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Reimagining Information Literacy Instruction Through Faculty Development

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REIMAGINING INFORMATION LITERACY INSTRUCTION THROUGH FACULTY
DEVELOPMENT

by

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©

SYNTHESIS*

MASTER OF ARTS

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* The Synthesis can take a variety of forms, from a position paper to curriculum or professional development workshop to an original contribution in the creative arts or writing. The expectation is that students use their Synthesis to show how they have integrated knowledge, tools, experience, and support gained in the program so as to prepare themselves to be constructive, reflective agents of change in work, education, social movements, science, creative arts, or other endeavors.

ABSTRACT

This paper explores a unique approach to information literacy instruction by designing a curriculum map that provides consistent opportunities for faculty to engage with ideas surrounding critical thinking, metacognition, scaffolding instruction, and implementing information literacy teaching tools within their classroom. This map outlines a comprehensive approach to faculty development that addresses the dissatisfaction in information literacy instruction among academic librarians, particularly with the one-shot model and the lack of assessment opportunities of students' information literacy skills. Using action research, the author explores the reason for this dissatisfaction and how it be addressed. Through interviews with other campus departments like online learning, piloting professional development sessions, and receiving feedback from faculty, the intricacy of the problem continued to emerge.

The research and constituency building of the action research problem revealed conflict between librarians and teaching faculty in the following areas: a misunderstanding of the definition of information literacy, assumptions about librarians' effectiveness as classroom educators, and the shifting relationships between the two. The author makes a case that library-led faculty development can increase the reach of information literacy instruction by working with faculty on more consistent opportunities for information literacy skills practice into their content courses. Additionally, increasing the reach of information literacy instruction is essential to the success of today's student due to the growth of information on the web and the complex information landscape. The library faculty's use of a curriculum map identifies the key areas of instruction for faculty and the possibilities for institutional and organizational change through faculty professional development.
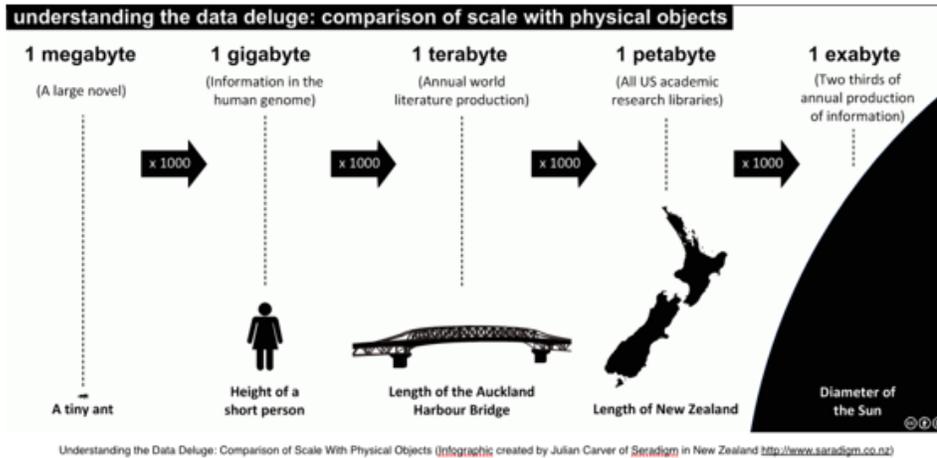
Introduction

Think about the largest collections of knowledge in the world. The largest library, with vaults and vaults of storage. The rarest of rare book rooms. The largest server rooms. The largest conference of a professional organization. Combine all of that, and you have the total of searchable human knowledge. Now, in your mind, double that. Every 13 months, that is what happens, which means that within 5 years, the amount of knowledge available to humans will have grown exponentially (Schilling, 2016). Not only is our current state of knowledge mostly searchable and findable, but it is also about every subject that can be known. No topic is off limits to learn about, discover, or become an expert in. And yet within that knowledge, there is information that contradicts itself; there are videos that go viral, seen by millions, for no reason at all; technology allows the face of one person to be put on another person in videos, movies, and television shows, essentially calling into question what is real and what is not. This is the world we are all trying to navigate. Where does this leave educators? How can we possibly teach the kind of skills students need to cope with the amount of data thrown their way?

The graph below tells the story of information. It illustrates the physical equivalents of computer memory size so that readers can more easily understand what a "gigabyte" is. Not only is this a clever visual metaphor to help people grasp the scale of a computer's ability, but it also shows quite clearly the growth in data—there would be no need for an exabyte if information wasn't continually being produced.

Figure 1

understanding the data deluge: comparison of scale with physical objects

1 megabyte	1 gigabyte	1 terabyte	1 petabyte	1 exabyte
(A large novel)	(Information in the human genome)	(Annual world literature production)	(All US academic research libraries)	(Two thirds of annual production of information)
A tiny ant	Height of a short person	Length of the Auckland Harbour Bridge	Length of New Zealand	Diameter of the Sun

Understanding the Data Deluge: Comparison of Scale With Physical Objects (Infographic created by Julian Carver of Seradigm in New Zealand http://www.seradigm.co.nz)

A person does not need to travel far, either physically or virtually, to be bombarded by information. Billboards, advertisements, flickering screens at the store or the restaurant, social media feeds, and pop-up notifications all mean that no one needs to wait for the newspaper delivery to find out what is happening in the world and what options are available for any number of services. Human cognition has yet to catch up with this information evolution; for example, traditional college-age students routinely report that the critical thinking they practiced in a school setting does not prepare them for making sense of the volume and variety of information they encounter daily (Head, 2021). While it has long been thought that people can manage their own consumption and evaluation of information, a multitude of events confirm the study results from Project Information Literacy (PIL): the amount of information available and the flattening of previously trusted authorities (network news, public academics, and policy makers, to name a few) creates a complex and at times, chaotic, environment to negotiate.

As a community college librarian, I work with classroom faculty to help incorporate information literacy teaching and concepts into their disciplinary courses. There is ample research, though not consensus, regarding the variety of practices that demonstrate how information literacy skills and ideas can be taught in an academic setting, and this paper exposes the gaps in that research and those practices. My library colleagues and I focus on working with college instructors directly to aid in their understanding of ideas around information literacy, to encourage seamless incorporation of those concepts, and to demonstrate how information literacy skills enhance a student's disciplinary understanding and the meeting of course learning outcomes.

This paper is a result of research conducted within the graduate program in Critical and Creative Thinking (CCT) at the University of Massachusetts Boston and also includes perspectives from my own inquiry as a reflective practitioner in the academic library environment for 20 years, primarily in the role of information literacy instruction. The definition of information literacy (IL) will be elaborated on further in the paper, but it is important to note its basic tenets as the ability to seek, evaluate, select, and use appropriate information for the problem at hand. Because of my role as an IL instructor, I have observed gaps across the college curriculum regarding the consistency of information literacy instruction for students and have sought to address that gap in order to positively impact the academic success of the students. This work examines and synthesizes the pieces that build toward a comprehensive approach by engaging more intentionally with faculty through consistent professional development. In order to do that, we must explore:

1. The connection between critical thinking and information literacy, in order to expand our shared understanding of those terms and alleviate any misunderstanding regarding those definitions,

2. How the current state of information literacy instruction demonstrates its effectiveness and areas for growth,

3. The relationship between teaching faculty and academic librarians, to identify areas of collaboration, and

4. Best practices for library-led faculty development to assess the feasibility of such programs in the local context.

In our local context, information literacy is a specific learning outcome for our graduates, yet the teaching of information literacy skills is often assumed to happen by osmosis. Additionally, the assessment of IL proficiency has been initiated by the library for specific departmental projects but remains an inconsistent endeavor. This combination of inconsistent assessment with inconsistent information literacy instruction results in most teaching sessions being reactive to a course assignment instead of proactive toward collaborating with faculty on specific assignments, projects, and student learning goals. A proactive approach will be more effective in reaching more students than the current, reactive, assignment-based approach. Additionally, a proactive approach maximizes the library's effectiveness and allows us to more broadly understand if our students are meeting the stated core competencies in this area.

From a departmental perspective, the creation of a consistent workshop series (See Appendix A) will systematize the way we instruct faculty regarding information literacy and feels like the most natural step to build on the work we have already done in establishing strong relationships and credibility within a library instructor's assigned disciplines. It also creates

consistent space and opportunity for collaborative conversations across the institution as standards shift and the information environment becomes more complex. We are pursuing a creative approach to participate with teaching faculty as they educate students and to delivering content to both faculty and students that helps each audience engage with the difficult information landscape. Because information literacy instruction is always evolving and filled with challenges, we also aim to share this project with the library and faculty communities outside our institution in order to encourage creative teaching solutions in a variety of contexts.

The Relationship between Information Literacy and Critical Thinking

It is safe to say that the two primary goals of education are to impart knowledge and teach students how to think critically about that knowledge in order to produce their own. Therefore, it is essential to connect the concept of critical thinking to all aspects of the educational experience, including the way that students interact with the multiple modes of information they consume for academics and for life.

Librarians are traditionally seen as the organizers of information and knowledge. Even through the advent of the internet and web searching, the profession continued to focus on knowledge acquisition, teaching people how to access that knowledge, and introducing individuals to the organizational world of the written word. However, as knowledge dissemination became less regulated because of the internet, it also became clear that academia needed to adjust its expectations of the way students interact with information, what skills they bring to the classroom, and the blending of the open online world with the strictly gate-kept world of scholarly research. Librarians, from the highest levels of the university down to those with the earliest readers, began to shift from teaching "bibliographic instruction"—or, how to use the library—to "information literacy," which encompasses a broader set of skills and frames of

mind. This includes understanding where to find the answer to a question, evaluating the possible answers or solutions, and using the information that is found in an ethical manner. These concepts began to be taught at all levels of education and incorporated into disciplinary learning outcomes and institutional goals. In fact, Nicholas Goetzfridt argues as early as 1993 for the value in integrating the teaching and encouragement of critical thinking into the traditional, task-oriented BI (bibliographic instruction) model, and for nurturing cooperative relationships between librarians and faculty which integrate library skills and course content (p. 3). To put that in context, the Association of College and Research Libraries (ACRL) did not publish its *Competency Standards for Information Literacy* until 2000, demonstrating the length of time it takes for attitudes to shift and for fringe ideas to become mainstream.

At its most direct, information literacy is centered around the comprehension and interpretation of information and how it is made available to us (Badke, 2011, p. 130). There are a lot of layers to that definition, especially in the educational setting. The Association of American Colleges and Universities (AAC&U) defines information literacy as "the ability to know when there is a need for information, to be able to identify, locate, evaluate, and effectively and responsibly use and share that information for the problem at hand," and this is a definition that contains clear goals and outcomes and can be communicated to teachers and faculty by their librarians (AAC&U, 2009). The AAC&U also developed a rubric (Appendix B) that aligns with this definition, creating a tool that assesses students' learning, retention, and application of IL concepts. This definition and rubric have been adopted by my community college as a student learning outcome and provide the framework for teaching and assessment in my local context but it is just as important to grasp the larger picture of how the information landscape has developed and how current students adapted to that environment. The AAC&U published this material as

Apple's iPhone was released and suddenly the internet was in everyone's pocket, creating an immediate challenge to the definition. Would this rubric only be used with assignments that required academic sources? Or can an information literacy rubric meant for higher education be used to evaluate students' skills with any kind of source?

With the advent of public access to the internet in 1997, the information landscape became more complex, and it became clear that students of all ages suffered from a cognitive overload of information in their daily lives. Librarians adapted to this evolution by applying information literacy concepts to the web environment outside of academia, in addition to keeping their traditional role of instructing students how to use the library (bibliographic instruction). For example, while it is important to evaluate the search results in an article database, it is as important to develop the ability to filter through the results of a Google search. Librarians became the natural champions and communicators of this broader understanding regarding information overload and the evaluative needs of our society. A comprehensive literature review that examines articles from 2000–2009 provides examples of academic librarians collaborating with faculty for the integration of formational information literacy into the faculty members' courses and shows the shift from bibliographic instruction to information literacy. The review concludes that this shift requires librarians to understand faculty needs and that faculty must understand the importance of planning and assessing the information literacy skills of students (Mounce, 2010). By the early 2000s, "information literacy" as a description of what librarians taught supplanted the term "bibliographic instruction."

My work within the context of the CCT course *Introduction to Critical Thinking* (CRCRTH601) examined the relationship between critical thinking and information literacy; specifically, how a classroom teacher might be able to assess when both of those thinking actions

are happening for their students. That research was foundational to my expanded conclusions for this paper, namely that being information literate requires critical thinking skills and creating a "habit of mind" (as defined by Costa and Kallick, 2000) and that the two concepts are interlocked and should be talked about in that way. The expansion of that research for this paper exposed a disconnect between faculty and librarians in their language and definitions of both these concepts, and I am committed to providing space and opportunity to alleviate those misunderstandings, which I address further on.

The concept of critical thinking is familiar to educators at all levels and can be viewed as the overarching goal of all education. The AAC&U defines critical thinking as "a habit of mind characterized by the comprehensive exploration of issues, ideas, artifacts and events before accepting or formulating an opinion or conclusion" (AAC&U, 2009). That definition mirrors a growth approach to critical thinking, where critical thinking is defined not as a set of skills to be employed but a posture or disposition an individual carries with them into any circumstance. Conversely, as I mentioned in the introduction, information literacy is defined by the AAC&U as "the ability to know when there is a need for information, to be able to identify, locate, evaluate, and responsibly use and share that information for the problem at hand" (AAC&U, 2009). Defining information literacy in this way—as a set of abilities—makes it much easier to measure than critical thinking, since a "habit of mind" can only be measured over a period of time and not in a single assessment (See Appendix B). However, a deeper dive into both definitions illuminates how the set of skills that define information literacy leads to a critical habit of mind; in other words, an individual who practices information literacy skills consistently is creating a habit of critical thinking. Yet another way to phrase this relationship is to say that one way to be sure critical thinking is happening is to observe information literacy skills being practiced;

information literacy is the application of a critical thinking frame of mind. For a critical thinking person to "comprehensively explore issues," those issues need to be examined, perspectives need to be discovered, and an understanding of the information's context needs to be addressed. All those abilities are something an information-literate person should be able to employ.

Another way of exploring the link between critical thinking and information literacy is by looking at the composite view of thinking from Costa and Kallick (2001) (see below). The concentric circles show how one can move from cognitive operations to thinking tasks to habits of mind. Thinking operations (the inner-most circle in the diagram) are basic, discrete thinking skills of the type employed daily—recalling, comparing, inferring, and analyzing—such as knowing you need your car keys to start the car, knowing where they are and what to do with them. Thinking tasks are "larger strategies employed over time and require the application of clusters of discrete cognitive operations" (Costa and Kallick, 2000), such as the ability to drive to work without really "thinking" about it. The habits of mind are self explanatory—it is the combination of operations and tasks employed on a regular basis in the appropriate context. Critical thinking is what helps drivers make decisions to avoid a car accident or choose another route—because the thinking tasks and operations have developed a habit and expectation of what should happen, drivers recognize when something is out of the ordinary and can decide what to do about it. While information literacy, by any definition, is not synonymous with a "habit of mind," it certainly is a thinking task that requires certain cognitive operations. In this way, information literacy skills contribute to the creation of a critical habit of mind.

Figure 2

—*Figure 81.1—*
A Composite View of Thinking

Habits of Mind

Thinking Tasks

Thinking
Operations
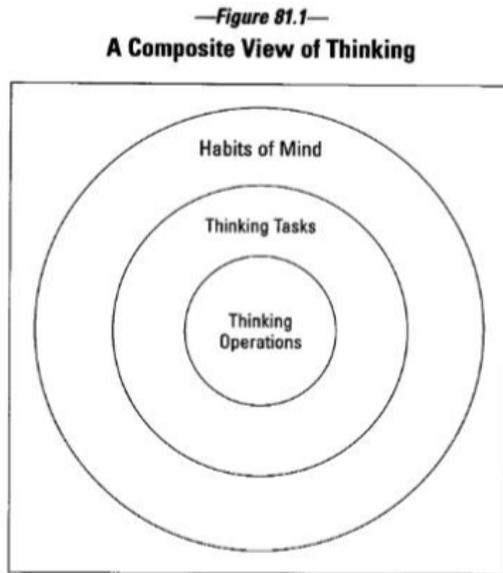
Additionally, *Metacognition* (CRCRTH655) rounded out my understanding of what

happens in the brain when we think or solve problems and provided me with more tools for

teaching the research process to students. Teaching with an awareness of metacognition allows

the instructor to help students reflect on what they are learning. Through this reflection and an

understanding of what decisions they are making regarding an information-seeking task, students

are more likely to have the ability to transfer research skills to other classes and apply critical

thinking across a variety of domains. Teaching students metacognitive strategies and

information literacy skills further builds their ability to become critical thinkers in all aspects of

their lives.

Before assuming and researching possible solutions to address the gaps in information literacy instruction, it is essential to understand and define the local context in which one is working. Information literacy is a student learning outcome that has been identified as a core competency at my workplace, Massasoit Community College (Massasoit Website, https://massasoit.edu/academics/core-competencies/). Information literacy forms the basis of critical thinking and assists students along the path of lifelong learning. Broadly speaking, the library's role in information literacy instruction has been focused on how to use the library—an introduction to books and article databases. While these "how to" versions of library instruction are extremely useful and important, they often only teach students how to be successful in an academic environment and for specific tasks and fall into the inner circle of the composite thinking model: thinking operations. The lack of a holistic approach to information literacy denies the reality that we all need to practice information literacy skills on a variety of source types and within a variety of contexts in order to navigate the increasingly complex information landscape around us and develop a critical habit of mind as we do so. This is the context in which librarians at Massasoit are teaching, assessing, and working to improve the information literacy skills of students.

Information Literacy Instruction: A Current Snapshot

Currently, best practices among academic teaching librarians focus on search strategies, source evaluation, and the close reading of the information at hand. That can involve engaging with information found in a library database but also applies to any number of source types encountered in the online environment such as news websites, blogs, and videos. However, in most educational settings, the perception of the library and of librarian skills has not caught up to the reality of the current need. Students need to be taught broad information literacy skills in

order to engage critically in the world around them. Traditional views of what librarians are and do will not provide adequate avenues of teaching today's students and it is up to librarians to communicate that we have the pedagogical skills to guide students and teachers along this journey.

Some of the misunderstandings about information literacy instruction center around the language librarians themselves use to describe the everyday work that happens at the library, either in person or online. We have tended to diminish the reference work that assists students and faculty alike, which often takes place on an individual level. We have described this work as "a service" as if no teaching or learning happens in these encounters and as if no specialized skills are necessary for a successful interaction. In 2002, Nimon described this disconnect and the detrimental effect it has had on faculty perceptions of a librarian's "fitness" as an educator and peer. But interactions with students at the reference desk is no less teaching because it takes place outside a classroom. In fact, Nimon argues that because reference librarians model thinking tasks within small group contexts and mentor individuals through a complex problem, they are doing as much teaching as any instructor in a classroom. In that study, faculty academics were satisfied with the status quo of the librarians' role as service providers, not teachers, primarily due to the lack of understanding of what librarians can offer to them and to their students in a myriad of capacities (Nimon, 2002, p. 16-18).

In order to better qualify and combat this misunderstanding of a librarian's role, the librarians at the University of Colorado engaged in a community of practice with interested faculty around the teaching and understanding of information literacy. As that group discussed definitions and expectations of what information literacy is and what it should do, those faculty expressed the frustration that their students, after receiving instruction from librarians, were able

to find and use information; however, the students did not really engage with information or create meaning from that information. This resulted in students who had too much confidence in their abilities both in the course and in how they were going to apply that learning into the future of their discipline (Kissel et al, 2016, p. 413). After the IL instruction session, they could generally "search for and find" their information but could not evaluate and engage with it. This second step is where instructors tend to struggle within their own teaching and consequently, students struggle with their own comprehension of the disciplinary information. Faculty–librarian collaboration can help merge content and process within instruction so that students learn how to think in their discipline and recognize themselves as creators of knowledge and not merely consumers (Kissel et al, 2016, p. 415). So, while this group of faculty viewed librarians as partial peers within the educational system for students, there remains a lack of full collaboration with librarians that would allow students more time to synthesize the course content if they relied on information literacy skills to deepen their knowledge.

Even though I have argued that information literacy encompasses more than academic research skills, it is important to understand the academic context in which college students are introduced to and interact with the college library and librarians. A recent study (Yevelson-Shorsher and Bronstein, 2018, p. 541) names multiple obstacles to library use from the perspective of students: they have a challenging time finding the right search term, they are ashamed to ask for help, they feel awkward in the space and within its specific information ecosystem, and they feel like they must do everything alone. Those obstacles create a significant barrier for one librarian to overcome in one library session, and often, one session is all librarians have with the students they instruct. Students are not accustomed to the idea of failing at a search or of needing to look very hard for an answer to a question online; ads and headlines are pushed

on them in a variety of ways, rendering critical evaluation tools moot. This then creates an opportunity for mis/disinformation to thrive, as students hardly look for answers; the answers are given to them. That is a very different experience from the academic research experience, where failure is an acceptable, and even necessary part of the search process.

It has always been a challenge to know when and how to expose students to information literacy concepts within the academic environment. Evidence suggests that skill-building is best practiced in a specific context—one that has a purpose—and within a community, such as a class or cohort (Fundator and Maybee, 2019, p. 82). Additionally, as the information environment has become more complex, the model of having librarians teach individual library sessions showed the limits of what a library staff can do because there was too much to cover and not enough staff. Cowan and Eva (2016) argued convincingly that instead of guarding the teaching of information literacy as something only librarians can do, it could be beneficial for librarians to partner with faculty in order to help them incorporate information literacy instruction into their courses. This has the advantage of "scaling up" that teaching across the curriculum and relieving the pressure on librarians to reach every student (p. 166) and it is this model that I will attempt to pursue in my local context. In fact, my colleagues and I have already engaged in this "scale-up" through the introduction of microlearning, which divides information literacy instruction into smaller "nuggets" using instructional videos and modules built into the Learning Management System (LMS). Teaching faculty can choose to add any of these modules to the online space their course inhabits, bypassing or supplementing in-person library instruction altogether. The next step needed for this solution to thrive is to build more constituents among the faculty and have more intentional development opportunities for them, so they understand how best to scaffold these modules into their courses instead of including them as passive, optional additions.

The primary argument in support of changing the model from the traditional "one shot" librarian instruction, where librarians engage with students in one specific class, is efficiency. The sheer number of students and courses, combined with the amount of information students need to evaluate and the growing complexity of the information environment, results in a lack of ability for library instructors to teach deeply or consistently each academic year. The focus on library-led faculty development has gained traction on the merit of math alone. The advocates of this model argue that in order to fully integrate IL into the curriculum, teaching faculty need to also understand more completely how they are responsible for addressing these concepts, as opposed to leaving it to the librarian to manage. Hammons' recent literature review explored the articles that described this "teach the teacher" approach and the effects of that programmatic shift (Hammons, 2020, p. 3). The 24 cases the author reviewed found that this approach increased the amount of information literacy instruction that was provided to students, by allowing discipline faculty to teach information literacy.

However, the amount of disciplinary content for faculty to manage complicates meeting specific IL learning outcomes. Hammons' literature review highlights this as well, revealing that in the variety of models studied, institutional context plays a significant role in how information literacy is approached and incorporated among the faculty, regardless of the personal relationships between individual faculty members and librarians (p. 6). Therefore, while much of the research outlines and suggests best practices for librarians to follow when approaching faculty or creating an information literacy program, there is no "one solution" approach, even within a single institution. And, because of the way librarians teach and reflect as a part of their professional practice, librarians can embody the role of " informed learning developer;" or "those who help teachers recognize the importance of students' learning to use information within a

learning context" (Fundator and Maybee, 2019, p. 92). This is an evolution of the librarian's role, adding to their repertoire of service providers, instructors, and information managers.

The doubling of information predicted by Schilling and the rise in mis/disinformation continues to confound even the savviest searchers and thinkers. It is in this context that we all live and operate. Entering the classroom and being asked to search for, evaluate, and synthesize academic sources requires a complete shift in evaluative thinking from what students are exposed to in everyday life. There is no search engine algorithm guiding them to a "best" source and academic sources do not have the same markers of reliability that students are used to: peer groups, reviews, experience, and background knowledge are of little help in this academic context. And this is where my argument, while coming to the same conclusion as other authors before me, creates an even stronger case for why faculty development needs to be a viable solution for increasing the reach of information literacy on campus. Similar to the way a history teacher is frustrated by the growth in content to cover, because history never stops being created, librarians are profoundly aware of the variety of skills needed to navigate the information landscape, both on the web and in an academic environment. Those skills now require consistent practice and reflection which cannot be achieved in one class with a library instructor. The partnership of faculty in this endeavor is essential.

Faculty and Librarian Relationships

Faculty and librarian relationships take many forms and vary from campus to campus. This is the result of the often confusing and fluctuating status of librarians within the world of academe. The confusion exists within the library world as well, with some aspects of library work requiring an advanced degree (Master's level) and some not. That same advanced degree

can simultaneously qualify a person for teaching, administration, resource management, or public service.

Additionally, librarians with advanced degrees don't fit neatly into the tenure-track models prevalent on college campuses and they have worked to carve out a niche to clearly communicate the peer ranking needed to engage in discussions with teaching faculty. There is an entire body of research on this dynamic, which is important to note because of the underlying history among these two groups and how that history affects each group's perceptions and assumptions of one another. The areas of conflict inherent from that research identify the pressure points of cultural values within the profession, the language used to describe what each group does, and the specific areas of influence (what I call "turf") that each group inhabits.

Cultural Values

Interpersonal relationships among different campus groups and service providers are often a result of complex structures and long institutional histories out of the individual's control. This is evident in the colloquial language often used to describe campus structures with the phrase "side of the house"—the academic side of the house, the student affairs side of the house, the administrative side of the house, etc. While those terms are banal in and of themselves and are used to describe campus operations, they become baked into the mindset of the individuals who work in those various "sides" and create a simple way to identify an "us vs. them" mentality. Libraries do not fit neatly into these categories, as they are a service or resource provider—which are seen as falling under student affairs—but typically report to the academic "side" of the organizational structure because of the need to provide relevant resources that support the academic mission. This context is important to fully understand the culture gap that can exist between the two groups.

Library culture is rooted in collaboration and service. Libraries are built to share resources, whether those resources are physical, digital, or human. The humans who manage and promote those resources operate out of a service-oriented mentality: essentially, to help the person in front of them find what they need. The skills needed to manage resources and provide access have been professionalized for a long time, requiring a post-baccalaureate degree and years of experience to do well. However, as noted earlier in the paper, around the turn of the 21st century, librarians began to be more involved in the teaching and assessment of student learning and had to gain a pedagogical skill set that did not come naturally to many in the profession; however, even that teaching and assessment has remained in that service mentality. This evolution into classroom teaching, while still focused on service first, contrasts with the traditional way college faculty gain their expertise and the culture in which they (faculty) learned:

> The modern faculty culture in the United States [retains an] emphasis on research and content and a de-emphasis on the teaching and process. The result is a highly autonomous, often isolated, faculty faced with considerable pressures—including lack of time—to perform in areas in which its members are not particularly well trained (teaching) or well supported either by their institutions or the other members of the profession. The result is a culture characterized by a resistance to change, particularly a change promoted by those (such as librarians) who are not perceived as sharing fully in the [faculty] culture and are not promoting values (bibliographic instruction) compatible with it. (Hardesty, 1995, p. 11)

The culture and training of each sub-culture is rooted in different priorities: teamwork vs. autonomy, experimentation vs stability, and teaching vs. research. It takes years of relationship

building, positive communication, and collaboration to overcome the conflicts and assumptions those differing priorities can unearth.

Language

My research into librarian and faculty collaboration revealed a new-to-me area of conflict: communication and the definition of terms. Librarians have become so comfortable with the term "information literacy" that we don't often do a good job of explaining what that is or how it links to the broader learning goals of a discipline or of the academic mission. We tend to think those connections are self-evident. However, Albitz surveyed faculty and librarians and uncovered this disconnect, specifically regarding information literacy and critical thinking. Because of the lack of definition and connection, "librarians are frustrated that they are not invited into the classroom to teach information literacy skills and teaching faculty are suspicious of librarian's motives for wanting to take over their valuable class time" (Albitz, 2007, p. 98), when, both groups desire the same outcome: students who engage with information and think about it critically. Additionally, the literature review by Albitz illuminates further the areas of confusion between faculty and academic librarians. As librarians adopted the term "information literacy," it was seldom connected to critical thinking in its explanation, which is the term faculty use to explain their goals for the classroom experience. Educators use that term more broadly and know what it means—to them, it suggests a goal to strive toward; information literacy suggests a process of steps to undertake (Albitz, 2007, p. 98). Kissel et al mirrors Albitz's work regarding the disconnect between what faculty think and what librarians think when they published the result of their community of practice (CoP) around information literacy issues in collaboration with faculty. They found two primary views among librarians and faculty regarding information literacy: that it is composed of discrete skills and competencies with measurable outcomes and/or

it is comprised of interconnected threshold concepts where "success is more difficult to identify" (Kissel, 2016, p. 411). Overall, the article describes the creation and implementation of a faculty community of practice around information literacy ideas, as well as two workshops with outside speakers. Those speakers addressed the needs that were uncovered during those CoP conversations regarding the group's understanding of information literacy. The problem of definition and what to assess was persistent through the CoP, regardless of faculty discipline.

These examples lead us to further questioning about faculty–librarian communication, because when librarians advocate for information literacy instruction, faculty have not been able to connect that process to the critical thinking goals they have for their classroom. These two studies offer a glimpse into why consistent opportunities for discussion and collaboration between faculty and librarians are so important—to alleviate the confusion and misunderstanding of what each group perceives and prioritizes.

Turf

There are a variety of examples that support the work regarding information literacy, faculty development, and the role of librarians on a college campus. Until recently, librarians have guarded their area of influence within the teaching of bibliographic instruction as something that could only be done by professional library staff but one that requires trust on the part of the faculty regarding librarian teaching skills and motives. Over the years, librarians have worked to become part of the team that determines and executes the educational process, but faculty often seem content for librarians to remain in their service provider role (Ducas and Michoud-Ostry, 2004, p. 344).

While it is clear to librarians that working with teaching faculty has positive outcomes for student learning and information literacy, this approach can be met with resistance on several levels. Findings from Moran's 2019 study of discipline specific faculty suggest that faculty hold conflicting ideas about information literacy and information literacy instruction (p. 150). Nearly all faculty agree that information literacy is an important student learning outcome, but fewer than half of the faculty surveyed involved a library professional in their course or consulted with them on their research assignments. Faculty assume this instruction happens in prerequisite classes such as the general writing class and that their students do not need that reinforcement of ideas. This assumption reflects the 2016 study by Pinto, which confirms how faculty, no matter the discipline, have a misconception about information literacy and that their [faculty] ideas about the topic are "biased and erroneous" (p. 246). In fact, evidence from a 2013 study with writing instructors posits that when writing instructors also taught information literacy alongside their writing instruction, they (the instructors) gained greater understanding and appreciation of student information needs and skills, and better grasped the distinction between assigning research and teaching it (Gardner & White-Farnham, 2013). As a way to address these misunderstandings of what information literacy is and its necessity across the curriculum, librarians can create a space for those issues to be consistently discussed and unpacked with their disciplinary instructors.

One thing that has always been true is that much of the influence librarians have on students is dependent on relationships with specific faculty or faculty departments (Badke, 2005; Little and Tuten, 2006; McGuinness, 2006; Cowan and Eva, 2016; Pinto, 2016). Librarian liaison models typically assign a librarian to a group of academic departments in order to create a consistent presence for the library within specific programs and curricula. This model provides

insight into more than information literacy needs; it has positive effects on collection development, collaborative programming, and assistance with faculty scholarship. But the effects of faculty–librarian relationships on information literacy instruction are more mixed; what is more, this problem is not new. Knapp (1958) concluded from her extensive study at Knox College during the 1950s that: "neither subject field, nor teaching method, nor kind of assignment, nor quality of student in a class is of crucial importance in determining whether or not a given course will be dependent upon the library. The only decisive factor seemed to be— and this is a subjective judgment —the instructor's attitude. *Where the instructor expected and planned for student use of the library, it occurred"* (quoted in Hardesty, italics mine, 1995, p. 829). Despite the passage of time, this assessment feels true to many librarians: student use of the library and library resources must be planned for, expected, and explained to students by the content insrcutor because they will not willingly approach the library on their own to solve an information problem.

Finally, there are multiple models of librarian and faculty collaborations that provide positive examples and ideas for how to engage in this work of incorporating IL across the curriculum (Wishkoski et al, 2019; Hromalik et al, 2020; Bury, 2016; Michaelson, et al, 2009; Saines et al, 2019). VanderPol and Swanson (2013) predicted that "the future of information literacy will be multi-faceted. Faculty see students struggle to produce well-researched and well-reasoned papers and projects, so they respond positively to the [information literacy] standards as a roadmap for student improvement and are willing to share responsibility to develop students' information literacy" (p. 146). These examples are only a handful of the studies that have been done and it is difficult to come to broad conclusions. Every school and context are different, but there are some clear through-lines: faculty generally see information literacy as an important set

of life and academic skills, even if they are not sure how students are exposed to it; librarians continually develop creative ways to collaborate with faculty in order to highlight information literacy as a campus-wide value; and students benefit when their teachers encourage engagement with academic resources. However, conflict arises because each group desires to retain their sphere of influence—the classroom for faculty and the teaching of information literacy for librarians—and have anxiety opening their spheres to others.

Existing Tensions

As with all relationships, there are layers of complexity that add to the successes and tensions that arise between faculty and librarians. There can be meaningful personal relationships that don't translate to increased classroom collaboration; there are differing perspectives and priorities to navigate and personality conflicts to overcome. Additionally, these institutional and historical issues of status, language, culture, and turf provide a backdrop that creates the need for self-awareness and reflection. It is in the midst of all this context that information literacy instruction is required to grow, thrive, and assist student learning.

The impact of this relational dynamic has affected information literacy instruction for many years and, as demonstrated by the handful of studies mentioned, is influenced by the changing nature of information retrieval, faculty members' perception of a librarian's skill set, and the anxiety students feel when engaging with the library's own information ecosystem. The time is ripe for librarians to explore creative alternatives to the status quo and challenge each local context by expanding the view of what librarians can do. One of these alternatives is to create spaces where librarians and faculty can engage in peer-to-peer conversation regarding information literacy and disciplinary content

Effective Professional Development

Professional development is used to accomplish a variety of goals in an educational setting—to understand current trends, to improve pedagogy, to learn a new tool or system, and to foster organizational change. And though faculty do not think of professional development through the lens of organizational theory, identifying professional development as an essential part of a larger system ensures that goals and priorities of the college's mission are being addressed (Bond and Blevins, 2020, p. 230). This project introduced me to an entirely new arena of scholarship in professional development literature and organizational theories. There is a solid foundation of scholarship that discusses the need for faculty professional development and its impact on students and on the broader organization (Bryson et al, 2020; Scott et al, 2016; Dimmit, 2004). This engagement broadened my view about how working with instructors regarding information literacy can change the conversation across campus about information literacy in general and about the library specifically. Before engaging with professional development literature, I had considered faculty attitudes toward librarians as consistently convenient, and not necessarily collaborative. As described in the earlier section about information literacy instruction, much depends on the individual relationships between librarians and faculty that are cultivated over time. Those relationships are necessary in building trust and credibility between groups of professionals, but professional development creates a systematic approach to achieving organizational goals. If the goal is to increase the reach of information literacy instruction, then the approach to instruction needs to change or be amended. Consistent faculty development provides the venue to reach previously unreachable faculty and propels informational literacy instruction forward.

However, as I uncovered in my research, faculty and professional development can be met with a mix of enthusiasm, dread, and resistance among employees of any organization. "Faculty themselves tend to read the term [faculty development] as an indication of shortcoming that require attention and active correction" states Jenae Cohn at the outset of her article about creating an online learning community of faculty (Cohn, et al. 2016, p. 1). This sentiment was repeated throughout the professional development literature in a variety of ways and is not a perspective I had considered before. That statement gave me pause, looking at my excitement and motivation surrounding faculty development through the eyes of the faculty. Where I see an opportunity to collaborate, have stimulating conversation, and understand more clearly the needs of teachers and students, faculty may experience that enthusiasm as a misunderstanding of their work—at best—or arrogance, at worst. Framing any faculty development solution as an opportunity to learn and grow together is the key to success from any aspect of the endeavor.

Faculty learning is a part of a changing paradigm and culture on a campus; it creates a campus where learning is valued, where faculty development is not about "fixing" a teacher who is broken but gaining increased understanding of the student body, methods of teaching, and new perspectives to consider. In 1995, Robert Barr addressed this idea as part of a larger organizational goal. He writes that "a college is an institution that exists to provide instruction. Subtly but profoundly, we are shifting to a new paradigm: a college is an institution that exists to produce learning" (p. 13). His article outlines ways that the institution itself is a learner within its systems and core mission. One of those ways for the institution to learn is to provide opportunities for the teachers to learn as well. Once this becomes part of the culture, professional development is not seen as part of a fix to some problem, but part of the identity of the college, modeling learning for all.

Part of my research involved speaking with one of the primary faculty trainers on my campus, Kathleen Berry. We had an extended conversation about how she conducts faculty training, which is focused on instructional design and online learning; this conversation included her experience navigating faculty workload and administrative expectations. We spoke a lot about planning and implementation, her advice being to "over-plan and take the long view on implementation." She further advised me to be prepared to repeat workshops and be prepared to explain concepts repeatedly, in a variety of mediums (Kathleen Berry, personal communication, October 22, 2021). And while faculty may balk at being told what workshops to attend and how many times, she views her job as having consistent offerings and providing excellent training, anticipating the needs, and responding to problems that she gets questions about.

My interview with Kathleen also illuminated the ways in which building a community of faculty learners is key to success, which aligns with broad learning theories about community building. Though she did not use the words "social learning theory" during our conversation, it is one of the explicit goals of the training she designs. Her training designs address all the needs individuals have for learning: "conversational connections; communities of practice; learning communities; and mentorship opportunities" (Bond and Blevins, 2019, p. 231). Kathleen divides her training up in this way: a single workshop enhances what someone already knows and makes them better at what they are already doing; a series of workshops over time scaffolds new knowledge, allows participants to learn and practice the new concept or tool, then come back with questions for the trainers and for others in the cohort. This also confirms the conclusions by Hromalik, et al, in their most recent literature review about community college faculty development. More than anything else, they stress that format and incentive are extremely specific to the institutional context, and it is essential to understand the culture and community

when designing and implementing any faculty development program. (Hromalik, et al. 2020). Kathleen is an exemplar in accomplishing this goal of understanding context and providing training sessions that reflect the needs of that context.

The primary goal of faculty development is to give classroom instructors the time and tools for reflection and change. If faculty are well informed by the current educational research, have time to reflect on what is working in their and others' classrooms, and have repeated opportunities to add to their repertoire of strategies and skills, their comfort and confidence only continue to grow (Cohn, et al, p. 5). This investment reduces their stress and creates the ability for faculty to effectively respond to shifting demands of students, content, and expectations. That reduced stress leads to higher satisfaction in the work and in retention rates among faculty. Additionally, faculty development has positive effects on student learning when faculty implement the concepts and reflect on their teaching.

However, faculty instructors come from a learning culture that is traditionally incredibly independent, as discussed in the earlier section about faculty culture. The graduate school system culminates in a process that often isolates the scholar from others as they write and explore ideas in their academic discipline. Typically, teaching happens with a single faculty member in a classroom, teaching their content how they see fit. Faculty are often not naturally ingrained with a collaborative culture, which is a tremendous contrast to the ethos of librarianship. Workshops that mix faculty and librarians together place learning in the center of the social process, "attempting to overcome the natural isolation in the faculty environment that is adopted and ingrained in order to be successful in graduate school" (Wishkoski et al. p. 98-99). Working with librarians regarding teaching and learning requires a culture shift for teaching faculty so they can experience librarians as fully invested partners in their students' learning.

Plenty of barriers toward faculty development exist and reasons for non-participation abound. Steinert, et al, found that reasons for non-participation really came down to a mindset of scarcity or lack: lack of time, lack of logistical understanding, lack of reward or recognition, and lack of direction from, or connection to, the broader university. The obstacles to attendance were the same for participants and non-participants alike, but it seems that for those who attended "their perceptions of faculty development and their internal beliefs about self-improvement as a teacher or values overcame their external obstacles" (Steinart, et al, 2010, p. 905). They further suggest that thinking about faculty development as a social practice will shift the suspicions that can surround workshop opportunities and inspire more intrinsic motivations from those who tend to be non-participants.

Additionally, faculty resistance can be acute if they are asked to revise their syllabus "yet again." On my campus alone, there have been summer institutes for faculty to globalize their curriculum, create an accessible syllabus, become proficient in universal design, and manage online learning. These continual adjustments can be tiring and create resentment toward the entire endeavor, even if they feel positively toward the library or toward information literacy instruction.

An important study completed at Texas Christian University explored what skills faculty expect students have mastered and who is responsible for teaching those skills. Until this study, librarian research about faculty focused on unpacking a predefined set of skills and standards that librarians had for students; this study allowed faculty to talk about what skills were important to them for students to have and them the researchers extrapolated the common themes that emerged. Interestingly, this work (Huddleston, et al. 2019) demonstrated that faculty members talk about the important components of the research process with a vocabulary that is different

from the library field, similar to the confusion between the base definitions of information

literacy and critical thinking. Instructors are very concerned about "good" sources and plagiarism

while librarians are more focused on transferable skills regarding source finding and evaluation.

This has implications for how services are marketed and how librarians explain information

literacy to them—what they think is most valuable about what we teach might not be what we

think is the most valuable. This research again points to the need for venues and opportunities to

have these conversations and alleviate that language gap. Additionally, a study of community

college faculty revealed the unique needs of both those students and the faculty who teach them.

While community college instructors view information literacy as interwoven within their

discipline, they also are aware of the fundamental needs many of their students have regarding

reading comprehension, vocabulary, and writing; those needs were more closely aligned with

information literacy instruction than their disciplinary needs (Cope & Sanabria, 2014, p. 487).

Again, understanding the context of the local student body and the needs of the classroom

instructors is essential to any success for expanding IL instruction.

There are common design elements that create a positive learning experience based on

constructivist and social learning theory. A case study at the University of Utah reported three

highlights that resulted from their teaching workshops: first, creating an environment of trust and

comradery between the attendees so that everyone felt comfortable talking about their experience

was essential in the opening phase of the workshop. Then, the group was able to discuss specific

student interventions such as scaffolding, facilitating group work, creating authentic learning

experiences through intentional project design, and modeling the learning process for the

students in the classroom (Wishkoski, et al 2019, p. 109). The authors are also honest about the

difficulty in planning a comprehensive workshop because of competing responsibilities, but the

payoff is substantial and improves outcomes for the students in these faculty classrooms. The group estimated that information literacy instruction reached 700 students, who became beneficiaries of the workshops with faculty.

Through my engagement in creative thinking concepts during CCT's *Introduction to Creative Thinking* (CRCRTH602), I was highly influenced by Todd Lubart's 7C's of Creative Thought: creators, creating, collaborations, context, creations, consumption, and curricula. If I think of faculty as creators, that they are creating something as we collaborate, that we are pursuing an understanding of our context, and that I am focusing on a curriculum that allows space for that to happen, I remain highly motivated to continue this work (Lubart, 2018, p. 135). The framing of faculty development as a creative process reminds me of the "long view" of creativity and that it takes time for ideas and the understanding of those ideas to come to fruition.

My initial plan for faculty development intended to target specific departments in order to enact this organizational change. Organizing professional development in that way adds an additional layer of administrative duties: communicating with department chairs, attending meetings to understand their context, and creating disciplinary-specific content. However, multiple studies highlighted the advantage of having multidisciplinary groups engaged in learning opportunities together (Cohn, et al. 2016; Pinto, 2016; Saroyan and Amundsen, 2004). These heterogeneous groups allow faculty to practice their teaching on educated people who still are not in their field. This creates a more realistic environment for the attendees, forcing them to explain concepts they may take for granted and challenging their assumptions about what students may or may not understand. For this reason, I plan to expand the workshop series to allow the opportunity for different disciplines to learn from each other and build camaraderie across campus departments. Systemic change can, and should, happen within the departmental

levels, but limiting the learning opportunities to faculty in specific departments runs the risk of alienating potential allies that can build a broader constituency across campus.

Proposed Solution: Library-led Faculty Development Series

The literature I explored demonstrates a shift among academic librarians regarding their role on a college campus, a shift that is happening in real time and is not complete. While the past twenty years have seen general success communicating the importance of information literacy on a broad scale, the current shift underway describes a more faculty-centric approach to education and instruction. I think librarians will always engage directly with students, but the complexity of the information landscape requires that librarians begin to think of themselves as faculty developers in addition to classroom educators. This change builds on the relationships that have been forged (hopefully) over the years between faculty and librarians and requires faculty to view us not only as fellow instructors engaged in student success and achievement of learning outcomes, but as experts who can teach faculty how to engage with their students in information literacy concepts.

A consistent series of workshops (See Appendix A) will be held for faculty instructors throughout the academic year, planned and led by the library instructors, in order to assist self-motivated faculty with achieving their information literacy learning outcomes for their students and providing space for connection and collaboration between librarians and disciplinary faculty across campus. A workshop series accomplishes multiple goals: it fulfills the need for support and encouragement, it creates a distinct cohort of faculty who are invested in the material and produces a manageable number of students exposed to information literacy. On an organizational level, it keeps information literacy as a central part of the conversation about teaching and learning and provides clear opportunities for assessment, which are both long-term goals within

the campus strategic plan. Additionally, and as previously noted in an earlier section, non-library faculty have more access to students and more opportunities to scaffold information literacy into their discipline. As educators in front of students every day, they are what Boon calls "vital agents for information literacy" on a college campus (Boon, p. 2007).

The trend for librarian-led faculty development is moving toward a "train-the-trainer" approach, which is a bit of a misnomer but is a common phrase in professional development circles. This approach "prioritizes working with faculty over direct classroom instruction to better integrate IL instruction with course content as well as to reach a greater number of students" (Flierl, 2019, p. 186). This is not a role that librarians are naturally comfortable with and requires a shift in our own mindset moving forward and more exploration of what positive faculty development can look like. Flierl identifies four categories that describe the experiences of librarians as they collaborate with faculty: connector, facilitator, colleague, and developer (p. 190). More specifically,

> The *Connector* category describes actions librarians may take in their practice as liaisons to departments in which they connect disciplinary faculty with specific teaching and learning resources on campus. The *Facilitator* category focuses on systematically working with faculty to develop their IL skills and abilities. The *Colleague* and *Developer* categories are more complex, as librarians embraced broader interpretations of their educative role: a *colleague* being seen as a true peer to team-teach or collaborate with, and a *developer* being an expert in an area where the faculty has a knowledge gap. (p. 198)

This recent research illustrates the changing nature of the librarian's role on campus and the myriad ways we engage with faculty in order to help students achieve information literacy

goals. As a librarian in the field for 20 years, much of the change in the status quo of library instruction centered around teaching more information literacy classes and getting into more classrooms. I have worked constantly toward that aim, often frustrated that the model never changed, that there were so few follow up sessions with students, and that faculty seemed content with their students encountering the library, the librarian, and library resources in a hurried, one-shot library session. As I explored this model for "training the trainer," I began to see many advantages to this approach.

One primary advantage concerns the relationship between librarians and faculty themselves. While those relationships range from professional to cordial to positive, a tension can exist between the two groups. This tension is alluded to in the earlier section and much more specific literature explores this phenomenon, but the reasons are myriad: teaching experience, academic credentials, and the view that what librarians do is "service"—not educating—all create barriers to a balanced relationship (Nimon, 2002, p. 18). A workshop setting provides a space that is egalitarian, allowing librarians to "move beyond the roles of service provider to that of a peer with other faculty" (Handler and Hays, 2019, p. 222). These social learning spaces create trust, respect, and collegiality, which have a natural outcome of increased collaboration where all participants are learning together about each other's needs.

There is a practical element to teaching faculty how to teach information literacy more thoroughly. If faculty implements the changes discussed and practiced during the workshop, more students are reached than if librarians were in those classrooms. Additionally, the workshop space provides the opportunity to brainstorm and design other areas for library involvement, resource support, or information literacy instruction in multiple contexts or at different levels (Michaelson et al, 2009, p. 73). It is a shift in focus for librarians, but one that

pays dividends both in energy output and student reach. Librarians can continue to teach students but also can increase their reach by teaching the faculty. This shift keeps information literacy as part of the conversation on campus regarding student learning goals and as part of the assessment as students engage in critical thinking activities.

Design of Workshop Series

Exploring library-led faculty development required that I peel back many layers regarding the issues of information literacy, its relationship to campus goals, faculty and librarian relationships, and the current state of library instruction. It also required that I explore the realities of my own context and begin to imagine creative solutions, designs, and possibilities for library-led faculty development. For example, I never considered how my enthusiasm to work with faculty and to provide opportunities for information literacy training could be perceived as threatening. But understanding the reasons why faculty can be sensitive to mandated development (Cohn, et al 2016) made me rethink my approach to the design and marketing of my ultimate proposal by exploring incentives, creating a long-range plan, and offering consistent opportunities instead of large-scale, time-consuming workshops. My goal now is for the workshops to range from forty-five (45) to ninety (90) minutes, depending on the content and to offer them consistently throughout the academic year in order to increase opportunities for engagement.

For example, as part of the action research process associated with this inquiry, my colleagues and I conducted a short professional development session with staff and faculty from a variety of disciplines that guided them through some web evaluation activities, similar to what we do with students. The session was about forty-five (45) minutes long and combined some background information about the struggle people have with evaluating information online with

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activities that highlighted the attendee's own assumptions about how well they themselves can evaluate information online. This was incredibly eye opening for them and prompted positive feedback and discussion about how to incorporate similar activities into their classes. Once the faculty understood the depth of complexity around information consumption and experienced the strategies used to practice those evaluative skills, they were prompted to reflect on how similar activities would benefit their students and strengthen their students' understanding of course content. None of the articles I read used this tactic for engaging faculty at the outset; however, one study stressed the need for understanding the institutional context while designing and implementing faculty development (Hromalink et al, 2020). After building this constituency and evaluating this feedback within the action research framework, we decided to add sessions like this to the overall strategy of library-led faculty development. This action research enables us to develop a sense of the appetite for further development around information literacy and testing what resonates with our faculty and staff on our campus. This model of shorter, interactive sessions provides a unique approach to gaining that understanding and provides an avenue of participation that builds a constituency of committed instructors willing to engage in this work.

While its role in my inquiry was less clear at the time, *Action Research* (CRCRTH693) was a class that provided such relief for my process. Throughout the CCT program, I thought that my final product would be a well-polished workshop curriculum that I had practiced, packaged, and produced. But as I gained an understanding of the action research process and recognized its connection to Lubart's 7 C's of the creative process, I began to further explore the values of building a constituency, providing more avenues of engagement for those constituents, which empowers them to contribute to a collaborative solution. The introduction of action research into my process impacted my entire approach, as I realized that I would need to spend

more time researching these ideas, building a constituency that cared about these ideas, attempting to communicate these ideas, then evaluate and alter them based on feedback and a broader understanding of context. These concepts are complex and will take time and practice to communicate and to assess. Once I understood the cycle of action research, my final product became a curriculum map (see Appendix A) instead of a fully formed workshop lesson plan. I know that specific content may need to change, but the map provides me and the other information literacy instructors with a tool to assist us in addressing the variety of needs faculty have surrounding information literacy, critical thinking, assignment design, and assessment.

The curriculum map (Appendix A) is the tool that provides structure for my vision of a collaborative and creative library-led faculty development program. The map outlines multiple series of workshops, with each series focusing on a different theme. One series focuses on scaffolding information literacy concepts into the classroom, highlighting the need for consistent information literacy instruction. Another focuses on the brain science that undergirds the teaching of information literacy, primarily critical thinking and metacognition, as an essential conversation in understanding the theoretical underpinnings of teaching those skills. The final two series are implementation workshops, where librarians can work directly with faculty on identifying what their information literacy goals are for a course and finding the right tools to help students meet those goals. In addition to the creation of the curriculum map as an administrative tool, there are actionable steps that I want to pursue in the design of all the workshops we offer.

Multiple Modalities

While COVID has provided us with a more comfortable approach to synchronous, online instruction, and there are benefits to that, it still cannot be the only way to offer interaction and

instruction. In-person sessions still have value, especially for hands-on workshops that may require intervention at various points along the way. Additionally, recording virtual sessions or creating a separate set of modules for faculty is a future possibility, to provide opportunities for on-demand learning but there is an increased demand on staff time by adopting that approach. Regardless, it is essential for access and equity to explore these various modes of delivering content and consistently assess what works more effectively in my local context. The modality should also be chosen with the learning outcome clearly in mind. The content being taught will also impact the modality choice.

Feedback and Follow-up

The action research model requires that evaluation be part of the process. The needs of the faculty and of the students will continue to change, the information landscape will continue to change, and it is essential to gather consistent feedback in order to adjust, improve, and meet the needs of all constituents. Building feedback opportunities into the workshop design and structure ensures that evaluation takes place consistently so that adjustments can be made to keep the content relevant. After the second offering of the workshop my colleagues and I provided, I designed and circulated an assessment tool for attendees who attended, and for those who registered but did not attend. Though we are still in the early phases of implementing the curriculum map, establishing the habit (for us) and the expectation (for attendees) of assessment creates a stronger and more relevant program for faculty development.

Constituency Building

Building a space of trust among colleagues is one of the many advantages to heterogeneous groups. These workshops can positively impact campus culture by providing space for these cross-departmental interactions and relationships to form and thrive. Instead of assuming that

departments need their own sessions, I will plan sessions to include a variety of disciplines and trust that all participants can learn from each other. However, as I discovered in a faculty development session this semester, at times there may be multiple attendees from the same department. While observing and facilitating that session's discussion, it became clear that the topics uncovered a disciplinary-specific curiosity that needed to be explored at the departmental level. Remaining open and aware to those possibilities is built into the curriculum map.

Learning, not fixing

This may be the most difficult design element for librarians because we see the macro problem of information literacy deficits. It is necessary then for the workshop facilitators to always articulate the learning outcomes for the workshop and design with that end goal in mind: that all who attend will learn from each other about how to teach information literacy and that the workshops are not advancing a specific library "agenda" that is out of step with broader campus goals. Library instructors need these spaces to interact with faculty in order to understand the students we teach and the complexity of their needs. With this in mind, all participants can learn from one another.

Critical thinking and metacognition

The research studies I cited illustrate the disconnect that can exist between faculty and librarians simply because of the vocabulary and misunderstanding of definitions. I believe this is the point that will need to be repeated and discussed so that it is clear we all have the same goals for the students. Understanding the evolving brain science of learning benefits all instructors who engage with students and the goal of these conversations keeps the sessions from becoming stale and predictable. Additionally, it opens up avenues of participation in identifying the expectations we have of student learning and the assumptions we have of what they already know.

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Provide space & opportunity for shared learning

It is impossible not to be motivated by my perspective as a library practitioner and to focus on the library goal of increasing the reach and assessment of information literacy across campus. However, this research raised the concern for me that I am too focused on library outcomes and not the broader campus culture or student learning, which potentially alienates me from the very people with whom I desire to build collaborative relationships. It is easy to be caught up in one's own discipline and communicate to faculty that they need to help fix this "library" problem. Reminding myself and my colleagues that information literacy deficits are a societal issue and that we are doing our part to affect change in our context will be important for remaining motivated and retaining a posture of humility through this process.

Workshop climate

In addition to reflecting on the values that will impact workshop design, the literature also provided me with the opportunity to reflect on the climate of the workshops, inspiring me to be specific about the atmosphere I will seek to create. The space, whether virtual or physical, should be one that:

1. Cultivates creativity (Sains, et al, 2019 p. 15),

2. Acknowledges that teaching is a scholarly activity (Saroyan and Amundsen, p. 21),

3. Welcomes questions, even if the solution isn't a library-led solution (Handler and Hays, 2019, p. 222),

4. Facilitates sustainable library connections for students [in the syllabus] *when appropriate* or necessitated by the learning outcomes of the assignment (Wishkoski, 2019, p. 114),

5. Allows participants to communicate different perspectives on the research process and the skills students bring to it (VanderPol and Swanson, 2019, p. 145).

Librarians have an opportunity to facilitate these professional communities while also engaging faculty in conversation about information literacy and the ways these skills impact their students' academic and lifelong learning. The goal is not primarily to increase the teaching load of librarians but to provide space for faculty to reflect on these issues and think about what changes make sense for their students, courses, and assignments.

Conclusion

From my perspective as a library practitioner, with twenty years in academic libraries, I have sought to engage the issues surrounding the gaps in information literacy instruction and the dissatisfaction with the current model. The purpose of this inquiry was to explore creative opportunities for expanding the reach of information literacy instruction using a proactive action research model, encouraging the participation of faculty in this work and providing them with space and tools that assist them in scaffolding information literacy interventions more intentionally within their content. This inquiry led me to a variety of avenues in research in addition to library literature, including professional development literature, organizational theory, and cognitive psychology. Exposure to this literature challenged my assumptions about librarian–faculty relationships, perceptions surrounding professional development, and the communication around information literacy concepts. Using the model of action research, I have been able to cycle through the process of gaining background knowledge, building a constituency, enacting a plan, and evaluating that plan. The result of this inquiry helped me create a new approach to faculty development in my local context by designing a curriculum

map (Appendix A) in order to implement strategic, library-led faculty development on a consistent basis.

Librarians can be a helpful part of the critical thinking discussion at any level of the institution. Mahaffy's article talks specifically about increasing a students' "research dexterity" and how "effective assignments are woven into the fabric of the course design which further students' information literacy skills" (Mahaffy, 2006, p324). Librarians encourage students to develop the skills they need to become critical thinkers and have a range of experiences and activities to share with faculty; the only thing lacking is space and opportunity for communicating and exploring this knowledge. Additionally, I would argue that librarians, because of our cross-campus understandings, are positioned to aid in the assessment of critical thinking across campus as we gain an understanding of our students' information literacy prowess. Examining the language used by faculty and librarians around the concepts of critical thinking, information literacy, and research skills will aid in alleviating the tensions between the two groups and the misunderstandings inherent when people use different words to describe similar ideas.

In a college academic setting, the best success stories regarding the teaching of information literacy have been when librarians and faculty collaborate on assignment design and course or program outcomes to scaffold broader information literacy ideas into the curriculum. "Students are essentially learning to cope with the concepts that complex questions require time to answer" (Yevelson-Shorsher and Bronstein, 2019, p. 542) and they do not come into the classroom with that knowledge, either of how to answer the complex question or even understanding that seeking those answers will take further learning and time to master new skills. The goal is to create a classroom environment where students understand that evaluating

information is a life-long skill and one that has real impact in the world, not just something that helps them complete an assignment or get a good grade.

Working with faculty in an individualized way—which is the current practice for most academic librarians—is difficult when there are only so many minutes in a day and only so many librarians to do that kind of intensive work. With these reasons and background understanding in mind, I began looking at a variety of ways to help the teaching faculty at Massasoit to incorporate this scope of information literacy concepts more easily and clearly into their courses. The research advocates for a clear assessment of the local context to design interventions that will reach most students and be a true collaboration between librarians and faculty.

While individual relationships between faculty and librarians can be fulfilling and benefit the students of that faculty member, it is not a sustainable model for information literacy instruction and one that does not have the desired impact in reaching an extended number of students. A consistent approach to teaching faculty through a workshop series informs their own understanding of the relationship between critical thinking and information literacy and has the potential to increase the impact of the library on more students across campus. Librarian expertise can contribute to the classroom, and it is time we leaned into and promoted that expertise to our colleagues to communicate the importance of information literacy across the curriculum for the benefit of all students.

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APPENDIX A: RESEARCH FOR LIFE CURRICULUM MAP

This curriculum map is the product of the research inquiry, engagement, and action taken to understand the local context, build on what has been done before, and create new avenues of participation across campus. The division and organization of the workshops into series helps the librarians and the faculty know the context and type of workshop they will be attending. Some of these workshops or more academically oriented, providing space to explore questions regarding metacognition and critical thinking. Some are much more hands-on, providing space and practical assistance for incorporating specific tools and lessons into a course. Some are sequential, most are not, and this model provides options for meeting with faculty with defined goals and expectations in order to maximize the time spent together.

Learning Outcomes:

At the end of a workshop, faculty will be able to:

1. Identify what information literacy concepts are the most important to their course content.

2. Understand what options of implementation are available to them.

3. Have an outline of where within their syllabus they might want to incorporate these lessons.

4. Decide what kind of information literacy instruction fits best with their course outcomes.

5. Engage with the way information literacy concepts and thinking effects daily decision making.

Research for Life Workshop Curriculum Map

Offered consistently throughout the academic year to faculty of all disciplines

Title	Scaffolding the Classroom Series	Teaching the Brain Series	MLILM* Implementation Series	Research for Life OER** Showcase Series
Description	This series will introduce classroom practitioners to some of the strategies librarians use that help students navigate and evaluate the variety of information sources available to them. Faculty will be given time to discuss and brainstorm ways to incorporate short but impactful activities into their classes.	Workshops in this series focus on thinking concepts-metacognition, critical thinking, and information literacy—and how those concepts can be highlighted in a variety of ways throughout different classroom activities.	This series will review the library information Literacy Modules that are available in Canvas and provide hands-on time to look at the content and import them into an existing course. There is also a collaborative opportunity to request, or custom create new MLILMs for a class.	This series showcases the OER written by Massasoit Librarians, titled Research for Life (or Introduction to College Research for the Early College group). The workshops require a deep dive into the content and provide room for discussion on implementation into a course either as a complete unit or choosing specific aspect of the OER to use.
Sample Workshops	Navigation Tools for the (Mis)information Landscape	Metacognition: You're Probably Already Doing It	MLILMs for the First Time	Session 1: Research for Life chapters 1-4
	Civic Online Reasoning for the Rest of Us	Metacognition with Intention	Maximizing Your Use of the MLILMs	Session 2: Research for Life chapters 5-7
	Unpacking Assumptions: Do They Know How to Do That?	Using the Rubrics: Information Literacy and Critical Thinking Assessment		Session 2: Research for Life chapters 8-12
				Session 4: Research for Life Feedback Session

* Massasoit Information Literacy Modules: cross disciplinary, a la carte modules built into the learning management system that focuses on specific information literacy concepts and skills-based instruction

** A 12—module curriculum that can be used to supplement classroom instruction with weekly readings, low-stakes assignments, and information literacy concept development

APPENDIX B: COMPARING CRITICAL THINKING AND INFORMATION LITERACY

VALUE RUBRICS

The Value Rubrics were developed by the Association of American Colleges & Universities as an assessment tool for a variety of stated institutional goals. The rubrics provide a way to assess skills development and learning in a systematic way. The library staff at Massasoit has engaged in two rounds of Value Rubric assessment and has a goal of completing an assessment project every two years. In our exploration and study of the rubrics, we unpacked the assumptions inherent in the assessment. This exercise helped us identify what specific skills and habits needed to be included in instruction if they were going to be assessed. The assessment project included writing center staff, so we engaged with this activity using the Information Literacy Rubric and the Writing & communication Rubric. It was an incredibly useful exercise, and during my exploration of critical thinking assessment, I engaged in the same activity comparing the IL Rubric and the Critical Thinking Rubric. This chart outlines the assumptions inherent in both rubrics, which is an essential aspect to using the rubrics for assessment. On the left is the definition of measurement according to the rubric, and on the right is the assumption inherent in that measurement.

Rubric Measurement*:	Each Measurement Assumes that Students Have:
Explanation of Issues (CT):	Sufficient information has been gathered to accomplish this
Evidence (CT): Selecting and Using Information to Investigate a Point of View	The information being analyzed is reliable and can be understood
Influence of Context and Assumptions (CT)	Had practice identifying and naming the assumptions, biases and context of information
Student's Position (CT)	Been taught to imagine and explore alternative views or realities
Conclusion and related outcomes (CT)	Mastered how to group and prioritize evidence that is encountered
Determine Extent of Information Needed (IL)	An understanding of different types of information and their purposes
Access Needed Information (IL)	A meta-strategic knowledge and an ability to know where information resides
Evaluate Information and Sources Critically (IL)	An understanding of value placed on types of information regarding its context
Use Information Effectively to Accomplish a Specific Purpose (IL)	Information that is appropriate for the student's task
Access Information Ethically and Legally (IL)	An understanding of information ethics for multiple types and formats of information

*Critical thinking (CL) is a habit of mind characterized by the comprehensive exploration of issues, ideas, artifacts, and events before accepting or formulating an opinion of conclusion.

*Information literacy (IL) is the ability to know when there is a need for information, to be able to identify, evaluate, and effectively and responsibly use and share that information for the problem at hand.