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Exceeding the Limits: Teaching and Assessing Information Literacy within Blackboard

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Exceeding the Limits: Teaching and Assessing Information Literacy within Blackboard

Abstract

Many librarians can relate to the pedagogical limitations of one-shot classes and the challenges of reaching large numbers of first-year students. The Library Research Tutorial at the University of Nebraska-Kearney was designed to go beyond time and space constraints to orient new undergraduate students to library resources and research methods using self-paced modules within a Blackboard course. Since Fall 2011, over 2,400 students have been enrolled in the Tutorial at the request of their course instructors, who in turn receive students' Tutorial quiz scores for use as graded credit. This paper describes the Tutorial's contents, enrollment and grading processes, instructor responses, student outcomes, and future directions for continued development.

Keywords

information literacy, library orientation, library instruction, academic libraries, higher education, college students, computer assisted instruction, web based instruction, online courses, learning management system (computer software), integrated learning systems

Exceeding the Limits

Teaching “one shot” library instruction classes is a common occurrence at many academic libraries, but one that raises quandaries for many instruction librarians. In some cases, large undergraduate sections may exceed the seating capacity or the availability of campus computer labs, where students could practice research skills demonstrated by a librarian. As more courses are offered online exclusively, librarians may face the additional challenge of teaching students who live far from campus and dispersed across multiple time zones. Other department faculty (i.e. instructors) are unable or unwilling to yield classroom time for library instruction (Bury, 2011). Even when a librarian does secure an invitation to teach and do so in a campus computer lab, the time constraints of a single “one shot” class period limit instruction and assessment.

Librarians at the University of Nebraska-Kearney (UNK) have faced these same constraints. While UNK’s general education requirements require students to use and evaluate appropriate sources responsibly, many instructors do not request library instruction for these core courses. In 2011, this author developed and began administering an online “Library Research Tutorial” within UNK’s Blackboard learning management system (LMS) to provide librarians and instructors with an alternative to “one shot” instruction sessions. This Tutorial provides basic information literacy instruction online and asynchronously, regardless of a student’s location or time zone, without requiring instructors to yield valuable classroom time. The Tutorial has accommodated several hundred students each semester, including general education courses with 80-plus students enrolled, negating concerns about computer lab capacity and scheduling. Most significantly, the Tutorial has delivered more instructional content and assessments at the student’s desired pace than a typical “one shot” class would allow. The author contends that LMS-based tutorials can provide a successful and sustainable alternative or pre-teaching supplement to “one shot” library instruction classes, particularly for first-year undergraduate students. Others have likewise asserted the benefits of using LMS-based tutorials for students and library staff (DaCosta & Jones, 2007; Jackson, 2007; Mune et al., 2015; Tooman & Sibthorpe, 2012; Walsh, 2011).

The Library Research Tutorial’s Contents

The primary purpose of UNK’s Library Research Tutorial is to introduce first-year undergraduates to key research methods and library resources applicable for any research assignment. Many librarians understand these new students’ research competencies are inadequate to college-level assignments, and other research suggests that many faculty and first-year students recognize this as well (Bury, 2011; Head, 2013). Although UNK’s first-year general education sections often exceed the seating and schedule capacities of campus computer labs, the Tutorial’s asynchronous delivery negates such issues.

The Tutorial is composed of six Blackboard modules containing instructional lessons and quizzes, which correspond to four standards of the Association of College and Research Libraries’ (2000) *Information Literacy Competency Standards for Higher Education*, as shown in Table 1. The modules contain a mix of text, static images, narrated screencasts, or links to pertinent videos within the library’s online collections, before concluding with an 8-question

quiz. The Tutorial does not address ACRL’s *Standard #4* (i.e. “how to use information effectively to accomplish a specific purpose”) so as to be discipline- and course-neutral and to automate quiz grading. However, the Tutorial still covers more instructional content than could be covered in a typical 50- or 75-minute “one shot” session and builds a foundation for future instruction sessions to address specific information uses. The Tutorial was significantly revised during Summer 2014 to add mid-lesson “self-check” assessments, more visual learning aids, and content related to the library’s new discovery service and to the fair use and citation of media files.

Table 1.

Tutorial Modules as Mapped to ACRL (2000) Information Literacy Standards

Tutorial Module Titles	ACRL (2000) Information Literacy Competency Standards for Higher Education
<i>Lesson 1: The Research Process</i>	<i>Standard 1: Determine the extent of information needed</i>
<i>Lesson 2: Searching the Catalog</i>	<i>Standard 2: Access the needed information effectively and efficiently</i>
<i>Lesson 3: Finding Articles</i>	<i>Standard 2</i>
<i>Lesson 4: Locating Full Text and Using Interlibrary Loan</i>	<i>Standard 2</i>
<i>Lesson 5: Searching the Web and Evaluating Sources</i>	<i>Standard 2 and Standard 3: Evaluate information and its sources critically</i>
<i>Lesson 6: Citing Sources, Avoiding Plagiarism</i>	<i>Standard 5: Access and use information ethically and legally</i>

Administering the Library Research Tutorial in Blackboard

There are two versions of the Tutorial operating within UNK’s Blackboard system: “graded” and “guest” versions. While both versions provide the same instructional content and score quizzes automatically, their login methods and tracking of quiz scores differ significantly.

The “Graded” Version

In an effort to promote instructors’ awareness, a LibGuide was created to address frequently asked questions about the Tutorial (University of Nebraska-Kearney, 2015). UNK librarians have encouraged instructors to request their students be enrolled in the graded version because it records students’ quiz scores for reporting back to their instructor(s). When an instructor consents to have their students enrolled in the graded Tutorial, the librarian receives “course builder” permissions to that instructor’s Blackboard course in order to: (a) copy that course’s enrollment into the graded Tutorial, and (b) export a course roster. Once completed, the librarian can then create a Tutorial group named for the instructor’s course section and assign enrolled students to that group. Blackboard groups can also be linked to a gradebook “Smart View” that displays or exports students’ quiz grades from specific courses as shown in Figure 1. This enrollment-copy process at UNK has been relatively trouble-free, but the process of

assigning students within a course section to a Blackboard group and “Smart View” typically requires 10 to 15 minutes. By comparison, the University of Buffalo Libraries (2015) required students to self-enroll in that institution’s tutorial, also using Blackboard, but Walsh (2011) noted the increased staff time explaining this process.

Enrolled students must login to Blackboard to access the graded Tutorial just as they would any other UNK course, and they may repeat the Tutorial’s six quizzes until they achieve a passing score of 75% on each one. However, each quiz attempt is generated randomly from larger pools of similar questions to thwart repeated guessing. Using the gradebook “Smart View,” the librarian can export and send students’ quiz grades to their instructor at the end of the semester or at the instructor’s preferred deadline. The decision to assign graded or extra credit for passing the Tutorial’s quizzes remains with each instructor. In a survey of UNK instructors requesting the graded Tutorial during 2014-15 (N=11), eight instructors indicated the Tutorial was a course requirement, two indicated it was optional for extra credit, and one used both methods depending on the course.

It is not uncommon for a few students to be assigned the graded Tutorial by different instructors during an academic year. Fortunately, Blackboard prevents duplicate enrollments from occurring, so a student will only see the Tutorial once within their list of Blackboard courses. From the librarian administrator’s view, a student’s name will only appear once in the Tutorial’s main gradebook, but that student can be assigned to multiple groups and gradebook “Smart Views,” which facilitates sharing of quiz scores with multiple instructors. In other words, if a student passes the Tutorial once, those quiz scores automatically count for any other classes assigning it that academic year.

Figure 1.
Screen capture of a Blackboard Grade Center “Smart View”

Last Name	First Name	Last Access	Pass/No Pass	Quiz 1	Quiz 2
[blurred]	[blurred]	April 16, 2015	PASS	70.00	70.00
[blurred]	[blurred]	April 20, 2015	PASS	70.00	60.00
[blurred]	[blurred]	May 4, 2015	PASS	80.00	80.00
[blurred]	[blurred]	May 1, 2015	PASS	70.00	70.00
[blurred]	[blurred]		NO PASS	--	--
[blurred]	[blurred]	February 24, 2015	NO PASS	--	--
[blurred]	[blurred]	May 1, 2015	PASS	70.00	60.00
[blurred]	[blurred]	May 1, 2015	PASS	60.00	70.00
[blurred]	[blurred]	May 1, 2015	NO PASS	70.00	60.00
[blurred]	[blurred]	May 1, 2015	PASS	70.00	60.00
[blurred]	[blurred]	April 9, 2015	PASS	80.00	70.00
[blurred]	[blurred]	May 1, 2015	PASS	60.00	70.00
[blurred]	[blurred]	May 9, 2015	PASS	80.00	70.00
[blurred]	[blurred]	April 28, 2015	PASS	80.00	70.00

“Smart View” allows quiz grades for specific course sections to be viewed and exported. A pass/no pass grade is automatically calculated by Blackboard, based on whether a student scores 75% or higher in each of the six Tutorial quizzes. This screen capture is taken from the “Library Research Tutorial” by J. R. Ritterbush, 2015, and reproduced with the permission of Blackboard, Inc.

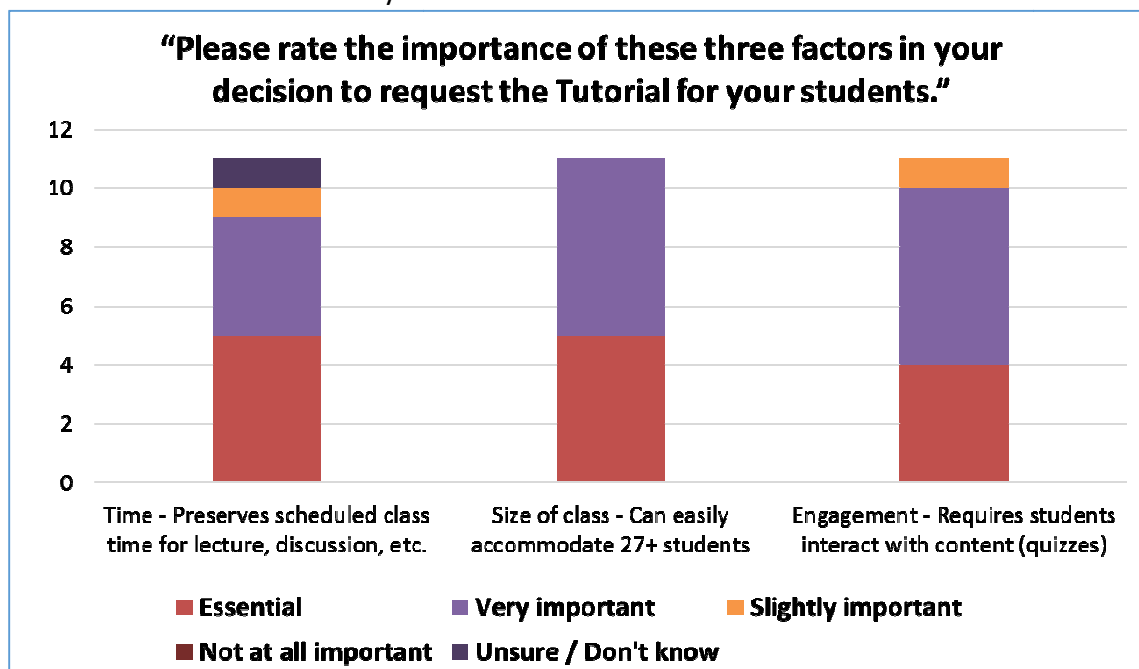
The “Guest” Version

To assist students whose instructors did not request the graded Tutorial, this author created a separate copy of the Tutorial – a guest version – that requires no login and is publicly accessible at <http://bit.ly/GuestLRT>. Although Blackboard requires a login to track student quiz grades, the author opted to use UNK’s Qualtrics survey system and its built-in “scoring” features to circumvent this issue. In this way, guests may anonymously self-assess their own understanding of the Tutorial’s contents. In 2014, Qualtrics was also used to add brief, anonymous, self-check assessments at the midpoint of each lesson within the Tutorial’s graded and guest versions.

Assessing Outcomes from the Tutorial

Since its introduction in Fall 2011, nearly 2,400 students across 72 course sections have been enrolled in the graded Tutorial as of Spring 2015. Over three-quarters of these sections were 100-level courses, though instructors from 10 upper-division and graduate-level courses have also requested their students be enrolled. In a survey of the 11 instructors who requested the Tutorial during the 2014-15 academic year, nearly all reported that class time, size of class, and content engagement were essential or very important factors in their decision to request the Tutorial, as shown in Figure 2.

Figure 2.
Results from instructor survey

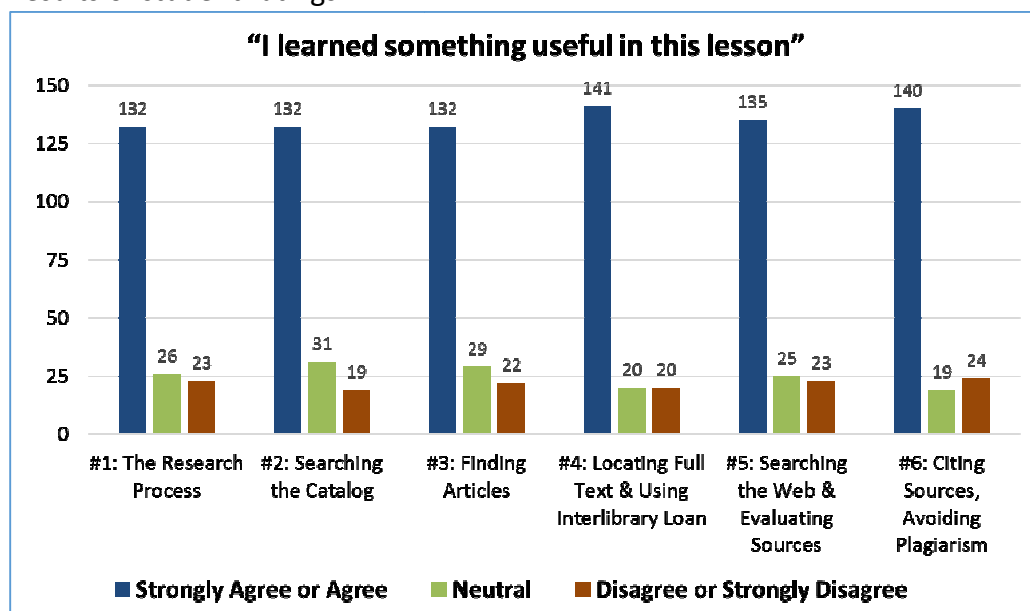


The importance of class time, class size, and content engagement to UNK instructors who requested the Tutorial during 2014-15 ($N=11$). This figure illustrates these three factors were rated as essential or very important to nearly all instructors requesting the Tutorial.

Instructors' responses when asked if they would "be willing to give class time for a library instruction session specific to your course assignments and/or desired learning outcomes?" revealed a surprise. While 4 of the 11 instructors were still unwilling to give up class time for library instruction, and another 2 were unsure, none indicated they would rather give up class time instead of assigning the graded Tutorial. Five instructors indicated they would be willing to give class time for additional instruction beyond the graded Tutorial. This last result underscores the potential for using an online Tutorial to pre-teach basic library skills prior to a live session in which a librarian demonstrates advanced topics or assists students with guided exercises or research assignments.

Within the 2014-15 student evaluation surveys, 12% of responding students ($n=180$) reported that the graded Tutorial took less than an hour to complete, 47% of students reported it took 1 to 2 hours to complete, 23% reported it took 2 to 3 hours, and 18% reported it took more than 3 hours. The vast majority of students responded they strongly agreed or agreed they had learned something useful in each of the six Tutorial lessons, as shown in Figure 3. Of the small minority of students who disagreed or strongly disagreed they had learned something useful, 87% reported having earned more than 12 credit hours at UNK. This suggests to the author that adding a shortened, single-attempt pretest, might benefit proficient students seeking to "test out" of passing the graded Tutorial's six quizzes. Students who failed the pretest would also benefit by discovering their own research deficiencies, which could spur additional motivation and attention toward completing the lessons and quizzes.

Figure 3.
Results of student ratings



The figure above illustrates 2014-15 student responses to the Tutorial's "usefulness" survey question (n=183). Most students reported strong agreement or agreement they had learned something useful in each of the Tutorial's six lessons.

A large majority of enrolled students (79%) passed all six quizzes in the graded Tutorial between Fall 2011 and Spring 2015 despite varying circumstances. As library resources have changed, so have the Tutorial's contents and quizzes, which could affect completion rates from year-to-year. A student may also enroll in a course, be assigned to and login to the graded Tutorial, but subsequently drop the course before passing all six Tutorial quizzes. A recent analysis indicated 3.5% of students enrolled in the graded Tutorial for a Spring 2015 class had dropped the assigning course by semester's end. Instructors – not librarians – define the grading incentives, which can influence student completion rates. In one case when the graded Tutorial was assigned as extra credit, the class's passing rate was a meager 11.8%. Regardless of these circumstances, the author has sent periodic emails via Blackboard reminding students of their instructor's specified deadline for completing the graded Tutorial in an effort to bolster passing rates.

Future Directions

Each summer, the Tutorial is reviewed and updated to reflect changes to library resources and services. Creating and revising multimedia content, in the form of screen captures, screencasts, or visual organizers, does require time and software expertise. In the future, the author may test using "Guides on the Side" as an alternative to developing screencasts and to enhance the interactive learning experience for students (University of Arizona Libraries, 2015). However, early research by Mery, DeFrain, Kline, and Sult (2014) suggests the "Guide on the Side" interface is no more or less effective than an instructional screencast. As previously noted, the author is strongly considering adding an optional pretest, so that advanced students assigned to the graded Tutorial might quickly demonstrate their research competency and "test out" of the longer Tutorial quizzes. On the other hand, requiring a pretest of all students could provide an additional measure for assessing the effectiveness of the graded Tutorial's contents (Henrich & Attebury, 2012).

There is evidence to hypothesize that enrollment in the Library Research Tutorial may bolster UNK students' grade point averages and retention rates. A recent University of Minnesota study reported modest correlations between student enrollment in online library tutorials and student-reported usage of library databases, which in turn correlated to higher GPAs and retention rates (Soria, Fransen, & Nackerud, 2013). In this study, students enrolled in "Part 2" of Minnesota's online library tutorial were 7 times more likely to return the following semester. Such correlations between online library instruction and student success are worthy of additional investigation.

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