

Got BILK? : Assessing Information Literacy Instructional Needs Using A Brief Test of Information Literacy Knowledge (BILK) in a Small Academic Library Setting

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Several years ago Howard White's book *Brief Tests of Collection Strength* presented an easy and reliable way to evaluate collection strength.¹ This paper explores using the same concept – a brief test – to gain baseline data for instructional efforts. Other longer and more comprehensive tests exist, such as the *Bay Area Community Colleges Information Competency Assessment Project Information Competency Proficiency Exam*.² A brief test of information literacy knowledge (BILK) would, ideally, allow an instruction librarian to quickly determine areas of student knowledge deficit. The BILK results can reveal gaps in student knowledge and help focus instructional efforts to more effectively meet student needs. The BILK test examined in this paper was developed, administered, and evaluated for results in less than two weeks, simultaneous with performance of normal duties like developing curriculum, developing the collection, and teaching classes. This paper describes the “quick and dirty” development, testing and results analysis of an eight-question BILK.

POPULATION

Peninsula College is a small rural community college in Port Angeles, Washington with 1834 students. This figure includes 712 students who are self-declared in professional and technical programs and 1122 students who are self-declared degree-seeking students in academic transfer programs.

The BILK was administered to professional-technical classes in nursing, fiber optics, health care assistant, internet literacy, office assistant, and fisheries technology programs. Academic transfer classes included English, sociology, history, and mass media. Testing was performed at the main Peninsula College campus in Port Angeles, Washington and the branch campuses in Forks and Port Townsend, Washington. A total of 130 students were tested representing approximately 7% of our unduplicated head count, including students at all branches and online, video, and special projects students.

METHODOLOGY AND RESULTS

A conscious decision was made to stay away from sophisticated statistical analysis software for two reasons: time and need. The whole idea was to do a “quick and dirty” analysis, in order to gain a rough idea of student needs for the purpose of guiding instruction. A simple spreadsheet yielded the most sophisticated calculations done, which were simple averages. The BILK results were used to aid information literacy instructional planning and confirm appropriate instructional emphasis. The eight-question BILK was developed after administering a 20-question pilot BILK to determine areas of greatest knowledge deficit. The eight-question BILK results validated findings of the 20-question BILK and revealed consistent results across disciplines, in both academic transfer and professional / technical programs, in a small, rural community college in Washington State.

The 20 question pilot BILK was administered as an online assessment the first week of fall quarter (9/25/03).³ The pilot BILK was based on questions selected from ACRL's Clip Note #32, *Assessment in College Library Instruction Programs*⁴ and was directed at six areas of information competency:

- Knowledge of Library Services
- Knowledge of Terminology
- Research Strategy
- Search Statement Construction
- Critical Evaluation of Sources

Ethical Use of Information

The pilot BILK revealed the students' strengths are:

- 84% Familiarity with Peninsula College Library services
(Q4-76%, Q11-96%, Q15-80%)
- 85% Understanding of terminology
(Q8-84%, Q14-80%, Q19-92%)
- 90% Importance of evaluating sources
(Q16-96%, Q20-84%,)

98% Understanding concept of ethical use of information

(Q10-96%, Q17-100%,)

The pilot BILK revealed the students' weaknesses are in the combined areas of:

55% Research strategy and search statement construction

(Q1-80%, Q2-42%, Q7-46%, Q9-40%, Q13-58%, Q18-64%)

55% Working with scholarly literature (interpreting citations)

(Q3-60%, Q5=48%, Q6-56%)

8-QUESTION BILK

After analyzing the results of the initial 20-question BILK, I developed an 8-question BILK, focused on the areas of weakness. The 8-question BILK validated the findings of the 20-question BILK. The 8-Question BILK was administered to classes in both the Art & Sciences transfer classes and the Professional / Technical career program classes. After giving the BILK to only six classes, results in every class averaged from 40% to 50%, confirming that these areas were the those that needed emphasis.

CONTROL GROUPS

Two BILKs were administered with variations. For one group the BILK was given midway through the class, after instruction had been given on Boolean search strategies but before instruction was given related to other competencies. This was to measure instructional effectiveness in different areas of emphasis. Results indicated the instruction on Boolean searching was effective:

44% Non-Boolean Questions

(Q2,3,5,6)

75% Boolean Questions

(Q1,4,7,8)

This testing could be criticized for being conducted immediately after instruction when the concepts were fresh in the students' minds. Because of this, another post-instruction control group was given the BILK, this time allowing a week pass before administering the BILK.

For this second post-instruction group, the BILK was given at the beginning of a second class session, one week after instruction had been given. This constituted a post-test BILK with an interval of one week between instruction and testing, the idea being to gain a better measure of how much learning had taken place. After administering the BILK as a pre-test, mid-class test and post-test, a pattern began to emerge. Although "quick and dirty," the BILK gave what appear to be valid results which correspond to the type and amount of instruction given.

45% average Pre-test BILK

60% average Mid-test (after Boolean instruction, before non-Boolean instruction)

74% average Post-test (one week both Boolean and non-Boolean)

Although one would have hoped for higher post-test scores, the differences seem to be significant in relation to instructional timing of the BILK administration. These scores came from a representative sample (57%) of the student population. The sample consisted of a cross-section of the student population, including academic transfer classes and professional and technical classes, at all three campus locations. After two weeks of administering the BILK and receiving consistent results, testing was halted. The Results of the BILKs informed instructional focus for the rest of the year.

CONCLUSION

The process of administering a 20-question BILK focused on six information literacy knowledge areas and then developing a targeted BILK based on areas of weakness allowed the instructional librarian to generalize that students in all curricular areas needed instructional emphasis on research strategy and search statement construction using Boolean logical operators. Scores consistently falling in the 40 to 50% range helped determine that the population size (57%) was significant, given that scores were consistent regardless of type of academic program or physical location. As a result of the BILK, information literacy instruction has focused on determining information needs, choosing appropriate sources and constructing effective search statements. The instructional focus has changed to demonstrate how knowledge of Boolean searching is transferable and can be used in different types of online databases, including OPACs, periodical indexes, government databases, and search engines.

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