may prove to significantly enhance the sustainability of innovations along multiple process points in course development, if studied through this lens.

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## References

- Abrizah, A., Inuwa, S., & Afiqah-Izzati, N. (2016). Systematic literature review informing LIS professionals on embedding librarianship roles. *The Journal of Academic Librarianship*, 42(6), 636-643. doi:10.1016/j.acalib.2016.08.010
- Bell, S. J., & Shank, J. (2004). The blended librarian: A blueprint for redefining the teaching and learning role of librarians. *College and Research Libraries News*, 65(7), 372-375. Retrieved from <https://crln.acrl.org/index.php/crlnews/article/view/7297/7297>
- Borchard, L., & Magnuson, L. (2017). Library leadership in open educational resource adoption and affordable learning initiatives. *Urban Library Journal*, 23(1), 1. Retrieved from <https://academicworks.cuny.edu/cgi/viewcontent.cgi?article=1160&context=ulj>
- Butera, G., Gomes, A. W., & Kakar, S. (2014). Expanding our roles: Embedded in curriculum design. *Medical Reference Services Quarterly*, 33(3), 292-301. doi:10.1080/02763869.2014.925688
- Cameron, R., Sankaran, S., & Scales, J. (2015). Mixed methods use in project management research. *Project Management Journal*, 46(2), 90-104. doi:10.1002/pmj.21484
- Cancilla, N., Glushko, B., Orfano, S., & Slaght, G. (2017). Engaging faculty and reducing costs by leveraging collections: A pilot project to reduce course pack use. *Journal of Librarianship and Scholarly Communication*, 4, eP2137. doi: <http://doi.org/10.7710/2162-3309.2137>
- Casanova, D., Price, L., & Avery, B. (2018). Supporting sustainable policy and practices for online learning education. In *Climate Literacy and Innovations in Climate Change Education* (pp. 323-339). Springer, Cham. doi:10.1007/978-3-319-70199-8\_19
- Curtis, J., Graham, A., Ghafoori, E., Pyke, S., Kaufman, S., & Boulet, M. (2017). Facilitating adaptive management in a government program: A household energy efficiency case study. *Journal of environmental management*, 187, 89-95. doi:10.1016/j.jenvman.2016.11.033
- Evener, J., McFadden, S., Long, J., & Knight, A. (2018, April). *Imagine, create, experience: IL credit course for distance student learning*. Panel discussion at the Distance Library Services Conference, San Antonio, Texas.
- Fransen, J. (2016, April). We're not in this alone: Working with campus partners to integrate the library into students' academic experience. Paper presented at NISO virtual conference: Justifying the Library - Using Assessment to Justify Library Investments. Retrieved from <https://www.niso.org/events/2016/04/justifying-library-using-assessment-justify-library-investments>
- Johns, E. M., & Oestreich, S. (2019). On the edge: How to provide course-and program-integrated library support without being embedded. *Journal of Library & Information Services in Distance Learning*, 13(1-2), 1-20. doi:10.1080/1533290X.2018.1499232
- Kobzina, N. G. (2010). A faculty-librarian partnership: A unique opportunity for course integration. *Journal of Library Administration*, 50(4), 293-314. doi:10.1080/01930821003666965
- Kumar, S., Ochoa, M. & Walker, B. (2013). Faculty-Librarian Collaboration for Student Support in an Online Graduate Program. In R. McBride & M. Searson (Eds.), *Proceedings of SITE 2013--Society for Information Technology & Teacher Education International Conference* (pp. 654-661). New Orleans, Louisiana, United States: Association for the Advancement of Computing in Education (AACE).

Lampert, L. (2005). "Getting psyched" about information literacy: A successful faculty-librarian collaboration for educational psychology and counseling. *Reference Librarian*, 43(89), 5-23. doi:10.1300/J120v43n89•02

Leeman, S., Guy, A., Dudek, B., & Coltrain, C. (2018, April). *Stronger Together: Librarian Partnerships in Course Design and Development*. Panel discussion at the Distance Library Services Conference, San Antonio, Texas.

Lieberman, M. (2018, September 26). Learning engineers inch toward the spotlight. *Inside Higher Ed*. Retrieved from <https://www.insidehighered.com/digital-learning/article/2018/09/26/learning-engineers-pose-challenges-and-opportunities-improving>

Malone, D., & Nelson, W. N. (2006). A library compliance strategy for regional accreditation standards: Using ACRL higher education standards with the Middle States Commission. *College & Undergraduate Libraries*, 13(1), 89-105. doi:10.1300/j106v13n01\_10

Matacio, L. R., & Closser, B. (2017). Transforming information literacy through librarian/course instructor collaboration: A case study. *Journal of Adventist Libraries and Archives*, 2(1), 1. Retrieved from <https://digitalcommons.andrews.edu/jala/vol2/iss1/>

McPherson, M. A., & Nunes, J. M. (2008). Critical issues for e-learning delivery: what may seem obvious is not always put into practice. *Journal of computer assisted learning*, 24(5), 433-445. doi:10.1111/j.1365-2729.2008.00281.x

Moore, S. (2018). Traversing the path: A library director's guide to the Higher Learning Commission's open pathway for accreditation. *18th Annual Brick & Click: An Annual Library Conference*. Retrieved from <https://files.eric.ed.gov/fulltext/ED590389.pdf#page=124>

Müller, R. (2015). The migration of methodologies for project management research. *Project Management Journal*, 46(2), 3-5.

Mullins, K. (2014). Good IDEA: Instructional design model for integrating information literacy. *The Journal of Academic Librarianship*, 40(3), 339-349. <https://doi.org/10.1016/j.acalib.2014.04.012>

O'Kelly, M. (2017). Academic libraries and student retention: The implications for higher education. *Conference Proceedings*, 7, 485-490. Retrieved from [https://scholarworks.gvsu.edu/cgi/viewcontent.cgi?referer=&httpsredir=1&article=1006&context=library\\_proceedings](https://scholarworks.gvsu.edu/cgi/viewcontent.cgi?referer=&httpsredir=1&article=1006&context=library_proceedings)

Oldham, B., & Skorina, D. (2009). Librarians and instructional technologists collaborate: Working together for student success. *College & Research Libraries News*, 70(11), 634-637. doi:<https://doi.org/10.5860/crln.70.11.8285>

Piowar, H., Priem, J., Larivière, V., Alperin, J. P., Matthias, L., Norlander, B., ... & Haustein, S. (2018). The state of OA: A large-scale analysis of the prevalence and impact of Open Access articles. *PeerJ*, 6, e4375. doi:10.7717/peerj.4375

Pritchard, P. A. (2010). The embedded science librarian: Partner in curriculum design and delivery. *Journal of Library Administration*, 50(4), 373-396. doi:10.1080/01930821003667054

Puzziferro, M., & Shelton, K. (2008). A model for developing high-quality online courses: Integrating a systems approach with learning theory. *Journal of Asynchronous Learning Networks*, 12(3-4), 119-136. doi: <http://dx.doi.org/10.24059/olj.v12i3-4.1688>

Shank, J. D., & Dewald, N. H. (2003). Establishing our presence in courseware: Adding library services to the virtual classroom. *Information Technology and Libraries*, 22(1), 38-43. Retrieved from <https://search.proquest.com/docview/215830692> <https://ejournals.bc.edu/index.php/ital>

Shell, L. B., Duvernay, J., Ewbank, A. D., Konomos, P., Leaming, A., & Sylvester, G. (2010). A comprehensive plan for library support of online and extended education. *Journal of Library Administration*, 50(7), 951-971. doi:10.1080/01930826.2010.488996

Shepley, S. E. (2009). Building a virtual campus: Librarians as collaborators in online course development and learning. *Journal of Library Administration*, 49(1-2), 89-95. doi:10.1080/01930820802312821

Soria, K. M., Fransen, J., & Nackerud, S. (2013). Library use and undergraduate student outcomes: New evidence for students' retention and academic success. *Portal : Libraries and the Academy*, 13(2), 147-164. doi:http://dx.doi.org.library.capella.edu/10.1353/pla.2013.0010

Sridharan, B., Deng, H., & Corbitt, B. (2008). Evaluating intertwined critical success factors for sustainable e-learning. *ACIS 2008 Proceedings*, 102.

Sugar, W. A., & Luterbach, K. J. (2016). Using critical incidents of instructional design and multimedia production activities to investigate instructional designers' current practices and roles. *Educational Technology, Research and Development*, 64(2), 285-312. doi:http://dx.doi.org.library.capella.edu/10.1007/s11423-015-9414-5

Thoms, B., Davis, E., Hill, J. & Williams, B.F. (2018). *Librarians as partners: Strategies for systematically embedding in online course development*. Panel discussion at the Distance Library Services Conference, San Antonio, Texas.

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