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Traversing New Terrain: Introducing Academic Research to High School Students

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INTRODUCTION

Academic librarians appear to agree that providing library instruction to new incoming first-year students is a crucial opportunity to introduce students to their library and the academic research process. In the past five years, the literature on academic library outreach to first-year students has covered pedagogical or methodological variations on library instruction to this group (Badia 2014; Donahue, 2015; Green, 2014; Tran, Miller, & Aveni, 2018), and the positive outcomes of library instruction to this group (Fabbi, 2015; Scott, 2017; Soria, Fransen, & Nackerud, 2014). However, in the communities that surround many colleges and universities, high school students are increasingly losing access to the school libraries that support their curriculum or personal interests (Clark, 2014; Hernandez, 2018; Moss, 2016; Trusty 2014). In addition to losing space and books, districts are also losing professional or paraprofessional library staff. As was detailed by a series of online columns entitled "School Librarian: State of the Union" on the website for *School Library Journal*, school librarians have decreased over the past several years due to changes in school funding priorities, school choice options, and budgets at the national, state, and local level (Jessen, 2018; Kachel, 2018; Lance, 2018). In Illinois specifically, the *ILA Reporter* published research that analyzed budgets for educational media services for all secondary districts in the state, and found that on average, those budgets dropped 5%, with greater losses on average in rural school districts (Guittar & Grossmann, 2017). High schools throughout the country are facing these reductions, and that means many of our new first-year students are a product of this diminished school library environment.

These reductions present two challenges. First, that many first-year students will arrive at college without experience using what academic librarians consider basic sources of information—reference books, periodicals, and academic books—and lacking internet evaluation skills. Second, that even as school libraries are experiencing budget cuts (or ceasing to exist), secondary school curricula expect students to pursue in-depth, independent, and/or college-level research even though that might require resources beyond what school libraries can offer. Both challenges can co-exist within the same group of students: they may be required to do an in-depth research assignment, but due to lack of access to academic sources of any level, they have to rely on internet "research" to try and find answers to their questions. Recognizing these challenges, teachers look elsewhere in their community for a place where students can become familiar with academic sources and make progress on their research assignments, and many of them find an academic library.

Since the 1980s, there has been plenty written on the ways academic librarians have worked with high school students. Authors detail how information literacy standards can bridge the divide between primary and secondary education and higher education (Cahoy & Moyo, 2008; Cosgrove, 2001; Islam & Murno, 2006). There also exist numerous formal programs and relationships put into place between high schools and colleges, many of which also have a recruitment component (Burhanna, 2006; Flynn & Stevens, 2018; Schein, Conway, Harner, Byerley, & Harper, 2011). In 2018, *Library Journal* ran a story, "Teaming up for College Readiness," which details programs at University of Wisconsin-Madison, Arkansas State University, and Kent State University to introduce high school students to an academic library (Vercelleto, 2018). Regarding the Kent State visit, the author notes that the visit works best when the students are doing research for a real assignment; in the absence of that, librarians can introduce students to the Library of Congress Classification System, periodical organization and access, and basic database searching (Vercelleto, 2018, p. 27). This example illustrates the common theme in the literature that visits with academic librarians can help students build information literacy skills, reflecting the Standards for Information Literacy in Higher Education. Since the ACRL

adoption of the Framework for Information Literacy in Higher Education in 2016, there has been very little published on how the Framework can be incorporated into library instructional design in ways that ask younger students to think critically and question information sources. In this paper, I will discuss how I used the ACRL Framework for Information Literacy in Higher Education as the basis for library instruction to two groups of high school students with very different goals: an AP Research class and a group of Schuler Scholars.

AP RESEARCH

AP Research is part of the AP Capstone diploma program from the College Board, and is the second of two year-long AP courses in which high school students enroll. Students take AP Seminar in the first year, typically when students are in tenth or eleventh grade, and the following year students can take AP Research. AP Research requires students to complete an academic paper of 4,000-5,000 words and a presentation with an oral defense on a "college-level research topic" of personal interest. A limited but growing number of colleges and universities have publicly endorsed the AP Capstone Diploma program and/or grant credit for a qualifying score, although Northwestern University is not among those institutions that recognize the program (College Board, n.d.).

In 2017, a Title I school in the Chicago suburbs asked if they could bring their AP Research students to the Northwestern Library for a "research day." According to the teachers of the class, the students had access to a school library that offered databases and resources appropriate for high school curricula, but did not have access to peer-reviewed journal literature that the students needed for their research. They arrived by bus, and planned to be at the library for three hours. The discussion below will focus on the November 2018 visit that included 18 students and 2 teachers.

Since the students arrived at the library with clearly defined research questions and some preliminary research already completed, my colleague, Anne Zald, and myself designed our instruction to focus on three frames: Research as Inquiry, Scholarship is a Conversation, and Searching as Strategic Exploration. We made the visit as interactive as possible and took frequent workshop breaks to let the students practice using various tools soon after we introduced them. The table below details the learning goals, assessments, and activities. The assessment was a short quiz given about two hours into the session, while the students were participating in workshop time.

Table 1: AP Research
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At the end of the session, nearly all students who completed the quiz were able to pull out at least three relevant keywords or key phrases to use in their research. The students were able to identify the broad disciplines of their research, with the majority of students interested in topics in psychology, education, environmental studies, or social services. No students had problems finding a citation for a useful source, although many still struggled when asked to identify a reference source! In future visits, we will plan to spend more time on how the reference sources can help students navigate the larger research surrounding their topics.

To assess the teachers' satisfaction with the visit, I followed up via email with the co-teachers who brought their AP Research students to the library. I got the following note back from one of the teachers: "My students really love this field trip, it wouldn't be nearly as enjoyable or even possible without all your help and support. We really appreciate you allowing us to do this; and YES!! We will definitely be back next year!" For this class in particular, we found that the AP Research curriculum had well-prepared the students to succeed when they visited the Northwestern University Library, and the short amount of time the students had planned to be in an academic library made them very focused researchers. This lesson plan can serve as paradigmatic for working with high school students who come to the library with clearly defined research questions and previous experience researching either online or through their school library.

SCHULER SCHOLAR PROGRAM

Unlike AP Research, in which students arrived at the library with a clearly defined independent research project, the library also hosts groups of students who come for a visit without a specific research agenda in mind. Student visits from Schuler Scholar Program provide one example. Based in the Chicago metropolitan area, the Schuler Program recruits high-achieving students that are first-generation, students of color, and/or low-income students and offers dedicated support and resources throughout their four years of high school and beyond (Schuler Scholar Program, 2019). As part of their experience, the Schuler Program also offers cultural experiences, called "exposures," to students, to help them integrate into the high-achieving liberal arts colleges that they encourage students to attend (Schuler Cultural Exposures, 2019).

In Fall 2018, through a personal connection, I met Zoe Chachamovits, Program Associate with the Schuler Scholar Program. She was interested in taking her students on an exposure to an academic library, but the students did not have a research assignment they had to complete. Rather than focusing on building students' research skills in databases that they would not have access to for

years, we instead decided to focus on analyzing news sources for bias and comparing them to academic sources. I met with three groups of Schuler Scholars this academic year, all from different high schools, and below I will cover what I did when I met with a group of Scholars in March 2019.

In designing the instruction session, I started with the frames of Authority is Constructed and Contextual, and Information Creation as a Process for the two hour visit. The learning goals and activities are detailed on the table below. In this case, the ongoing discussion between the Scholars was the primary method of formative assessment in the session. I acted as discussion guide, and recorded our discussions on whiteboards in the room. As a secondary assessment, I also asked the Scholars to draw how they see the research process at the outset and at the end of class, reflecting on how those views changed after our discussions.

Table 2: Schuler Scholars
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I met with the group in an active learning classroom without any computers, and this lesson plan included no database demos, cataloging searching, or computer use. I provided all the images and sources through handouts and a Google Slides presentation. The discussion engaged the students almost the entire time. In their pre- and post- drawings, I noticed that the students frequently started with a linear process that moved from topic to research to handing in their paper. In one notable example from 2018, the drawing of one student changed to instead start with questioning current events, asking questions, seeking multiple perspectives, and then being able to talk about the topic.

Figure 1: Anonymous student drawing, 2018
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Although the shift is subtle, this example demonstrates that instead of serving as a passive consumer of information, the student instead sees him/herself as an actor who can interrogate sources and actually be able to send that knowledge back out into the world with their own voice. Throughout the lesson, the students became comfortable with identifying the authors, audience, and purposes of the different sources that we looked at, and as we progressed to more academic sources, students were able to quickly contextualize its information as for scholars and practitioners in the field rather than a general audience. In confidence surveys conducted by Zoe Chachamovits before and after the visit, the Scholars self-identified as being much more confident in their ability to think critically about the information they receive after their exposure at Northwestern (Chachamovits, 2019). In the coming year, up to twenty groups of Schuler Scholars could come to Northwestern University Libraries for a similar exposure.

CONCLUSION

Welcoming groups or classes of high school students to academic libraries addresses both of the challenges that decreased funding for school libraries can present. Academic librarians can help high school students gain familiarity with and skill using basic information sources, and we can introduce those students that need it to the kinds of sources they need to do in-depth, college-level research projects. While working with high school groups is far from new terrain for academic librarians, mapping these visits to the ACRL Framework for Information Literacy in Higher Education still is. Relying on the instructional design cycle of setting learning goals and designing assessments and activities allows us to construct engaging, student-centered learning experiences that will resonate with high school students much longer than an orientation to the space or database demonstration. Whether the students visit the library to learn to analyze bias and distinguish sources or to conduct in-depth research, centering critical thinking and inquiry as the central goal of the session will serve to better prepare students for college, while continuing to promote the academic library as a welcome place, regardless of whether students attend your specific institution.

REFERENCES

AP Capstone: Higher education endorsement | AP Central – The College Board. (2018, June 4). AP Central. Retrieved from https://apcentral.collegeboard.org/courses/ap-capstone/higher-education-endorsement?course=ap-capstone-diploma-program.

AP Capstone: How it works | AP Central – The College Board. (2018, June 4). AP Central. Retrieved from https://apcentral.collegeboard.org/courses/ap-capstone/how-ap-capstone-works?course=ap-capstone-diploma-program.

Badia, G. (2014). Relevancy trumps format when teaching information literacy. *Evidence Based Library and Information Practice 9*(4): 64. https://doi.org/10.18438/B82024.

Burhanna, K. J., and Jensen, M.L. (2006). Collaborations for success: High school to college transitions. *Reference Services Review 34*(4), 509–19. https://doi.org/10.1108/00907320610716413.

Cahoy, E. S., & Moyo, L. (2009). K-16 outreach: Creating connections that matter. In N. Courtney (Ed.), *Academic Library Outreach* (21-30). Westport, Conn.: Libraries Unlimited.

Chachamovits, Z. & Guittar, M. (2019, April 5). 'What's really going on here?' Engaging and contextualizing the media landscape with high school students. *Information literacy summit*. Talk presented at Information Literacy Summit, Moraine Valley Community College..

Clark, A. (2014, March 16). Allentown school libraries understaffed and underused. *Morning Call; Allentown, Pa*, sec. News.

Cosgrove, J. A. (2001). Promoting higher education: (Yet) another goal of bibliographic instruction of high school students by college librarians. *College & Undergraduate Libraries, 8*(2), 17–24. https://doi.org/10.1300/J106v08n02_02.

Cultural Exposures | Schuler Scholar Program. (n.d). Retrieved from https://www.schulerprogram.org/story/cultural-exposures.

Donahue, A. E. (2015). Charting success: Using practical measures to assess information literacy skills in the first-year writing course. *Evidence Based Library and Information Practice, 10*(2), 45. https://doi.org/10.18438/B85P53.

Fabbi, J. L. (2015). Fortifying the pipeline: A quantitative exploration of high school factors impacting the information literacy of firstyear college students." *College & Research Libraries, 76*(1), 31–42. https://doi.org/10.5860/crl.76.1.31.

Flynn, K. & Stevens, E. (2018). From students to interns: UW Libraries' experiment with student internships bridges the gap between high school and university library success." *Alki 34*(1), 25–28.

Green, J. (2014). Library instruction for first-year students: Following the students' path. *College & Research Libraries News, 75* (5): 266–67. https://doi.org/10.5860/crln.75.5.9127.

Guittar, M., & Grossmann, K. (2017, April). Data back up the headlines: Adding weight to advocacy. *ILA Reporter, XXXV*, 12-16.

Hernandez, S. (2018, May 7). State's rural schools face unique set of challenges. *Oshkosh Northwestern; Oshkosh, Wis.*, sec. News.

Islam, R., & Murno, L.A. (2006). From perceptions to connections: Informing information literacy program planning in academic libraries through examination of high school library media center curricula." *College & Research Libraries, 67*(6), 492–514.

Jessen, S. B. (n.d). Charter schools, segregation, and school library access. *School Library Journal*. Retrieved from https://www.slj.com/2018/03/industry-news/charter-schools-segregation-school-library-access/.

Kachel, D. (2018, March 16). A perfect storm impacts school librarian numbers. *School Library Journal*. Retrieved from https://www.slj.com/2018/03/research/perfect-storm-impacts-school-librarian-numbers/.

Lance, K. C. (2018, March 16). School librarian, where art thou?" *School Library Journal*. March 16, 2018. Retrieved from https://www.slj.com/2018/03/industry-news/school-librarian-art-thou/.

Moss, R. (2016, May 1). Kids show they have spine to fight illiteracy. *The Santa Fe New Mexican; Santa Fe, N.M.*, sec. Local news.

Schein, C., Conway, L., Harner R., Byerley, S., & Harper, S. (2011). Bridging the gap: Preparing high school students for college level research. *Colorado Libraries, 36*(1), 1–4.

Scott, R. E. (2017). Information literacy skills are positively correlated with writing grade and overall course performance. *Evidence Based Library and Information Practice, 12*(2): 157. https://doi.org/10.18438/B8TT0G.

Soria, K. M., Fransen, J., and Nackerud, S. (2014). Stacks, serials, search engines, and students' success: First-year undergraduate students' library use, academic achievement, and retention." *The Journal of Academic Librarianship, 40*(1): 84–91. https://doi.org/10.1016/j.acalib.2013.12.002.

Tran, C. Y., Miller, C.A., & Aveni, D. (2018). Baseline assessment: Understanding WISE freshman students' information literacy skills in a oneshot library session." *Science & Technology Libraries, 37*(3), 302–21. https://doi.org/10.1080/0194262X.2018.1460651.

Trusty, S. (2014, December 4). Libraries: Gateways to knowledge." *News Herald; Port Clinton, Ohio*, sec. A.

Vercelleto, C. (2018). Teaming up for college readiness. *Library Journal, 143*(14), 26–27.

Welcome to the Schuler Scholar Program | Schuler Scholar Program. (n.d.). Retrieved from https://www.schulerprogram.org/.

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

Table 1: AP Research

Goal	Formative Assessment	Activities
Students will be able to define the broadest possible discipline for their topics, and identify relevant keywords for searching. (Searching as Strategic Exploration)	What is the broad topic into which your research question falls? Which keywords were most effective in your database searches?	Model the move from a research question to keywords with an example. Crowd-source a list of synonyms for the topics/themes/nouns in the research question. Example topic: "trophy hunting and conservation efforts within America." Provided students a worksheet to work out their own keywords.
Students will be able to use NUSearch effectively for their topics, to find materials, including reference sources. (Research as Inquiry)	Write the name of a reference source you identified using NUSearch.	Brief introduction to finding reference sources, ask students to find a reference source. Discuss the characteristics of reference sources.
Students will be able to use subject-specific databases to find secondary literature on their topics for their literature reviews. (Scholarship as a Conversation)	Write the citation for a source that you will use in your research.	Compare topic results of NUSearch to that of a subject-specific database. Explore multiple databases to determine which one has the most relevant scholarship.

Table 2: Schuler Scholar Program

Goals	Discussions/Activities
Students will be able to analyze bias in sources. (Authority is Constructed and Contextual)	• Compare two images of migrants at a border: A group of men vs. a family surrounded by Border Patrol. • Compare the use of those images in two news publications: from Breitbart vs. the Wall Street Journal. • Compare "data" statements from each publication. • Compare a webpage from the Department of Homeland Security vs. an opinion column from the *El Paso Times*.
Name differences between media and academic sources. (Information Creation as a Process)	Find a book in the library in a specific call number range. • What is the subject of the book? • Who wrote it? • Who is its audience? • What is its purpose?

	Read a citation and an abstract from a scholarly journal article. - What is it about? - Who wrote it? Where was it published? - Who is its audience? - What is its purpose?
View the research process as iterative, and themselves as actors within it. (Research as Inquiry)	At the beginning of the visit: - Draw how you view the research process At the end of the visit: - Revisit your drawing. How has your view changed?

Figure 1: Anonymous student drawing, 2018