Skills-Based Multiple Choice Questions in Information Literacy Instruction

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Background

At the American University in Cairo, our students are required to take a zero-credit, semester-long information literacy course called Libraries and Learning Technologies 1010, taught by librarians. Until recently, undergraduate students were able to put off taking LALT until senior year. Beginning Fall 2016, the AUC senate has mandated students pass the course in their first 3 semesters. Soon, we will finally have classrooms full of our intended audience: freshmen. However, we still have all the upperclassmen that need to take the course in addition to new freshmen. To accommodate this, 3 librarians have had to teach 22 sections every term, with 20-40 students per section. In addition, we have held competency exams for upperclassmen, taken by over 800 students in a 3-week period.

To provide students with immediate feedback and save time grading, we turned to writing multiple choice questions for our students' in-class activities and exams.

Assumptions

At first, we shied away from multiple choice questions because of the following misconceptions:

- **Multiple choice questions can only be used to test memorized facts, which is unhelpful for learning or testing hands-on information literacy skills.** Multiple choice questions are cover quite complex issues and require students to use practical skills. The multiple choice format is simply the way of communicating the answer.

- **It's time-consuming to write unique questions**. In fact, once you have a model, it is easy to create unique questions.

- **They're only useful in credit-bearing, semester-long courses**. New technologies have made it possible to easily assess and engage students in one-shot sessions and library orientation activities,

- **They're too easy for students to cheat**. Test banks to build unique exams, mixing the order of questions and order of answers, and (in high-stakes situations) paper tests can all minimize cheating.

- **Multiple choice questions eliminates opportunities for class discussion**. Students can answer multiple choice questions in pairs or groups; displaying class results on the projector can prompt further discussion.

Pedagogy

- **Immediate feedback**: One of the fundamental building blocks of student engagement is to provide them immediate feedback on their work. If you have a large class that you cannot assist one-on-one, answering multiple choice questions can be reassuring and engaging for students who would otherwise find this either frightening or dull. Students are more likely to ask questions or review concepts they did not understand.

- **Familiar format**: Since making the move from hand-written to multiple choice questions for in-class assignments, we have discovered students are more confident trying questions out on their own, rather than asking a librarian for help every step of the way. When the topics covered in information literacy classes can seem alien and difficult, the format may seem comfortingly familiar.

- **Build a storyline**: You may teach library orientations for brand new students, or research sessions too early in the semester for students to have chosen topics for hands-on activities. You can build a storyline for them: provide a topic and follow it through with multiple choice questions: finding sources, selecting and evaluating them, using and citing them, and more.

- **Gamification:** In cooperation with our university's Center for Learning and Teaching, we are piloting an initiative this summer convert our multiple choice activities and tests into challenges, quests, or other games for our course.

Applications

In addition to use in semester-long information literacy courses (in-class activities, midterms, final exams, and competency exams to waive the course requirement), multiple choice questions can be tailored for:

- **Pre- and post- one-shot assessment.** Discover your students' pre-one-shot competency, then let them (their professors, and your administration) see their improvement afterward.

- **Orientation activities.** Let students interact with library resources without expecting them to provide their own topics on their first experience with an academic library.

- **Self-guided "tours" to showcase highlights of online archives**. Don't make your students passive spectators. Let students discover the gems of your collection from themselves.

Technology

Nearpod: For use on computers, iPads, or iPhones. Give students a PIN number to access a multiple choice quiz you prepare. Nearpod will provide immediate feedback students can see for themselves, and group feedback that you can display to prompt discussion.

Google Forms: You provide questions to students with a link, and you view the results when the students are finished. You can also provide emailed feedback to students with their response, the right response, and an explanation.

Clickers: Another classroom response technology that allows you to immediately view student results. Unlike the other two options above, many clickers do not allow students to work at their own pace; instead, you must project one question at a time.

Blackboard or Moodle: For courses that you instruct. Both learning management systems have a number of tools you can utilize to minimize cheating.

This source may be easily exchanged for another when you need multiple copies of an exam, or if you're changing topics for a one-shot. The answer choices remain the same.

Again, the answer choices can remain the same for a different source, or the same sources with a different missing piece.

Complex issues like the purpose of information found on the free web can still be covered by the multiple choice format.