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Distributing Your Craft: Scaling Quality Instruction

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DISTRIBUTING YOUR CRAFT: SCALING QUALITY INSTRUCTION

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INTRODUCTION

The traditional information literacy format of one-shot instruction can be restricting. Librarians wish to provide higher levels of instruction, but are constrained by time and resources. In the short amount of time librarians have with students, they do not have the opportunity to introduce critical thinking skills and more advanced search strategies. Librarians at New Mexico State University (NMSU) used two common instruction tools to improve the quality of the library instruction session: online tutorials and the flipped classroom model.

Online tutorials are designed to guide students through a specific set of tasks and may cover a variety of topics, anything from how to search the library catalog to how to use specialized software. Research has indicated that these tutorials are just as effective in meeting the needs of students as face-to-face instruction (Beile & Boote, 2004). They allow users to self-pace through multi-step, often non-intuitive search processes. In addition, online tutorials meet the immediate needs of students anytime and from anywhere they may be. Distance education students, in particular, find tutorials beneficial, since they often lack the opportunity to attend an in-person library instruction session.

Building on tools like online tutorials and other online learning materials, the flipped classroom model has gained popularity among instruction librarians in recent years. Of course, it is likely that librarians have been using this model without naming it for as long as they have been teaching. Many excellent learning objects created by librarians go largely unused, which provides strong motivation to incorporate them more directly into library instruction opportunities (Datig & Ruswick, 2013). Importantly, “a good learning object strengthens classroom, it doesn't replace it” (Gibes & James, 2015, p.13), which is why the flipped classroom requires a well-thought-out plan.

Online tutorials and flipped classrooms tap into the existing skill sets and intuition of many instruction librarians. However, scaling these models to meet the needs of large-scale classes and assignments can be an overwhelming task. Integrating research throughout the assignment (in one case) and throughout the class (in another case) using online tutorials and a flipped classroom model has allowed for the existing library instruction to focus on higher order information literacy skills and concepts all the while in a scalable format.

CASE 1: BUSINESS IN A GLOBAL SOCIETY

Each year several hundred students are required to take the introductory business course Business in a Global Society (BUSA). It is designed to acquaint these students with the principal components of business, such as accounting, management, and economics. Every semester two face-to-face sections, with up to 150 students each, are taught along with one online section with up to 35 students.

One of the major projects in the BUSA course is the InfoSearch Assignment, which was developed collaboratively by business instructors and the Business Librarian. Completing this assignment, students learn the process of collecting, analyzing, and presenting business, economic, and demographic information. Each student is assigned a company and must use a variety of business resources to find basic company information in Mergent Online, articles in Business Source Premier, and industry data in IBISWorld. In addition, they are assigned a Metropolitan Statistical Area and are asked to find demographic and economic data using the U.S. Census Bureau's American FactFinder.

For a first year student this project can be quite daunting. The Business Librarian plays an integral role in assisting students by providing an overview of the assignment in class and hosting a series of drop-in workshops at the Library. One of the challenges has been to cover each individual database in detail during the limited class time. Furthermore, the assignment is due two weeks after the class presentation. Most students wait until a few days prior to begin working on their project and have forgotten much of the information presented in class.

To address these challenges the Business Librarian created a set of online video tutorials using Adobe Captivate. These tutorials guide students through the steps of searching specialized databases. For example, students must find demographic and economic data using American FactFinder. This resource can be challenging to navigate and users must follow a specific series of steps in order to locate the correct data set.

The Library hosts a series of drop-in workshops where students can receive one-on-one assistance. These workshops provide an opportunity for the Business Librarian to view the challenges and frustrations students experience with the assignment. During the drop-in workshops students were observed using the online video tutorials and it was clear that they were not as helpful as intended. Students frequently paused the video tutorial or tried to back up to certain sections. Most did not want to watch the entire tutorial before practicing.

Tutorials are most effective when they are engaging. Students want the ability to control their pace and progress (Mestre, 2012). The following semester the American FactFinder video tutorial, and another for finding industry data, were revised to include interactive features. Rather than watching a video, the new interactive tutorials have students follow along by taking an action for each step. Figure 1 is an example in which a student must click “select Educational Attainment” in order to continue with the tutorial. As students work through the new interactive tutorials they are able to complete the question simultaneously. After these changes were implemented the number of views per tutorial increased and the Library received positive feedback from students.

Figure 1: American FactFinder Tutorial
<Placeholder; Editors will place Figure here in final doc>

These interactive tutorials provide the opportunity for more time in class to cover business concepts. Students complete the InfoSearch assignment mid-semester and many questions relate to concepts that have not yet been introduced in class. For example, one question centers on the concept of market segmentation, which is a marketing strategy for dividing a target market into distinct groups. Students are asked to retrieve demographic and economic information from American FactFinder and explain why a business might consider a population's educational attainment or income when marketing their product or service. This concept is covered late in the semester, after this assignment is due. In the past, the Business Librarian would only have time to demonstrate how to complete this question by showing the steps of retrieving data from American FactFinder. With the availability of the interactive tutorials, students are instead directed to follow along with the tutorial. This allows for time in class to explain the concept of market segmentation and describe how different businesses might use segmentation data to determine store location or their product mix, for example.

There are additional benefits to these interactive tutorials. First, they meet the needs of the students in the online section who are unable to attend the on-campus presentation. Students are able to access these tutorials from anywhere and at any time. Second, the interactive tutorials save the time of the other librarians and staff. With several hundred students taking the class at once, they would often overwhelm the reference desk with questions. Now that the tutorials are available, the librarians and staff have commented on a noticeable decrease in traffic related to the assignment.

CASE 2: FIRST YEAR WRITING PROGRAM

The Library and the First Year Writing Program (FYWP) at NMSU have been working together since 1987. This deep partnership has led to a great deal of trust and progressive collaboration. For years, the standard routine was a required once-per-semester library instruction session for all sections of FYWP classes. Recently, a series of findings led to rethinking this traditional approach for getting students started with their research:

- An internal survey of instructors showed an overwhelming interest in increasing the number of library sessions and expanding the number of topics covered in these sessions.
- Statistics showed that many instructors (as many as 50% per semester) were scheduling follow-up sessions to supplement the one-shot instruction session. The Library was running short of librarians and staff time to effectively cover these additional requests, yet wanted to accommodate the instructors and their students. The online research guide (published as a LibGuide) was also getting a great deal of use but was never intended to stand on its own.

- Analysis of FYWP students' self-reported processes for evaluating information suggested that students were not critically evaluating information before selecting and/or deselecting it for use in documented research arguments (Westbrock & Moberly, forthcoming).
- Analysis of FYWP students' bibliographies showed heavy reliance on general web and news sources in documented research arguments (Wojahn et al., 2016).

Interestingly, our analysis of students' evaluation processes and bibliographies looked very similar to results of related larger-scale research, specifically The Citation Project and Project Information Literacy.

Aside from practical reasons, there were also philosophical motivations for revising the Library's interaction with the FYWP: the desire to encourage students to experience research as a process directly linked to writing, rather than as an isolated activity, seemed lost in the one-shot instruction session. The Library Instruction Program wanted to find a way to better prepare students for the required library instruction session in order to increase information literacy after the *entire process* of researching and writing an argumentative paper. In order for this to happen, there needed to be an intentional shift from training students to teaching students, a shift that requires reflective perspective.

Would it be possible to create and implement a project whose benefits would outweigh the costs? The challenges to this project were clear and present. Logistically, the project needed to respect the time of the librarians and instructors. There is a high turnover in instructors (since most instructors are graduate students and only teach in the FYWP for two semesters), so the project had to be easy to implement. Most important, because one size cannot fit all, the solution needed to be adaptable to the unique goals and objectives of individual instructors' course sections.

The response to these problems and challenges came in the form of a project called Research Diaries (see Appendix A). The Research Diaries comprise ten assignments that are embedded as an 'assignment set' into Canvas (NMSU's learning management system). Each Research Diary asks students to either view or interact with a tutorial, read a short article, or conduct a short research-related exercise. In each case, students then answer a set of questions designed to allow them to reflect on the process of research. The Research Diaries are not intended to stand on their own as an "introduction to the library" module. Rather, they drop critical questions into the class throughout the entire semester. They function as a supplement to what is already happening in the classroom by adding deliberate topics to the ongoing conversations about writing and research.

The Research Diaries adhere to a variety of theories and standards. They take into consideration the value of a flipped classroom model, deliberately preparing students for the in-person library instruction session. The library visit is intended to happen after six of the ten Research Diaries are completed, allowing librarians to focus on higher-order concepts and research skills during their visit to the Library. Rather than spending the limited in-person time showing students how to navigate around the Library's website or defining what a database is, librarians can use this time to guide students through the increasingly complex process of inquiry and information discovery. Students are asking more questions about the research process and fewer about the web site or language associated with research.

Outside of the library, instructors use students' Research Diaries in a variety of ways. On one side of the spectrum, instructors simply give students credit for completing them. On the other, instructors review Research Diary entries looking for issues, misunderstandings, or confusion related to students' research processes. Then, they are able to bring these issues into the classroom for discussion, identifying problems before they become practice.

Importantly, the Research Diaries are scalable. Though it is difficult to create assignments and then to let go of them, the Research Diaries are meant to be given away, allowing them to be used in many classes simultaneously without increasing the workload of any individual librarian or instructor. Generally, instructors assign the Research Diaries to their students as is. However, several instructors edit the prompts, change the order, and choose which to include as assignments. Additionally, several supplemental classroom tools have been created to support the Research Diaries, including selected articles for common reading and handouts to support beginning research questions.

The Research Diaries took time and collaboration to create and require updating and editing every year. However, the benefits have continued to exceed the cost. Students are able to be more prepared for research when they come into the Library because they are in the middle of an ongoing research conversation. In a study conducted by Wojan et al. (2016) comparing FYWP sections using Research Diaries to sections not using Research Diaries, students reported that their perceptions as well as behaviors had changed, largely toward positive ends, by the end of the semester. Instructors are able to use the Research Diaries to facilitate ongoing inquiry at key moments in the research process. In the same study, instructors were informed by students' Research Diary responses, using them to guide classroom discussions based on needs identified by students themselves.

CONCLUSION

Collaboration may seem an obvious factor in the success of large-scale instruction initiatives, but collaboration alone is not enough. As librarians and instructors work together for the benefit of students and their assignments, both parties must remain reasonably flexible. In the case of the BUSA tutorials, a near-complete revision to incorporate interactivity was required as it became clear that students weren't benefitting from a one-way video. In the case of the Research Diaries, the first full semester was based on themed courses. The next year, themes were dropped from the courses, requiring a major revision of several Research Diaries. In both cases, the collaborative programming ultimately benefitted from these revisions, but the challenges were unanticipated and required immediate, creative attention. Additionally, sustained commitment to a big picture allows for adjustments to seem welcome and necessary rather than glitchy and intrusive. For example, because Research Diaries weren't an official part of the FYWP curriculum, they weren't kept in the course template. The process of adding the Research Diaries to individual courses was burdensome for a few instructors so the Research Diaries were moved into the FYWP template. This small change required contacting everyone involved and could have led to frustration. Rather, both parties realized that the goal was worth the patience required to deal with these small distractions. Ultimately, moving from product-based one-shot instruction to process-based integrated instruction requires planning, partnership, and patience. The investment into integrated, scalable models plants scholarship and research into the classroom conversation creating a stable foundation for the growth of information literacy.

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APPENDIX A

DESCRIPTION OF RESEARCH DIARIES

RD 1: Your Research Process

This RD simply gets students thinking about research as a process. Additionally, it provides instructors with a general idea of how students think about research and information. RD 10 asks students to look back at the semester and answer the same questions so that instructors can see their progress.

RD 2: Finding a magazine article

This RD entry corresponds with the Popular Article (from the common reading list). It provides students an introduction to databases (using the article that they have read for class) while demonstrating that information is not all in one place.

RD 3: Evaluating Information, part 1

This RD can be followed by a group discussion about author credentials, editorial writing, and bias. It provides students with a relatively simple activity to emphasize the habit of evaluating information. This RD sets the stage for students to do a similar, yet more intellectually challenging, evaluation of one of the Argument Articles (from the common reading list).

RD 4: Personal Interest Essay

This RD asks students to reflect on their research process used while writing the Personal Area of Interest essay. It is interesting to compare this entry with the entry from RD 1.

RD 5: Exploring Topics

This RD gives students access to a useful reference source, CQ Researcher. It can be coupled with an activity or discussion about writing annotations. Using this resource as a discussion topic can help to deter students from relying too heavily on this and other reference resources (including Wikipedia).

RD 6: Finding Articles

This RD gives students an opportunity to explore another useful library resource, Academic Search Premier, before their Library Visit. It also gets them thinking about the different types of publications that they might want to use in their final paper. The Library Visit can then focus on more advanced searching skills and more academic resources.

RD 7: Library Visit

This RD asks students to reflect on the face-to-face Library Visit.

RD 8: Evaluating Information, part 2

Evaluating information from web sites is often more complicated than evaluating information published in more traditional venues. This RD simply emphasizes the importance of the thought process. As mentioned in RD 3, the Argument Articles (from the common reading list) can be used for a more challenging evaluation exercise.

RD 9: Citing your sources

Based on student feedback from prior semesters, they are continually frustrated with how to cite their sources. This RD gives students the opportunity to discuss a difficult source that was problematic to cite and to describe, in their own words, why it is important. Hopefully, this process reminds students that (along with the importance crediting sources) they have an audience that is interested in their source material.

RD 10: Your Research Process

This RD allows students to again think about research as a personal process, noting how their own process has changed and evolved throughout the semester.

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

Figure 1

