

March 2021

LibApps LTI: Integrating LibApps into Blackboard using the Springshare LibApps LTI Tools

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Recommended Citation

Brame, DeAnn; Deinert, V. Emily; McLeod, Amanda; and Walters, W. Cody (2021) "LibApps LTI: Integrating LibApps into Blackboard using the Springshare LibApps LTI Tools," *South Carolina Libraries: Vol. 5 : Iss. 1* , Article 7.

DOI: <https://doi.org/10.51221/suc.scl.2021.5.1.7>

Available at: https://scholarcommons.sc.edu/scl_journal/vol5/iss1/7

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LibApps LTI: Integrating LibApps into Blackboard using the Springshare LibApps LTI Tools

Abstract

This article discusses how librarians on the Dacus Library Online Instruction Task Force at Winthrop University collaborated with the campus online learning office to integrate Springshare LibApps directly into the Blackboard Learning Management system through Springshare's LTI Tools. We share first impressions, implementation, and best practices for consideration, along with challenges and development opportunities.

Keywords

learning management system, online education, computer managed instruction, academic libraries, Springshare LLC

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In 2018, Winthrop University launched a fully online Master of Social Work (MSW) program. The library liaison to the Social Work Department wanted to ensure that students in the online program would have access to similar instruction and content available to students in the on-campus programs. To that end, the library liaison worked with Social Work faculty and learning designers during course development to design online library tutorials. During this process, the course development team decided to embed the Social Work LibGuide in Blackboard for all classes in the program. The embedded Social Work LibGuide link gave students an easy access point to the guide and library services. Indeed, during the 2017-2018 academic year, the year before the online MSW program launched, the Social Work guide received 1,027 views. By the 2019-2020 academic, the guide received nearly 5,500 total views, making it the most visited research guide on the library website. Based on the substantial increase in total guide views, this integration proved to be highly successful.

Screenshot of the Social Work LibGuide website embedded in Blackboard. The page title is "Social Work: Introduction". The navigation menu includes: Introduction, Databases, Reference Books, Finding Books, Videos, Websites, Capstone Resources.

Related Guides

- Online Students Library Orientation by Hope Johnson Last Updated Aug 21, 2020 6142 views this year
- Psychology by Amanda McLeod Last Updated Sep 7, 2020 711 views this year
- Education Resources by Emily Deinert Last Updated Jul 29, 2020 535 views this year
- Human Nutrition by Cody Walters Last Updated Sep 4, 2020 632 views this year
- Federal Government Information by Amanda McLeod Last Updated Oct 1, 2020 404 views this year
- Citation Styles by Emily Deinert Last Updated Nov 10, 2020 496 views this year

Introduction

This guide will provide you with recommended resources for researching issues related to social work. Use the tabs to navigate through the different types of resources. Remember, social work is a multidisciplinary field, so depending on your topic you may want to also consult resources from other subject areas.

Library Blog Feed

- Dacus Library Reopening Guidelines [📄](#) Jul 5, 2020
- Library Hours During Spring Break [📄](#) Mar 15, 2020
- Library Hours This Week [📄](#) Mar 8, 2020
- Library Hours This Week [📄](#) Mar 1, 2020
- Library Hours This Week [📄](#) Feb 23, 2020

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Subject Guide



Amanda McLeod

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Contact:
803-323-2226

Subjects:
Government, Political Science, Psychology, Social Work

Contact Dacus Library

Reference: 803-323-4501
refdesk@winthrop.edu

Social Work LibGuide Embedded in Blackboard

Given the success of the embedded Social Work guide, the library Online Instruction Task Force wanted to encourage other faculty to embed library LibGuides into their courses. We needed a tool that

would be easy for our faculty to access and navigate. That tool was the LibApps LTI. The LibApps LTI (Learning Tools Interoperability), “a standard for integrating tools from third-party services into Learning Management Systems (LMS)” (Springshare, 2020, para. 1), allows libraries to embed library resources such as guides, links to databases, and e-reserves directly into a course management system with just a few clicks. Libraries can customize a landing page, called The Library Page, that can display other related guides, links to databases, a LibCal calendar including hours, appointment and room bookings, LibAnswers widgets, and LibChat. Our goal was to integrate the libraries LibGuides into all Blackboard courses with the LTI Automagic Tool.

In 2016, Springshare expanded its LTI capabilities, creating the LTI Automagic Tool and making the tools compatible with multiple Learning Management Systems (such as Canvas and Blackboard) (Springshare, 2016, para. 2). This update was driven by studies of Springshare’s LTI Manual Tool which noted that while useful, the “process was not scalable. It was simply not realistic to expect that librarians would ever be able to [manually] integrate resources into all...the course sites that are created each semester” (Daly, 2012, p. 210). There have been few studies to determine the efficacy of the Automagic Tool specifically, but the desire for an automated process is evident; Duke University libraries and Utah State University libraries both built in-house LTI tools of their own to integrate library resources prior to Springshare’s LTI Automagic Tool debut (Daly, 2010; Fagerheim et. al., 2017), and the Penn State University library was an early adopter of Springshare’s LTI Automagic Tool (Clossen, 2018). Limitations of automatic integration mainly focused on course structures at a university rather than on the Automagic Tool itself (Fagerheim et. al., 2017; Clossen, 2018). Thus, with the increase in online degree programs, and more recently the need for robust remote learning options due to the COVID-19 pandemic, librarians at Winthrop University felt it was prudent to move forward and begin using Springshare’s LTI Automagic Tool.

Methods

To move the project forward, the Digital Systems and Services Librarian and LibApps Administrator collaborated with the campus online learning office. Working with the Blackboard Administrator in the campus online learning office, the authors were able to setup the Blackboard LMS and Springshare LTI to communicate with each other.

There are two LTI Tools that can be implemented—the LTI Manual Tool and the LTI Automagic Tool—and they are each set up a little differently. Table 1 outlines some key differences between the tools.

Table 1

Comparison of LibApps LTI tools

Manual LTI Tool	Automagic LTI Tool
Faculty can directly embed guide content, e-reserves and/or database lists into Blackboard	Automatically displays course relevant guides or subject-focused Database lists
Can display: Full guide, single page of a guide, or a single content box from a guide	Resource matching is based on library supplied metadata
Set-up is a manual, two-step process for faculty	Requires preparation in LibApps including customizing the general setup and customizing the options on the Library LTI Page
Great for special topics courses or guides	Great for standard courses that are taught frequently

The Manual Tool requires less setup and can be implemented right away by coordinating with the course management administrators. The Automagic Tool takes a bit more setup and will require that each guide be assigned appropriate metadata. We decided to use a translation table to match our guides with Blackboard courses. A translation table matches course codes with other corresponding parameters in

LibGuides. This allows the systems to communicate with each and attach appropriate guides and library resources to a particular course.

lti_param_value Paramter value coming from the LMS or other LTI tool consumer (required, unique)	guide_meta_value Metadata value assigned to your Guide (optional)	course_meta_value Metadata value assigned to your Course (optional)	subject_meta_value Metadata value assigned to your Subject (optional)
AAMS300001202080	AAMS	AAMS	AAMS
AAMS302001202080	AAMS	AAMS	AAMS
AAMS317001202080	AAMS	AAMS	AAMS
AAMS338001202080	AAMS	AAMS	AAMS
AAMS390001202080	AAMS	AAMS	AAMS
AAMS390002202080	AAMS	AAMS	AAMS
ACAD100X0202080	ACAD	ACAD	ACAD
ACAD101001202080	ACAD	ACAD	ACAD
ACAD101002202080	ACAD	ACAD	ACAD
ACAD101003202080	ACAD	ACAD	ACAD
ACAD101004202080	ACAD	ACAD	ACAD
ACAD101005202080	ACAD	ACAD	ACAD
ACAD101006202080	ACAD	ACAD	ACAD
ACAD101007202080	ACAD	ACAD	ACAD

Snippet of translation table

We acquired a list of courses being administered through Blackboard in the Fall 2020 semester and then created matching metadata values between our guides and those courses. To simplify the process, we decided to use the four letters as the beginning of each course code as the preferred metadata value. This value was assigned to the guide, course, and subject in the LibApps system.

The screenshot shows the 'Metadata manager in LibGuides' interface. At the top, there is a '+ Add Metadata' button and an 'Import / Update Metadata' link. Below these are utility buttons for 'Copy', 'Excel', 'PDF', and 'Export All Records'. The main area contains a table with columns: ID, Metadata Name, Metadata Value, Public?, Object Type, Object ID, Object Name, and Actions. The table lists 13 entries, each with a unique ID, a metadata name (e.g., 'metadata_li'), a metadata value (e.g., 'NUTR'), a 'Public?' checkbox (all checked), an object type (e.g., 'Guide'), an object ID, and an object name (e.g., 'Human Nutrition').

ID	Metadata Name	Metadata Value	Public?	Object Type	Object ID	Object Name	Actions
178736	metadata_li	NUTR	✓	Guide	284117	Human Nutrition	✎ ✕
178740	metadata_li	EDUC	✓	Guide	284123	Education Resources	✎ ✕
200249	metadata_li	AAMS	✓	Guide	284151	African American Studies	✎ ✕
200250	metadata_li	ACCT	✓	Guide	284125	Accounting	✎ ✕
200251	metadata_li	ARTA	✓	Subject	50290	Art	✎ ✕
200252	metadata_li	ARTA	✓	Guide	284141	Arts Administration (MAAA)	✎ ✕
200253	metadata_li	ARTE	✓	Guide	284084	Art Education	✎ ✕
200254	metadata_li	ENTR	✓	Guide	870270	Introduction to Entrepreneurship	✎ ✕
200270	metadata_li	MATH	✓	Guide	284133	Mathematics	✎ ✕
200500	metadata_li	ARTH	✓	Guide	284107	Art History	✎ ✕
200501	metadata_li	ARTT	✓	Guide	284128	Fine Arts	✎ ✕
200502	metadata_li	ARTM	✓	Guide	284141	Arts Administration (MAAA)	✎ ✕

Metadata manager in LibGuides

Classes that were generic or taught broader information had basic research guides attached to them. That meant some guides were fulfilling many different classes and some guides had no specific class to

latch onto. Courses that do not have a corresponding guide are either directed to the library homepage or to the Library LTI Page. This landing page is customizable but lacks tools to make it visually appealing.

The screenshot displays the 'Library Resources' page in a preview mode. At the top, there is a yellow box with instructions: 'This page is being displayed in preview mode, without the LMS frame around it. To see how the page will look with different "context_label" LTI Parameters enter a test value and click the Test button below. To test the subject-specific LTI page enter the value of the LTI metadata parameter assigned to a particular subject in your system.' Below this is an input field for 'LTI Parameter Value' and a 'Test' button. There is also a 'Debug Mode' checkbox.

The main content area is divided into several sections:

- Ida Jane Dacus Library- Winthrop University**: The library's name and logo.
- Today's Library Hours**: A table showing hours for Dacus Library (8am - 5pm), Reference Desk (9am - 5pm), and Pettus Archives (9:00am - 4:00pm, by appointment only).
- A-Z Database List**: A link to a full list of databases.
- Book a Research Consultation**: A section titled 'Dacus librarians are ready to help you succeed!' with a sub-header 'What We Can Do'. It lists services like navigating resources, searching databases, and citation guides. Below this is a form to 'Select a staff member' with radio buttons and a dropdown menu containing 'No preference', 'DeAnn Brame', 'Emily Deinert', and 'Hope Johnson'.
- Ask Us**: A chat interface with a search box, a 'Search' button, and a message: 'Sorry, chat is offline but you can still get help. Search our Knowledgebase and/or submit your question'.

Preview Image of the Library LTI Page

The Manual LibGuides LTI tool can do most of what the Automagic Tool does with one essential difference – it does not automatically map a guide to a course. Instead, the instructor needs to manually add the guide they want to their class by creating a Dacus Library content item and choosing the research guide they want to include, adding an extra step for faculty compared to the Automagic Tool. Nevertheless, the manual tool provides a relatively easy way for instructors to add library materials to the LMS. In addition, the manual tool allows professors to add database lists based on subject matter, single pages from guides, and more specific information such as a citation guide that the Automagic Tool would not bring up.

Limitations and Opportunities

We discovered two main limitations for this project after the creation of metadata: the LTI Automagic Tool – we learned that when more than one guide is relevant for a class (or when more than one guide is attached to a class' metadata), the landing page is simple and directionless. The second is a

limitation of our creation: we realized we had 49 classes without a corresponding guide. This was a useful statistic to see but also showed that, we were missing guides for key subject areas, such as Chemistry.

The LTI landing page limitation is difficult to change, but we have discovered a way to improve the information on the landing page making it more navigable for users. The LTI landing page pulls information directly from LibGuides – including the title and description of the LibGuide. Future plans include ensuring each LibGuide has a succinct description; this would place a description on the LTI landing page and would provide users with crucial information so they can make an informed decision about which resource to use on the landing page.

The variety of LibGuides available for the LTI Automagic Tool is a limitation we can eliminate. We have already identified which classes do not have a matching LibGuide available for the LTI Automagic tool, and plan to have new LibGuides created by the beginning of the Spring 2021 semester. Additionally, the manual LTI tool allows professors to add guides they think could be relevant to their Blackboard courses; this serves as a backup option in case there are more specialized classes, we do not have LibGuides for.

One final consideration to note is we believe our implementation was accelerated by having already added subject tags to our librarian profile pages and database list. This allowed a smooth transition to the LTI tool because if a class did not have a matching guide, the LTI tool could pull subject information from other locations to put on a generic landing page for those classes. If we had not previously tagged our librarian profiles and databases with subject metadata, it is possible the rollout of the LTI tools would have resulted in blank pages for classes without matching guides.

Thus, despite these limitations, this collaboration plans to continue to expand this initiative. The Information Literacy Librarian has created video tutorials for professors which explain how to use each tool. These videos have already been shared the campus online learning office and are posted to their Instructor Training and Resources page. Neither the library nor the campus online learning office has

actively marketed the new LTI tools, but professors are already using them to add resources to their courses – since we began working on this initiative in September (2020), there have been 38 instances of the LTI Automagic Tool being used in a class. We will continue working with the online learning department and plan to include our Outreach Librarian to market these tools for the Spring 2021 semester and hope use will be widespread.

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