Abstract
This research explores the current state of information literacy initiatives in undergraduate mathematics. The authors surveyed academic librarians who have a mathematics departments in order to gain an understanding of their practices and attitudes in this area.

Introduction and Literature Review
Information literacy (IL) instruction and related initiatives in mathematics appear rarely in the literature. There are some case studies of library-related assignments (Barringer, 1989; Hurlibert & Weida, 1991; Spiegelman & Glass, 2008). Others who have written about mathematics and library-related initiatives have also indicated interest in math IL for students but without appropriate supporting research (Stover, 1991, Newby, 2005; Rutter, 2002). Despite the fact that very little has been published on information literacy instruction for mathematics students, this does not necessarily mean that math IL is not happening.

Research Questions
The following research questions were developed to elicit a better illustration of what mathematics librarians are doing in this area:
1. Is mathematics information literacy being taught at colleges and universities by librarians for undergraduates?
2. In what ways is mathematics information literacy being taught to undergraduates?

Methodology
After the literature review was complete and the research questions finalized, the researchers drafted the survey questions. The researchers then tested the survey instrument with three librarians (two who have experience in mathematics librarianship and one who has extensive research experience and education in the field of library science). Using the feedback gained from the testing group, the researchers revised and improved the survey instrument, employing Qualtrics software to create the online survey. An invitation email was sent to four email distribution lists: STS-L, PAMNET, SLA-Sci-Tech, and IL-L. The survey was open for a month with a final reminder sent one week before it closed. Because email lists were used to distribute the survey, there is no means of calculating a response rate.

Surveying the Field: Academic Librarians’ Responses
Regarding Information Literacy Instruction for Math Undergraduate Students
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Results
While there is some IL instruction taking place for mathematics undergraduate students, the majority (over 68%) responded they had not taught any math undergraduate IL since Fall 2010. Of those who taught in the academic years 2010-2016, only a few had conducted multiple sessions per year, but around half the librarians were either teaching zero or one IL session per academic year.

Selected Responses
For information literacy done specifically for mathematics courses, programs, or activities, what is the delivery method? Check all that apply.

Conclusions
The results from this 2014 survey indicate IL instruction for math students is still rare today. For those librarians who had the opportunity, a substantial portion were able to do in-class demonstration of how to search/use mathematics-related resources. They found that students were expected to use journals and monographs. Thus, it is not surprising that more than half demonstrated the use of MathSciNet and similar resources.

With the new IL framework being formalized by ACRL, will this create a new opening for math librarians to engage math faculty and undergraduate students? How do the framework and the threshold concepts apply in mathematical sciences for undergraduate education?

References

“With the increased focus on undergraduate research at our university, I would anticipate a gradual increase in the need for IL instruction for undergrads in mathematics here.”

“81 of 116 respondents have not taught a math undergraduate IL session since fall 2010. “We offer to provide information literacy instruction in the classroom every semester, but sadly, I don’t believe ANY math faculty have taken us up on the offer in at least the past 5 years.”

Librarian and Institution Demographics

How long have you been a librarian who liaises with mathematics/mathematics majors? How many undergraduate mathematics majors [are enrolled in your institution]?

How many information literacy or library-related sessions did (or will you teach)? This is only in regards to sessions as part of specific mathematics courses, programs, or activities for undergraduate students at your institution.

For information literacy done specifically for mathematics courses, programs, or activities, what is the delivery method? Check all that apply.

Which of the following competencies have you included in your information literacy sessions? Check all that apply.

“On the whole, would you consider this to be a tough sell for our math faculty.”

More information can be found at: https://www.jeffrab.com