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Before-and-After Quiz in One-Shot Library Instruction as a Vehicle for Content Delivery,
Feedback, and Assessment.

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Abstract

A before- and after-quiz was administered to one-shot library instruction sessions requested for other courses offered in a community college setting, in order to better deliver content and add an assessment element into the session. The quiz was well received by both students and instructors, and it showed good results in terms of knowledge retention, and the identification of both pre-existing information literacy knowledge and existing knowledge gaps. While the tool showed promise, more specific and systematic feedback on the tool's efficacy needs to be gathered.

Keywords: quiz, library instruction, higher education, assessment, knowledge retention.

Before-and-After Quiz in One-Shot Library Instruction.

"One-shot" sessions are a very common method for library and information literacy instruction delivery. For the purposes of this paper, one-shot library instruction sessions will be defined as those sessions scheduled with a librarian by a fellow faculty member, typically the length of a normally scheduled class session, where the class as a whole spends a class session to meet with a librarian to learn about topic and keyword development, access to the library catalog and article databases, citation, and the research process in general, scheduled either at the library or at their classroom. Delivering information literacy theory and concepts, teaching practical skills like searching the library catalog and article databases, and guiding hands-on research in the classroom, all within a 50 to 110 minute session can prove challenging. In addition, librarians have to incorporate an element of assessment, in order to, be able to observe their sessions' progress and outcomes.

Quizzes have been used widely in the field of education as a way of assessing knowledge retention (Haigh, 2007). Quizzes, specifically anonymous pop quizzes, in one particular instance, delivered right after the content has been delivered, have been shown to be a better way of learning than studying alone, although, admittedly, more research in the effect anonymous pop quizzes have on learning (Me-Lihn, 2012). When it comes to before-and-after quizzes, that is, those quizzes given both before and after the content has been delivered, there is research that shows this form of assessment and content delivery results in greater content retention over a specific time span, compared to a control group (Ari, 2009). Ari argues pre- and post-quizzes have specific roles in learning: the pre-quiz introduces the material to students and give them a set of expectations, while the post-quiz shows the student the amount of information retained and knowledge gaps. Further research suggests that the frequent administration of short, low stakes

quizzes improves knowledge retention by reviewing the material while reducing anxiety by giving the quizzes low stakes (McDaniel, Agarwal, Huelser, McDermott & Roediger, 2011).

Method

The quiz, which is available at http://uglylibrarytools.com/quizentry.html, consisted of a "Tag" field, a "Computer number" field, a list of five multiple choice questions, and a Submit button. The Tag field identified the class as a whole, it should typically be a single word, lowercase, easy to type and remember. "Computer number" showed a drop-down menu with numbers from 1 to 40, which matched the number of the student's computer terminal and allowed the student to identify themselves on the quiz while also remaining relatively anonymous. The list of five questions regarded the use, features and tools of article and journal databases, in this particular case. The questions were multiple choice. Once the students answered all the questions, they submitted it using the button at the bottom of the quiz. A "success" screen appeared once the quiz was properly submitted. The quiz itself is a website that uses HTML, CSS and Javascript to collect data in the form of class, student and quiz answers, stores them in a database table using PHP and MySQL, and retrieves stored data from the database to display it as a table of quiz results.

This quiz was be given once before the lecture, and demonstration of the available databases, and once more after the necessary material to answer the quiz correctly was covered, with the proper time allotment for student questions before the second quiz. Once both quizzes were done, the instructor (and/or the students as well) were able to retrieve the class' quiz results by going to http://uglylibrarytools.com/quiz.html and entering the tag given to the class. The table displayed the tag given to the class, the individual computer numbers, the correct answer letter for each question at the header and the quiz results for both the before and after quiz, in

order of time at which they were submitted. This allowed instructor and class to review the material covered and to reveal both pre-class knowledge and remaining knowledge gaps.

Results

Qualitative, pre-assessment results have been gathered in the form of specific mentions of the quiz in the feedback form submitted to the instructor once the library instruction session was over. The majority of the instructors referred to the quiz specifically, and all of them referred to it positively. At the time of this paper, only very general data was gathered in a non-systematic manner.

Discussion

Both students and instructor seemed to receive the quiz positively. As far as how it was used in the classroom, it did become a useful tool to demonstrate students both pre-existing and newly acquired knowledge. The quiz also allowed the class to observe remaining knowledge gaps and for the instructor to address such gaps. However, the usefulness of the quiz cannot be completely assessed without gathering feedback about the tool more specifically. Casual positive mention of the quiz proved very valuable to establish it as a resource to teach database use and features in library instruction, in this particular case. While casual feedback helped the introduction of the quiz, the next step will be to gather more in-depth information about the quiz's effectiveness in the classroom and find correlations with this quiz and knowledge retention, for example.

Conclusion

The use of low stakes, semi-anonymous, before- and after-quizzes show positive effects on knowledge retention, content review and knowledge gap identification with the confines of

the library instruction session, based on both student and instructor perception, and the data provided by the quiz results.

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 **Journal Of The Medical Library Association, 100(4), 316-319. doi: 10.3163/1536-5050.100.4.017