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# **OPTIMIZING THE FIELD THROUGH A CURRICULUM MAPPING INITIATIVE: ADAPTING THE FRAMEWORK FOR ASSESSING INFORMATION LITERACY PROGRAMS**

**AMANDA B. MACDONALD, JULIA FEERRAR AND STEFANIE METKO**

## **OVERVIEW**

Curriculum mapping allows educators to examine the structure of their instructional programs on a wide scale. Academic libraries have recently discovered the power of curriculum mapping for identifying high-impact areas within the curriculum, for creating realistic programmatic and curricular assessment, and for increasing library engagement. Understanding the user experience (Booth & Mathews, 2012), curriculum mapping for strategic planning (Archambault & Masunaga, 2015), mapping for information literacy and faculty-librarian collaborations (Miller & Neyer, 2016), and curriculum mapping by subject liaisons to understand “the tiered curriculum of their assigned departments and programs” (Arthur & Tierney, 2013) are examples of this work.

Building off of the various strategies employed at other institutions, this article will share the beginning stages—including selecting software, creating flexible templates and scales, piloting the materials, and planning the next steps—of the creation and implementation of a new model of curriculum mapping to illustrate how library instruction programs connect to high profile campus initiatives. The model was designed to address changes to the general education curriculum at Virginia Tech and initiatives like digital literacy and ePortfolio, which were recently charged to the University Libraries. These changes created a greater need to understand the curriculum and to identify key areas in which to further engage. Furthermore, there was a need to assess what was being taught throughout the Libraries’ instructional programs in order to limit redundancy in topics, particularly those covered in first year library instruction, as well as to identify gaps that needed to be developed further. To address all of these changes and needs, a pilot project for mapping library instruction to the student experience, space usage, and new university-wide initiatives was launched. Ultimately, the team also hopes to create scalable and sustainable instructional materials based on needs identified during the mapping process.

## **TEAM ROLES AND RESPONSIBILITIES**

The Teaching & Learning Engagement Librarian served as the Curriculum Mapping Expert on the team. With a focus on theory and implementation, her role was to communicate what materials were needed, to create frameworks and templates for mapping, to collaborate with subject liaisons on converting templates into data visualizations, and to work with other team members analyzing the results of the visualizations and the project as a whole. The Curriculum Mapping Expert took the lead on implementation during these beginning stages but will collaborate with the Subject Liaison to create liaison training documents following the pilot.

The Learning Strategy Librarian served as the Subject Liaison on the team. Her role was to communicate with faculty in the English department, to gather syllabi and other materials needed for mapping, to work with the Curriculum Mapping Expert to put information into the templates, and to collaborate with other team members to analyze the results. The Subject Liaison also worked to imagine where future liaisons involved in the project might need further support.

## **PROJECT DEVELOPMENT**

The curriculum mapping team set out to create a structure and process for mapping existing academic curricula to work done in the Libraries. Specifically, the goals were to map the information literacy curriculum used within the Libraries, map library space usage, and draw connections to big-picture initiatives at Virginia Tech, such as digital literacy and ePortfolio. Mapping existing curricula in academic programs, which is often the stopping point for library curriculum mapping, was only the starting piece of this model.

In order to support a mapping process that would address the objectives above, the team first investigated software options with the goal of selecting software that would be easy for future liaison participants to use. The team explored software options including Chalk.com, CurricMap, and Atlas. Many mapping tools simply create a coded or colored template that illustrates how a curriculum is scaffolded and help to highlight redundancy and opportunities in instruction. However, the team was hoping for more robust visualizations, such as bubble charts and tree maps, and saw the coded template as the starting point or matrix for organizing the data, not as the final product. In the end, the team opted to use Google Sheets for the templates, as all of the liaisons already had access to and familiarity with this software. Additionally, the team chose to utilize Tableau for the data visualizations. This combination would allow for full functionality as envisioned by the team, as well as scaling options as the project moved forward.

Following software selection, the team created templates that would provide the structure for analyzing the curriculum. The Program Overview Template would help a subject liaison identify the courses within a particular program that he or she would like to explore further. At this level of curriculum mapping, the team wished to help subject liaisons identify courses that would benefit from many kinds of library engagement, including information literacy instruction, digital literacy and ePortfolio instruction or support, and use of library spaces. The team also decided to track courses according to enrollment, sections offered, and their status (required or elective courses). The completed Program Overview Template should include every course for a particular program as well as relevant data about each course. Figure 1 is a snippet of the Program Overview Template.

### **Figure 1: Program Overview Template**

A completed Program Overview Template illustrates current instruction and opportunities for future instruction engagement. Because the team wished to provide liaisons with a structure for exploring the concepts and skills they teach, a second template was created. The Information Literacy Template draws on the *ACRL Framework for Information Literacy* (ACRL, 2015). Because the Framework is highly theoretical and conceptual rather than outcome based, the Expert and the Liaison worked together to generate outcomes connected to the Frames. The team included four major outcome areas in the Information Literacy Template, each connected to multiple Frames. As the team developed outcomes, they also identified connections to the outcomes and learning indicators in Virginia Tech's new general education curriculum, Pathways (Virginia Tech, n.d.). Instead of framing information literacy as its own area, the Pathways general education curriculum includes information literacy-related concepts and skills throughout. While the Pathways indicators use different language, the team created a chart to show the connections between the Pathways indicators and the outcomes based on the Frames. When mapped, the team will know exactly which information literacy outcomes are covered in each Pathways course that receives library instruction. Table 1 is a crosswalk between the Information Literacy Template outcomes, the Frames, and the sample general education learning indicators.

### **Table 1: Outcome Areas and Frames**

While developing outcomes for each area, the goal was to keep the language as simple and flexible as possible, so future liaisons would easily be able to distinguish where the content of their instruction falls within the template. Figure 2 is a snippet of how the Frames were changed into student learning outcomes (SLOs) in the Information Literacy Template.

### **Figure 2: Information Literacy Template with Outcomes**

While having the full outcomes listed is useful for liaisons familiarizing themselves with curriculum mapping, it is not necessary to have a text-heavy template. Figure 3 is a snippet of the Information Literacy Template.

### **Figure 3: Information Literacy Template**

The only difference between Figure 2 and Figure 3 is that the verbs and other excess words in the SLOs were removed for a cleaner, less wordy appearance.

In order for the templates to be usable, an initial scale was developed based on Bloom's Revised Taxonomy (Krathwohl, 2002) with the thought that it would be interesting to see where librarians engaged students in higher order thinking in library instruction classes. Figure 4 is an image of the original scale.

#### **Figure 4: Bloom’s Taxonomy Scale**

In addition to mapping the concepts and skills involved in library instruction, the team was also interested in exploring current and potential space usage. The third template created was the Spaces Template. The Spaces Template includes classrooms, studios, exhibits, Special Collections, and even spaces that do not exist yet. Under each space name potential uses of the space are listed, which will provide the team with data on the actual use of the space. Figure 5 is a snippet of the Spaces Template.

#### **Figure 5: Spaces Template**

The Spaces Template has not yet been piloted, but there are blank rows under the last item in each list to provide liaisons the flexibility to state how the space is actually being used in the event that it is being used in a way that the team had not anticipated. This will give the team more insight into space usage. The data collected from the next iterations of space mapping will allow the team and other library faculty and staff to make informed decisions about space development and to design programs that are fitting for specific classes, co-curricular events, or other engagement opportunities.

### **USE CASE AND LESSONS LEARNED**

The curriculum mapping team identified the English department as an appropriate pilot, due to its structure and its history of library engagement, particularly in first year instruction. The English department includes three different undergraduate majors and three graduate programs, so it presented a fairly complex and overlapping curriculum to explore. To initiate the pilot project, the Subject Liaison reached out to the English department chair and shared goals for the project. The chair then shared the department’s internal collection of syllabi. The Liaison also collected departmental check sheets, graduation requirements, and course descriptions, all freely available on the English department website. After analyzing this collected content and drawing on her own knowledge of previous library instruction, the Subject Liaison completed the Program Overview Template for the undergraduate and graduate programs. Figure 6 is a snippet of the undergraduate English Program Overview Template.

#### **Figure 6: English Program Overview**

The Program Overview stage revealed multiple potential areas for further library engagement, including an intermediate methods course required of all three undergraduate majors, as well as technical writing courses that focus on writing and digital media. These courses tend to have high enrollment, are required for majors, and have research or creative projects with strong connections to digital literacy.

At this stage in the mapping process, the Subject Liaison and Curriculum Mapping Expert also recognized the need to seek feedback outside of the initial mapping team. While subject liaisons are the primary library contacts for academic departments at Virginia Tech, many other library faculty may work with those departments. In the case of English, librarians in Special Collections also do a great deal of instruction. During the initial test mapping phase, the Subject Liaison and the Expert met with partners in Special Collections to discuss the project at large and to identify courses with which they often work. Making sure to include other library partners will continue to be a goal for the team as the curriculum mapping project continues.

With current instruction identified, the Subject Liaison then used the Information Literacy Template to complete the next level of mapping. At first, the Subject Liaison used the initial scale based on Bloom’s Revised Taxonomy. However, it became difficult to determine where instruction fell in terms of encouraging students to Create, Evaluate/Analyze, Apply, or Remember/Understand. The term Evaluate, in particular, highlighted some potential points of confusion. When students work on evaluating information, are they *applying* evaluation criteria, *evaluating* information directly, or *creating* criteria to then apply? Would these distinctions provide meaningful data? In the end, the team decided on a more simplified, numeric-based scale that would align with traditional approaches to curriculum mapping. Figure 7 is an image of the revised scale and Figure 8 is a snippet of the scale applied in the Information Literacy Template.

#### **Figure 7: Revised Scale**

#### **Figure 8: English Information Literacy**

This deeper mapping phase can be challenging in the case of courses with multiple sections that may work with the library in different ways, depending on changing assignments and instructor preferences. For example, depending on the course theme, which can shift from year to year, some senior seminars may work with Special Collections and others may not. In these and other course examples, the mapping team found it useful to remember that curriculum mapping provides a snapshot. Mapping allows liaisons to dig into the curriculum as it currently stands. As such, mapping can be an ongoing, iterative process to capture changes in the curriculum over time.

## **NEXT STEPS**

The next step in the project includes bringing new liaisons into curriculum mapping. Because the curriculum mapping team is situated within a curriculum development unit that focuses primarily on first year instruction, the next department the curriculum mapping team would like to explore is Communication, as a large piece of the instruction conducted by the team comes from that discipline. In addition, the team would also like to map Statistics so that the team can compare the curriculum mapping results to a STEM-related discipline. The goal of the next iteration of this curriculum mapping pilot is to examine similarities and differences in the way that STEM, humanities, and social science disciplines use library spaces, digital literacy frameworks, and general education outcomes to achieve their own disciplinary outcomes. By mapping programs that are distinctively different, the team can begin to see both interdisciplinary themes emerging, as well as ways to uniquely engage with these areas through the liaison program and other initiatives.

## **CONCLUSION**

Curriculum mapping can be a useful endeavor for any library instruction program. Those embarking on a curriculum mapping project should begin by outlining goals to clarify the purpose and scale of the curriculum mapping project. Librarians may wish to map their instruction program to various curricula across the university, or they may wish to do something more expansive and map to spaces and other large, campus initiatives. Curriculum mapping is most powerful as a flexible, iterative process. When software and templates are easy to use and update, new spaces and initiatives can be included as they emerge. The types of visualizations produced can also change as goals and visions evolve.

## REFERENCES

- Archambault, S. G., & Masunaga, J. (2015). Curriculum mapping as a strategic planning tool. *Journal of Library Administration*, 55(6), 503-519.
- Arthur, M., & Tierney, B. G. (2014). Subject librarian initiative at the University of Central Florida Libraries: Collaboration amongst research and information services, acquisitions and collection services, and the Office of Scholarly Communication. *Proceedings of the Charleston Library Conference*. Retrieved from <http://dx.doi.org/10.5703/1288284315311>
- Association of College & Research Libraries. (2015, February 2). *Framework for information literacy for higher education*. Retrieved from <http://www.ala.org/acrl/standards/ilframework>
- Booth, C., & Mathews, B. (2012, April 7). *Understanding the learner experience: Threshold concepts and curriculum mapping*. Paper presented at California Academic & Research Libraries Conference: CARL, San Diego, CA. Retrieved from [https://vtechworks.lib.vt.edu/bitstream/handle/10919/18710/Understanding%20the%20Learner%20Experience\\_BoothMathews2012.pdf?sequence=1](https://vtechworks.lib.vt.edu/bitstream/handle/10919/18710/Understanding%20the%20Learner%20Experience_BoothMathews2012.pdf?sequence=1)
- Krathwohl, D. (2002). A revision of Bloom's Taxonomy: an overview. *Theory Into Practice*, 41(4), 212-218. Retrieved from <http://www.jstor.org.ezproxy.lib.vt.edu/stable/1477405>
- Miller, M., & Neyer, L. (2016). Mapping information literacy and written communication outcomes in an undergraduate nursing curriculum: a case study in librarian-faculty collaboration. *Pennsylvania Libraries*, 4(1), 20.
- Virginia Tech (n.d.). *Pathways to general education*. Retrieved from <http://www.pathways.prov.vt.edu/8pdf/PathwaysLearningOutcomes.pdf>

**Images for Tables and Figures (Editor will put in body of the text later)**

**Figure 1: Program Overview Template**

Course Number	Course Name	# of Sections Fall 2016	# of Sections Spring 2017	Required Course	Current Library Engagement	Aspirational Library Engagement	Research Assignment	Digital Literacy Aspect	Use a special space	Create or use ePortfolios

**Table 1: Outcome Areas, ACRL Frames, and General Education Indicators**

Template Outcome Area	ACRL Frame	General Education Learning Indicators
Reflective Discovery	Research as Inquiry Searching as Strategic Exploration Scholarship as Conversation	Discover and comprehend information from a variety of written, oral, and visual sources
Critical Evaluation	Scholarship as Conversation Authority as Constructed and Contextual	Analyze and evaluate the content and intent of information from diverse sources Evaluate the credibility and the use/misuse of scientific information
Ethics	Information has Value	Identify ethical issues in a complex context
Creation & Scholarship	Scholarship as Conversation Information Creation as a Process	Develop effective content that is appropriate to a specific context, audience, and/or purpose Synthesize multiple complex sources and create a coherent narrative or argument

**Figure 2: Information Literacy Template with Outcomes**

Course Name
<b>Reflective Discovery</b>
Develop research questions
Revise topic scope continuously
Generate keywords
Identify appropriate search tools and resources (incl. special collections, homegrown databases, and repositories)
Use database search strategies
Access physical materials (incl. rare book and manuscript collections)
Explore conversations surrounding a topic or idea
<b>Critical Evaluation</b>
Evaluate information based on relevance and context
Identify range of information sources (e.g. popular, scholarly, trade, primary, secondary, tertiary, editions, etc.)
Analyze present and missing voices from explored conversations
Recognize authority can change based on need and context
Select information based on authority, credibility, utility



Figure 3: Information Literacy Template

<b>Reflective Discovery</b>
Research questions
Topic scope
Keywords
Search tools and resources (incl. special collections, homegrown databases, and repositories)
Database search strategies
Physical materials (incl. rare book and manuscript collections)
Conversations surrounding a topic or idea
<b>Critical Evaluation</b>
Information relevance and context
Range of information sources (e.g. popular, scholarly, trade, primary, secondary, tertiary, editions, etc.)
Present and missing voices from conversations
Authority need and context
Information credibility and utility

Figure 4: Bloom's Taxonomy Scale

Scale		
Create	C	Verbs: design, assemble, construct, conjecture, develop, formulate, author, investigate
Evaluate/Analyze	E	Verbs: appraise, argue, judge, select, support, value, critique, weigh, differentiate, organize, relate, compare, contrast, distinguish, examine, experiment, question, test
Apply	A	Verbs: execute, implement, solve, use, demonstrate, interpret, operate, schedule, sketch
Remember/Understand	R	Verbs: define, duplicate, list, memorize, repeat, state, classify, describe, discuss, explain, identify, locate, recognize, report, select, translate

Figure 5: Spaces Template

<b>Course Name</b>		
<b>Multipurpose Room</b>		
Class presentations		
Poster sessions/symposiums		
Other events		
<b>Fusion Studio</b>		
Interdisciplinary group projects		
Events		
Exhibits		
Workshops		
<b>3D</b>		
Open		
Individual or assignment requirements		

Figure 6: English Program Overview

Course Number	Course Name	Current Library Engagement?	Aspirational Library Engagement?	Research Assignment?	Digital Literacy Aspect?	Uses a special space
ENGL 1654	Introduction to Science Fiction and Fantasy				x	
ENGL 1664	Introduction to Women's Literature					
ENGL 1704	Harry Potter Phenomenon			x		
ENGL 2444	Greek and Roman Mythology					
ENGL 2534	American Literary History	x	x	x		x
ENGL 2544	British Literary History		x			
ENGL 2604	Introduction to Critical Reading		x	x		
ENGL 2624	Reading and Writing Across English	x		x		x
ENGL 2744	Introduction to Creative Writing		x			
ENGL 2804	Contemporary Native American Literature					

Figure 7: Revised Scale

Scale	
Introduce	1
Reinforce	2
Master	3

Figure 8: English Information Literacy

	ENGL 3648 Lit and the Law	ENGL 3744 Writing Center Theory and Practice	ENGL 4784 Senior Seminar	ENGL 4854 Writing, Research, Study Abroad
<b>Reflective Discovery</b>				
Research questions				2
Topic scope				
Keywords		2	2	
Search tools and resources (incl. special collections, homegrown databases, and repositories)	1	1	1	2
Database search strategies		1	2	2
Physical materials (incl. rare book and manuscript collections)				
Conversations surrounding a topic or idea	1	2	2	