The Journal of Academic Librarianship 41 (2015) 540–547

Contents lists available at ScienceDirect

The Journal of Academic Librarianship

What do You Give the Undergraduate Researcher who has Everything? An Academic Librarian

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ARTICLE INFO

Article history:
Received 28 March 2015
Accepted 23 July 2015
Available online 19 August 2015

Keywords:
Library curriculum design
Undergraduate research
Library
Scholarly communication
Skills instruction design
Research engagement

ABSTRACT

We examine 12 library skills curricula developed for two formalized undergraduate research training programs that occurred between the time periods, 1999–2008 and 2013–2015, at the University of Tennessee to answer the question: how has library skills instruction for these programs adapted to changing technologies, tools, and expectations of student performance? Our analysis is based upon data mined from course documents. We contextualize these data with reflections on the course design experience from the principal course designer and knowledge holder. Findings from our constructivist analysis of course curricula demonstrate the value of formal partnerships between academic libraries/librarians and undergraduate research training programs/administrators on college and university campuses. Although such relationships seem unnecessary, given the increase in students' unmediated access to research tools, we find that innovations in research tools and other technologies create opportunities to deepen students' engagement with academic librarians. While the more recent curricula (2013–2015) have required students to demonstrate traditional library (research) skills, such as the ability to search and retrieve information and to properly cite sources, they have also challenged students to think and behave as scholars: to critically evaluate sources and information, to seamlessly integrate information into original scholarship, and to disseminate original scholarship among their respective scholarly communities.

INTRODUCTION

While many instruction librarians at colleges and universities are expected to develop curricula for their classes, many do not have opportunities to reflect in a scholarly forum upon curricula they develop and deliver over a number of years. In this study, we examine 12 library skills curricula developed for two separate undergraduate research training programs that occurred during the time periods, 1999–2008 and 2013–2015, with one curriculum for each year. Our analysis is based upon data mined from course documents (syllabi, instruction sheets, class notes, and presentation slides). We contextualize these data with reflections on the course design experience from the principal course designer and knowledge holder, Professor Thura Mack of the University of Tennessee Libraries.

Although formal connections between librarians and undergraduate researchers may seem unnecessary given the increase in students' unmediated access to research tools, we find in our study that innovations in research tools and other technologies create opportunities to deepen students' engagement with academic librarians. The more recent curricula (2013–2015) we study here have required students to demonstrate traditional library (research) skills, such as the ability to search and retrieve information and to properly cite sources. However, these curricula have also challenged students to think and behave as scholars: to critically evaluate sources and information, to seamlessly integrate information into original scholarship, and to disseminate original scholarship among their respective scholarly communities.

Our examination of library skills instruction brings to light a steady increase in opportunities for librarians to cultivate wisdom among students by engaging them in transliteracies, which fuse multiple types of literacies, such as academic and professional literacy. The research skills development programs studied here have provided library instructors latitude to teach various literacies within single library curricula. Although the academic librarian is simultaneously an "expert" of collections and general search strategies and "learner" of the modern information environment (Holmberg, Huvila, Kronqvist-Berg, & Widén-Wulff, 2009, p. 203), library partnerships with the research skills development programs have provided safe places for librarians to work through this tension and engage students in knowledge and wisdom production.

Findings from this constructivist analysis of course curricula demonstrate the value of formal partnerships between academic libraries/librarians and undergraduate research training programs/administrators on college and university campuses. Such formal partnerships position librarians to systematically improve undergraduates' library skills and positively impact their research. These efforts can help boost the metrics that

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http://dx.doi.org/10.1016/j.acalib.2015.07.008
0099-1333/

matter most to colleges and universities, such as graduation and retention rates and research productivity (Powell, Gilleland, & Pearson, 2012). Their contributions can subsequently enhance librarians' visibility on their respective campuses.

The insights gleaned through this research will add value to future practice and research. Presently, this reflexive practice encourages introspection by the principal course designer who can integrate lessons learned here into future course design. Also, we can disseminate these lessons among a knowledge community that is interested in the "lived experience" of library instruction: how this particular designer has reconciled research training program guidelines with tools and technologies, student skill level, and professional standards and guidance for library instruction (Yamagata-Lynch & Luetkehans, 2014, p. 40). In addition to shaping practice, this study initiates a conversation about how this and other course designers can structure curricula in the future to proactively support systematic evaluation.

BACKGROUND

The library skills curricula examined here span two separate undergraduate research training programs at the University of Tennessee, Knoxville (UTK). These programs have been hosted by the University's Educational Advancement Program (EAP), which offers academic support to "students with demonstrated academic need who are also first-generation college students, from low income families, or who have physical or learning disabilities" (UTK EAP, 2015). In its delivery of undergraduate research training programs, EAP has outsourced learning needs, such as library skills development, research methods, technical communications, and research engagement. Since 1991, UT Libraries has partnered with EAP to teach library skills to students enrolled in undergraduate research training programs (Mack, 2015). However, we examine curricula from 1999 onwards, the years in which the current library skills course designer has been involved in the partnership.

In 1991, UTK EAP began hosting a Ronald McNair Post-Baccalaureate Achievement Program. This federally-funded, nationally-distributed program "prepare[s] undergraduate students for doctoral studies through involvement in research and other scholarly activities [in order] to increase graduate degree awards for students from underrepresented segments of society" (McNair, 2015). Students from southeastern universities and colleges were invited to apply to the UTK McNair Program, which ceased in 2008 due to lack of funding.

In lieu of a McNair Program at UTK, the EAP hosted a series of fall and spring workshops from 2009 until 2012. Then, EAP brought the Summer Research Institute (SRI) (a McNair Program prototype) online in 2013 (McFadden, 2013). While the UTK McNair Program was open to students majoring in science, as required by the grants that fund the Program (McNair, 2015), the EAP SRI has supported students majoring in a diverse range of disciplines. However, EAP has limited SRI enrollment to the University's students.

Table 1 briefly chronicles the development of the EAP research training programs, the venues through which the library skills curricula examined in this paper were delivered.

For the periods, 1999–2008 and 2013–2015, the research skills programs operated for 12 weeks during the summer from May to July, hosting 30–35 students each year from 1999 to 2008 and hosting 13–15 students each year from 2013 to 2015 (Mack, 2015).

SERVICE CONTEXT

UNDERGRADUATE RESEARCH

Status and sustainability in higher education requires units to demonstrate how their work directly enhances an institution's capacity to meet key performance goals. College and university academic goals tend to align along one or both of two axes, research (including patent development) productivity and student success, which is often measured in student retention and five- or six-year graduation rates (Powell et al., 2012). Undergraduate research, which is defined by the Council of Undergraduate Research (2015) as "an inquiry or investigation conducted by an undergraduate student that makes an original intellectual or creative contribution to the discipline", supports both goals. In the learning hierarchy, original research is a culminating learning experience through which students acquire durable skills they can apply across different contexts (Boyer Commission, 2008).

Since the 1960s, colleges and universities have provided undergraduate research opportunities through extra-curricular programs (Stamatoplos, 2009). Such programs support undergraduates in developing scholarly papers and posters, in presenting findings at symposia, and in serving on editorial boards of undergraduate research journals (Davis-Kahl & Hensley, 2013). Formal programs create contexts for students to engage with vital support services, in ways they do not when conducting course-related research (Stamatoplos, 2009). In creating these contexts, formalized undergraduate research programs present niche opportunities for academic libraries/librarians to contribute to retention/graduation rates and research productivity. For example, in 2006 Virginia Tech Libraries established a formal relationship with its university's McNair Program. Scripa, Lener, Gittens, and Stovall (2012) describe a relationship that has provided students one-on-one access to librarians through mentorships and extended library instruction. While their contributions hold their own value, it is important that libraries/librarians, as Virginia Tech Libraries has done, showcase the contributions they make to undergraduate research (Fleming-May & Douglass, 2014).

A number of paradoxes precipitate the need for extended support systems for undergraduate researchers. For example, the current information environment is simultaneously more ordered and more chaotic for the inexperienced researcher than past environments (Breeding, 2015). However, as a consequence (or benefit) of the ubiquity of open access platforms, more scholarly and popular press articles and datasets have become available to a wider range of knowledge consumers and creators (Benkler, 2006; Boyer Commission, 2008), regardless of academic credentials, or lack thereof.

In general, the undergraduate researcher's (non-course related) information needs are complex, given the open-ended nature of original research. While researchers (undergraduate and otherwise) need to search for sources, cite sources, and engage with other traditional library services, they also need to discern the authority and the value of resources. In addition, they need to understand publication processes and opportunities (Secker & Coonan, 2013), which may be different

Table 1
UTK Educational Advancement Program — research skills programs, offered from 1999 to 2008 and 2013 to 2015 (programs originated in 1991)

Program	Years studied	# of students	Population	Format	Focus
Ronald McNair Post-Baccalaureate Achievement Scholars Program	1999–2008	30–35 per year	First generation and other definitions of underserved	12 weeks (May to mid or end of July), plus notebook grading	Science, technology, engineering, & mathematics (STEM)
Summer Research Institute	2013–2015	13–15 per year	First generation and other definitions of underserved	12 weeks (May to mid or end of July), plus notebook grading	STEM, business, social sciences, and humanities

See Mack (2015) for narratives about course design and delivery experiences, i.e., project notes.