Library Integration in Institutional Learning Analytics

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EXECUTIVE SUMMARY

Learning analytics is rapidly proliferating throughout academia as a strategy for understanding and promoting student learning and success.[1] Indeed, virtually all sectors of higher education are engaged in learning analytics initiatives—all, that is, except libraries. Libraries are essential to the mission of higher education institutions, and librarians have long been dedicated to supporting and increasing student learning and success. Nevertheless, most academic libraries are not currently engaged in learning analytics initiatives at the institutional level. Based on their historical and persistent commitment to students, it seems likely that librarians will choose to participate in the maturing conversations about learning analytics in higher education and guide the ethical use of learning analytics to improve student success outcomes. But what should library integration into learning analytics look like? How might library engagement in learning analytics change the ways in which students interact with the library? How might it highlight the value and impact of library services, resources, and facilities on student learning? And most importantly, how might library involvement in institutional learning analytics increase student learning and success?

To address these questions, the Library Integration in Institutional Learning Analytics (LIILA) project, funded by the Institute of Museum and Library Services, convened three meetings with academic library administrators, reference and instruction librarians, systems librarians, library technology administrators, library association leaders, and IT administrators as well as learning analytics, library vendor, and learning standards representatives to increase academic library participation in higher education learning analytics and prepare academic librarians to engage in this important use of data to support student learning and success.

The LIILA project sought to achieve four goals:

1. To increase librarian awareness and engagement in learning analytics;

2. To craft a plan for integrating academic libraries into learning analytics initiatives that support student learning and success;

3. To develop sustaining partnerships and collaborations among academic librarians and learning analytics lynchpins, institutional and library systems professionals, and library vendor communities; and

4. To explore, design, and develop library use cases and data profiles that can be used with learning analytics standards to integrate library data with institutional data stores.

The results of the LIILA project are detailed in the document to follow. Because institutional learning analytics is a nascent field for librarians, the LIILA project developed a number of strategies for supporting the initial engagement of librarians.

First, eight strategies were identified and deployed to help librarians and interested institutional partners envision library involvement in learning analytics including:

- identifying problems to solve and stakeholders to support (section 3.1);

- articulating questions about library impact on student learning and success support (section 3.2);

- imagining learning analytics-enabled decision-making and action-taking (section 3.3);

- ideating librarian roles in institutional learning analytics (section 3.5);

- conceptualizing scenarios to convey what library involvement in learning analytics might look like in the future (section 3.6);

- inventorying existing library data that may contribute to the understanding and improvement of student learning and success initiatives (section 3.7); and

- brainstorming and prioritizing user stories that could be used to integrate libraries into institutional learning analytics efforts (sections 3.8-4.2).

Second, LIILA project results encompass both facilitators of (section 3.4) and obstacles to (section 5.0) library involvement in learning analytics. Facilitators include intersecting pressures that either propel or enable higher education institutions to commit to learning analytics initiatives, including:

- responsibility to provide quality experiences for students, support student learning and success, and demonstrate the value students receive in exchange for their investment of time, energy, and resources;

- stakeholder concerns about student non-completion and skyrocketing student debt;

- accreditation and other accountability obligations;

- competition among institutions;

- budgetary pressures;

- student tolerance of data use, particularly in exchange for support, benefits, or advantages;

- technology developments to enable analytics; and

- emergence of positive results documented by learning analytics early adopters.

Librarians themselves may also serve as facilitators of library engagement in institutional learning analytics. Because of their history of data gathering, knowledge of data practices, commitment to ethical data use, ability to collaborate across institutional silos, potential role as lynchpins in student interventions focused on information use, and emerging corpus of research demonstrating the contributions of library interactions to student learning and success, librarians can become essential partners in learning analytics at an institutional level.[2]

A number of obstacles to library involvement in institutional learning analytics surfaced as well, such as privacy concerns (section 5.2); data concerns related to quality, granularity, and access (sections 5.3-5.5); and organizational culture (section 5.6).

Finally, the LIILA project yielded ten "next steps" for moving forward in this arena (section 6.0). These next steps include:

1. increasing awareness of and discussion about the role of libraries in institutional learning analytics both within the academic library community and among institutional participants in learning analytics;

2. investigating current library data practices and committing to transparent communication about the ways in which data is gathered, maintained, stored, secured, and used within libraries;

3. communicating and negotiating data rights with library vendor and institutional partners;

4. situating learning analytics among other assessment approaches as a tool for student learning and success support;

5. including libraries in learning analytics conversations at the institutional level;

6. identifying and analyzing questions or problems that require a learning analytics approach;

7. envisioning the contributions that library data makes to developing a holistic picture of student learning and success;

8. exploring interoperability standards that enable disparate information systems to connect in real time;

9. identifying and prioritizing user stories linking libraries and student learning and success that merit further development; and

10. pursuing pilot studies that investigate the feasibility of developing library user stories into achievable integrations of library data into institutional learning analytics.

This document closes with a series of discussion questions and resources useful for continuing the conversation, including a short reading list, relevant privacy resources, and brief descriptions of pioneering efforts in this space. It is hoped that this report will stimulate discussions about the unique role libraries may play in institutional learning analytics, ultimately enabling libraries to take their place among institutional partners using learning analytics to support student learning and success.

Increase Professional Awareness and Discussion

- Seek out readings, conferences, and other opportunities to learn about learning analytics.
- Connect with other librarians to discuss the role of the library in learning analytics.
- Invite stakeholders including students and faculty to engage in conversations about library involvment in learning analytics.

Be Informed and Forthright about Current Data Practices

- Investigate library systems to determine how data is gathered, maintained, secured, stored, and used.
- Investigate partner systems connected to the library (i.e. institutional, vendor) to determine how data is gathered, maintained, secured, stored, and used.
- Determine whether opt-in and opt-out choices are available and how data generated in each category is utilized.
- Be transparent about data gathering, maintenance, security, storage, and use and communicate rationales for data use.

Communicate and Negotiate with Vendor and Institutional Partners

- Determine who owns or has access rights to data maintained in vendor and institutional systems.
- Work with local procurement officer(s) to ensure that data ownership and access rights are part of contract negotiations.

Situate Learning Analytics among Other Assessment Approaches

- Recognize that learning analytics is one tool for assessing student learning and success and identifying ways to support students in achieving their goals.
- Acknowledge the strengths and weaknesses of all assessment approaches and pursue the approach that best fits the problems to solve, questions to answer, and students to support.

Engage the Learning Analytics Conversation at the Institutional Level

- Connect with learning analytics personnel, committees, and systems at the institutional level.
- Contribute librarian knowledge, skills, abilities, and values to institutional learning analytics efforts.

Identify and Analyze Questions or Problems Meriting a Learning Analytics Approach

- Identify the issues, interests, areas of concern, and other priorities appropriate for investigating via learning analytics.
- Identify and prioritize stakeholder groups that can most benefit from learning analytics inquiry.

Envision Library Data Contributions

- Identify library services, areas of expertise, resources, or facilities are most likely to contribute to student learning and success.
- Inventory the data emitted from the library services, areas of expertise, resources, or facilities most likely to contribute to student learning and success.
- Imagine data that may be instrumented and collected from impactful library services, areas of expertise, resources, or facilities.

Explore Interoperability Standards

- Consider ways to link data "silos" using interoperability standards.

Identify Key User Stories

- Prioritize library and learning analytics user stories likely to result in contributions to student learning and success.
- Develop prioritized user stories into detailed use cases.

Pursue Pilot Studies

- Develop pilot studies to investigate the feasibility and usability of highly ranked user stories and use cases.

Figure 10. Possible Next Steps for Library Integration into Institutional Learning Analytics