University of Illinois Chicago Library

Title: Developing and testing assessment tools for library impact on students' academic success

Summary: The University of Illinois Chicago (UIC) Library, partnering with Northern Illinois University (NIU) Libraries, seeks $245,315 in IMLS National Leadership Grants funding to 1) develop assessment tools that examine the causations among students' academic engagement (e.g., attending writing center and using library), psychological factors (e.g., motivation and self-regulation), college students' own definition of academic success, and their GPA and 2) test and validate the assessment tools. This project falls under the IMLS category to Champion Lifelong Learning to advance shared knowledge and learning opportunities for all. This project will address the following research questions: a) how do students engage in academic activities including in a library context? b) Are students' motivation and self-regulation related to their academic engagement? c) what are students' own definitions of academic success? and d) what factors predict students' own definition of academic success? 3) The final goal of this project is to disseminate the developed assessment tools to academic libraries who want to use them to investigate and demonstrate the library's value and impact on students' academic success. This will support academic libraries in advancing their understanding of why or why not students participate in academic engagement and further determine what factors predict students' own definition of academic success. These findings can be applied to better support student academic success.

Statement of Need: Demonstrating the library's value on students' academic success has become more normalized since the publishing of the Association of College and Research Libraries' *The Value of Academic Libraries Report* in 2010. To understand and measure students' learning outcomes, more academic libraries are adapting learning analytics by utilizing student learning data from the institutional administrative level. However, several issues and concerns have been raised in the use of learning analytics (e.g., data policy on who and how to access, data privacy, storage, capacity of implementing learning analytics, ethical issues, etc.). Additionally, learning analytics is still limited in understanding causations based on the collected quantifying data.

Since 2016, the UIC Library has been conducting ongoing assessments to understand users' needs and examine the relationships between library use and students' academic success (Grade Point Average - GPA) by using locally developed and validated surveys [1] [2] [3]. However, the findings revealed that students' in-person library use was negatively correlated with students' GPA [4] [5]. We speculate that spending more time in the library did not result in a lower GPA, instead students with lower GPAs are likely to spend more time in the library. However, this correlation does not reveal the relationship between the impact of library use and the final GPA. Further investigation was necessary to determine underlying factors. The host institution further conducted 27 interviews to explore how and why students utilized the libraries, how they defined academic success, and whether the library impacted their learning outcomes using a mixed-method approach. The qualitative findings uncovered that students' perceptions of academic success are not only about getting a higher GPA but also developing applicable skills, accomplishing the learning process, and obtaining subject knowledge (in press). The qualitative findings further revealed that most of the students perceived that their use of the library positively influenced their GPA. However, the quantitative findings indicated that their actual frequency of library use was not associated with their reported GPA. While the ongoing assessment conducted by the host institution is critical to explore ways to demonstrate the library's value on students' academic success, the ability to generalize the findings to other academic libraries is unknown at this time. Also, the causal factors that contributed to the negative relationships between library use and students' GPA remain uncertain. Few studies in the library and information science literature have examined how students' psychological factors (e.g., self-regulation, motivation, and sense of belonging) impact students' academic engagement. Identifying psychological factors that influence students' academic engagements, including library use, and measuring its impact on their own definition of academic success are vital to understanding the causal relationship of students' learning behaviors and their outcomes. For these reasons, questions that contain psychological elements (motivation and self-regulation), academic engagement including library use, and students' own definition of academic success will be used to investigate the underlying causal relationships and test the reliability and validity of the instrument with the partner institution, NIU Libraries. UIC is a public research university in Chicago with more than 33,000 students consisting of 65% undergraduate students. NIU is a public research university in DeKalb, Illinois with approximately 17,000 students consisting of 73% undergraduate students. Both universities are racially diverse and serve underserved, Pell eligible and first-generation students. Given this, NIU is an ideal peer institution for

Note: Underlined numbers in brackets are linked to references when viewing it as a PDF.

comparisons and testing of the assessment tools. The outcomes of data and findings will be disseminated through conferences and publications. The assessment tools from the research projects will be freely available to any academic library who wants to demonstrate their library's value on students' academic success.

Project Design/Proposed Work Plan: The UIC Library in partnership with NIU will develop assessment tools that explore types and frequency of undergraduate students' academic activities in their institution and explore these in relation to students' motivations for academic engagement and self-regulation, their own definition of academic success, and GPA.

Year one: Develop assessment tools and test them at the host institution. Activity 1 involves 1) developing a survey tool and an online weekly journal for students to record their academic activity 2) testing face validity (expert assessment) of the tools with: librarians, educational psychologists, and practitioners to rate the content validity of the initial assessment tools (survey and online journals) in terms of relevance and clarity as well as psychological constructs from educational psychologists, 3) obtaining IRB for the survey and online journals. Activity 2 includes 1) recruiting and distributing the survey to undergraduate students: items consist of demographics, library use, and self-discipline and motivation for academic engagement, 2) recruiting 100 students to participate in online weekly journaling for 8 weeks: frequency of library use, frequency of academic engagement across campus, reflection on academic engagement. Activity 3 during Spring 2023 involves 1) analyzing the quantitative (survey) and qualitative data (online weekly journal), 2) analyzing and revising the assessment tools (Outcomes: revised assessment tools and report)

Year two: Test the revised assessment tools at both institutions. Activity 1 during summer 2023 involves 1) obtaining IRB approval needed from UIC and NIU. Activity 2 during fall 2023 involves 1) distributing the survey to undergraduate students and recruitment of 100 students to participate in online weekly journaling for 8 weeks. Activity 3 during spring 2024 involves 1) analyzing the data and writing reports, 2) revising and finalizing the assessment tools (Outcomes: Openly available assessment tools, data, reports, and publications).

National Impact: This research will examine causations of students' learning outcomes by using their own definition of academic success from academic engagement activities and psychological behaviors (self-regulation and motivation). At the end of this project, the research team will collect and analyze data to 1) examine how students' psychological behaviors influenced their academic engagement activities and measure the impact on their own definition of academic success and 2) compare the findings from both institutions for generalizability. The results of this research project will provide a greater understanding of students' behaviors and academic goals, so academic libraries can more effectively market their resources and services and offer more customized workshops, consults, and instruction to students, and better communicate to the campus the role and value of the library in student academic success. In addition to disseminating the data and findings through conferences and publications, assessment tools (a survey instrument and an online journal form) developed and tested from this research project will be freely available to any academic librarians who want to replicate the study or examine their students' population, so that the broader academic library communities can benefit from this study.

Project Team: Principal Investigator Jung Mi Scoulas (UIC, Assessment Coordinator), holding PhD in educational psychology with expertise in library assessment, research design, survey design, and student learning, is currently serving as vice chair of the ACRL Value of Academic Libraries Committee. Co-Principal Investigators include 1) Sandra L. De Groote (UIC, Head of the Assessment and Scholarly Communications) with expertise in the impact of online information systems, research impact and data management, 2) Nestor Osorio (NIU, Head of the Reference and Research) with experience in higher education assessment, data analysis and visualization, and has co-chaired two assessment plans and status reports for NIU Libraries, and 3) Kimberly Shotick (NIU, Student Success Librarian) with expertise in undergraduate student success.

Budget Summary: The IMLS request of $245,315 includes indirect costs of $91,897 and direct costs of $153,418 over two years. Salaries and fringe for PI/Co-PIs:$90,163 and student salary and fringe: $23,255. Incentives for experts: (10 experts, $500 each: $5,000) and incentives for participants ($27,000) and travel for dissemination ($8,000).

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