

2015

Developing a health sciences information literacy assessment for undergraduates.

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Recommended Citation

Schubert, C., Baller, S., Ott Walter, K., Sapp, L., Swanson, M., & Jacovidis, J. (2015, March 27). Developing a health sciences information literacy assessment for undergraduates. Poster presented at 2015 Association of College and Research Libraries conference, Portland, OR.

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Developing a Health Science Information Literacy Assessment for Undergraduates

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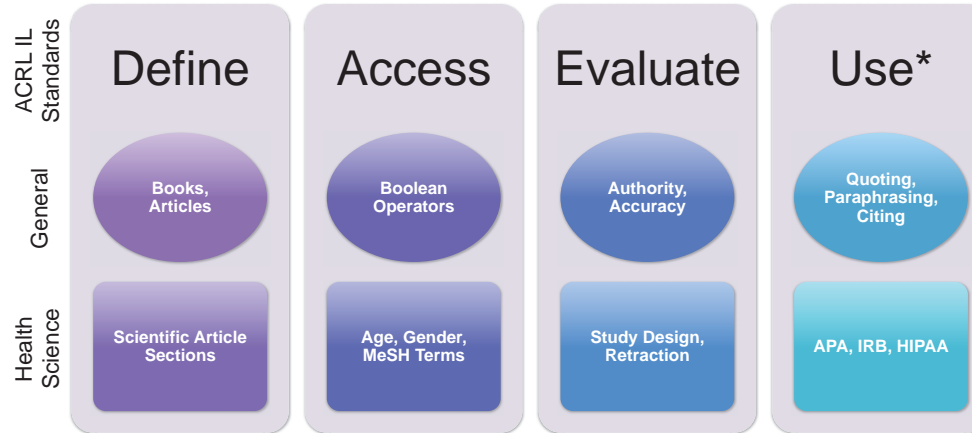
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#healthilt



Introduction

Health professionals today must incorporate scientific evidence into clinical decision making for good quality of care.¹ Strong information literacy skills are essential to attain this best practice. Unfortunately, the "health information competencies of undergraduate students, many of whom will soon enter a variety of health professions, are limited."² Health Science faculty and librarians collaborate to infuse information literacy instruction in individual courses. However, to better understand the information literacy skills of undergraduate students at the end of their entire program, we needed a summative assessment tool. The Center for Assessment and Research Studies (CARS) at James Madison University (JMU) developed an information literacy assessment for general education courses using the Learning Assessment Cycle³ (Fig.1). Building upon this existing framework, Health Sciences faculty and librarians wanted to assess the current student information literacy levels and use results to adjust curriculum.



*Standards 4 and 5 are represented in this one category of Information Use

Methods

Process

1. Faculty develop items (aka test questions)
2. Administer pilot items to students
3. CARS completes item analyses, such as
 - Item difficulty (are responses due to chance?)
 - Distractor analyses (are answer options too easy?)
 - Item total correlations (do individual item answers help predict if a student does well on the test?)
4. Re-administer revised test to new set of students
5. Re-evaluate

- 2011** Health Sciences faculty and CARS developed 34-item test. Test items weighted as 1-pt or ¼-pt. Test administered to 296 seniors in April.
- 2012** CARS conducted item analyses. Four new questions added. Test administered to 163 students.
- 2013** The Health Sciences Librarian joined the group. The group removed or revised poor performing questions and wrote new questions. Members mapped the final 36 questions to ACRL Standards. Test administered to 260 senior-level students in April.
- 2014** Test was re-administered to seniors in April. Team began discussion for long-term assessment plan.

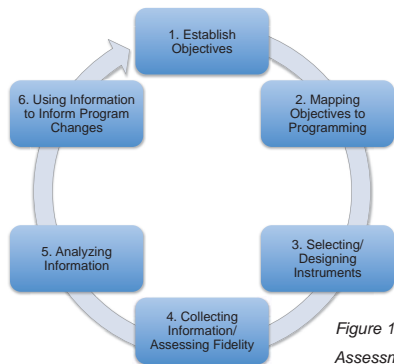


Figure 1. Learning Assessment Cycle

2013 Results

- Over 80% of students achieved faculty standard of answering at least 60% of questions correct
- Reliability of total test scores achieved .66
- 3 questions mapped to Standard 5 were removed after testing
- 33 items were included with a total weighted score of 16.50. Students' mean score was 12.49 (72.75%)

| IL Standard | Questions per Standard | Weighted Mean | Reliability |
|-------------|------------------------|---------------|-------------|
| 1 | 8 | 80.36% | .53 |
| 2 | 6 | 73.33% | .31 |
| 3 | 4 | 67.50% | .32 |
| 5 | 19 | 73.16% | .47 |

Discussion & Conclusions

Reformatting test question layout and on-going test question development are preliminary steps in continuing the assessment. Developing more reliable test questions for Standards 2 and 3 is also necessary, as well as starting to develop Standard 4 questions.

Next Steps:

- Review 2014 item and test performance results
- Revise curriculum based on assessment results, e.g. collaborate on IL instruction in Foundations to Health Sciences course
- Map IL instruction across Health Studies Curriculum

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