<u>Analysis of Library Instruction sessions Pre/Post testing for Information Literacy for Library Instruction SAO for period Fall 2016</u>

Instrument: Information Literacy Pre/post test (Multiple Choice) See tests at end.
Participating class faculty: Henson, Sandor, Simon and Gallagher, with library faculty Striepe McMillan Medina Josephides

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Library Instruction SAO Information Literacy Pre/Post-test Results and Analysis
<u>Prof. Sandor Eng 1A 1 section 28 participants</u>

When researching an assignment topic, one should develop a research strategy that includes analyzing the topic to identify keywords/concepts, checking various resources for background information on your topic, locating books using the library's online catalog, and searching computer databases for articles.

1. One of the first steps in approaching a research paper is to develop an approach to finding needed information. Which of the following is NOT recommended as part of a good strategy?

    a. Analyzing and evaluating information sources of various types
    b. Identifying the main concepts or keywords underlying your topic
    c. Using Google and Internet sources to find all your information
    d. Reading background information on your topic

Pre-test SCORE: 19/28 got this correct - 68%
Post-test SCORE: 21/28 got this correct - 75%

2. Which of the following is a complete Library of Congress call number that will allow you to find the book on the shelf:

    a. 142.780973   **b. HQ 766.5 U5 D44 2008**
    b. JOHANSEN J643 P   d. 781414481432 (pbk.)

Pre-test SCORE: 7/28 got this correct - 25%
Post-test SCORE: 23/28 got this correct – 82%

3. An advanced Google search which is looking for PDF type documents on government websites regarding gun laws in California might look like this:

    a. Semi-automatics in California site:.edu
    b. gun laws california site:.gov filetype:pdf
    c. "gun law in California" site:.gov

Pre-test SCORE: 16/28 got this correct - 57%
Post-test SCORE: 22/28 got this correct – 79%

4. Which is NOT an article database?
    a. EbscoHOST Masterfile Premiere
    b. Sierra Catalog

c. ProQuest National Newspapers Expanded

Pre-test SCORE: 13/28 got this correct - 46%
Post-test SCORE: 19/28 got this correct - 68%

5. When searching the Internet you should keep in mind:
   a. That you can find any information online if you just search long enough
   b. That all information is free and available to the public at no cost
   c. That because of copyright laws, nothing worthwhile is ever published on the Internet
   d. That not all online sources provide reliable or authoritative information

Pre-test SCORE: 21/28 got this correct - 75%
Post-test SCORE: 24/28 got this correct - 86%

6. Match the correct answers below by entering the appropriate letter in the underlined space.
   A. Popular magazine   B. Scholarly journal   C. Trade publication
   a. **B**___ is a publication that consists of articles written by specialists, most of them having been reviewed by peer specialists prior to publication.
   b. **C**___is a publication that focuses on a specific profession such as video production, aviation, interior design, publishing, etc.
   c. **A**___covers mainstream news and the articles are written mostly by staff or freelance writers

Pre-test SCORE: 12/28 got this correct - 43%
Post-test SCORE: 22/28 got this correct - 79%

Striepe Comments and Analysis: **Across the board the scores went up. The most dramatic gains were with Q. 2 from 25% to 82%, Q.6 from 43% to 79%. This was good to see as Q 2 is associated with the practical task of recognizing/locating a call number within a results set, interpreting a call number within LC parameters to see whether it is appropriate, and finding the item on the shelf. This increase should indicate a greater confidence in seeking and retrieving items from the collection. The initial low score indicates a great confusion in this area and that that instruction librarians should continue to explain the library of Congress system in the information sessions to build information literacy in this area, and increase student confidence is their ability to find items in the library.**

The large increase in correct results for Q.6 also indicated a welcome new awareness of the students of the types of periodicals publications students are asked to locate. Faculty often indicate that students are not aware of what a scholarly source is – this was borne out by the scores. The initial low score indicates that instruction librarians should continue to spell out the differences between periodical types in the information sessions to build information literacy in this area.

The smallest gains came with Q.1 and Q.5 indicating that students already have a fairly robust understanding of the pitfalls of relying solely on the internet for source materials for research, but the gain in scores indicate that this is an information literacy skill worth reinforcing.

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Library Instruction SAO Information Literacy Pre/post-test Results and Analysis
Prof. Sandor Eng 1A 1 section 23 participants

Pre-Test	Q1	Q2	Q3	Q4	Q5	Q6
1	0	0	100	0	0	100
2	100	100	100	100	0	0
3	100	0	100	100	0	100
4	100	0	100	100	0	100
5	100	0	100	0	100	100
6	0	0	100	0	100	0
7	100	0	0	100	100	100
8	100	100	0	100	100	100
9	0	100	100	100	100	0
10	100	0	100	100	100	100
11	100	0	100	0	0	0
12	100	0	0	100	100	100
13	100	0	100	100	100	100
14	0	0	100	0	100	0
15	0	100	0	0	100	100
16	100	0	100	0	100	100
17	100	100	100	100	100	100
18	100	0	0	100	100	0
19	0	0	100	100	0	100
20	0	0	100	100	100	100
21	100	0	100	0	100	100
22	0	100	100	100	0	100
23	100	0	100	100	100	100
Avg.	65.22	26.09	78.26	65.22	69.57	73.91
Overall Avg.	**63.04**					

Post-Test	Q1	Q2	Q3	Q4	Q5	Q6
1	0	100	0	0	100	100
2	100	0	100	100	0	100

3	100	100	100	100	100	100
4	100	100	100	100	100	100
5	100	0	100	0	100	33
6	100	0	0	0	100	100
7	100	0	0	0	100	100
8	0	100	0	0	100	100
9	0	100	100	100	100	100
10	100	100	100	100	100	100
11	100	100	100	100	100	100
12	0	100	100	100	100	100
13	0	0	100	100	100	100
14	0	100	100	100	0	0
15	0	100	0	0	100	100
16	100	100	0	100	100	100
17	0	0	100	100	0	100
18	100	0	100	100	100	100
19	0	0	0	100	100	0
20	100	100	100	100	100	100
21	100	100	100	100	100	100
22	100	100	100	100	100	100
23	100	100	100	100	100	100
Avg.	60.87	65.22	69.57	73.91	86.96	88.39
Overall Avg.	74.15					

Medina Comments and analysis: This class was encouraging. Overall, there was a 18% increase in overall results between the pre/post test. Questions 2, 5 and 6 had the greatest improvements, at with a 150%, 25% and 20% increase in correct answers. The first question dropped a little in correct responses by 7% compared to the pre-test.

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Library Instruction SAO Information Literacy Pre/post-test Results and Analysis
Prof. Simon ESL 1 section

Pre-Test	Q1	Q2	Q3	Q4	Q5	Q6	
1	0	100	0	0	0	0	
2	0	0	100	0	0	0	
3	100	0	100	100	100	100	
4	0	100	0	0	100	0.33	
5	0	0	100	0	100	0	

	Q1	Q2	Q3	Q4	Q5	Q6
6	0	0	100	0	100	0
7	100	0	0	100	0	0
8	100	0	0	100	100	100
9	100	0	100	100	0	100
10	100	0	100	0	100	100
Avg.	50.00	20.00	60.00	40.00	60.00	40.03

Overall Avg. **45.01**

Post-Test	Q1	Q2	Q3	Q4	Q5	Q6
1	0	100	0	100	0	0
2	100	100	0	100	0	100
3	100	100	0	0	0	100
4	0	100	0	0	0	100
5	100	100	100	100	100	100
6	0	100	0	100	100	100
7	100	0	100	100	0	100
8	100	0	100	0	0	100
9	100	100	0	100	100	100
10	100	100	0	100	0	100
11	0	0	0	100	0	100
12	0	0	0	100	0	0.33
13	100	100	0	100	0	0
14	0	0	0	0	0	0
Avg.	57.14	64.29	21.43	71.43	21.43	71.45

Overall Avg. **51.19**

Medina Comments and analysis:

There was an increase in the overall assessment between the pre/post test of 14%. This is encouraging, as it highlights some improvement in the class learning. There was also significant improvements in Q2 (45% better result), Q4 (78%), and Q6 (78%). There were significant decreases in Q3 and Q5 (both declining 45%). The latter may be due, in part, to the fact that this was an ESL level class. The students may be having issues with the subtleties of interpreting the answers to the questions (e.g. the difference between "copyright" and "authoritative", for example).

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Library Instruction SAO Information Literacy Pre-test Results and Analysis
Prof. Gallagher Eng 1A 1 section

Pre-Test	Q1	Q2	Q3	Q4	Q5	Q6
1	100	100	100	100	0	0

2	100	100	0	0	100	0.33
3	0	0	0	100	100	0
4	0	0	0	100	0	0
5	100	100	100	0	100	100
6	100	0	0	0	100	100
7	100	0	100	0	100	100
8	100	0	100	100	100	100
9	0	0	0	0	100	100
10	0	0	100	0	100	0
11	100	100	100	100	100	100
12	0	100	0	0	100	100
13	0	0	0	0	0	100
14	100	0	0	0	100	100
15	100	0	100	100	100	100
16	100	0	0	100	100	100
17	100	100	100	100	100	100
18	100	100	100	100	100	100
19	100	0	100	0	100	100
20	100	0	100	100	100	100
21	100	100	100	0	100	100
22	100	0	100	100	100	100
23	100	0	100	100	100	100
24	100	100	100	100	100	100
25	100	100	100	100	100	100
26	100	0	100	0	100	100
27	100	0	100	100	100	100
28	100	0	100	100	100	100
29	100	0	0	100	100	100
Avg.	79.31034	34.48276	65.51724	58.62069	89.65517	82.77

Overall
Avg.   **68.3927**

Medina Comments and Analysis: Unfortunately, I was unable to administer a post-test for this class. I ran out of time and there was another class scheduled for 102 after my session. However, I did administer a pre-test. Overall, this class was pretty research-savvy, with an average of 68%. The most correct were Q1 (79%), Q5 (89%), and Q6 (83%).   The most often missed question was Q2 (34%), which relates to LC call numbers. It may be worth exploring the idea to reduce the number of pre/post and reformat test questions to better make time for administration of them in the future.

Library Instruction SAO   Information Literacy Pre/Post-test Results and Analysis
 <u>Prof.Chelsea Henson Eng1A – 2 sections</u>

1. One of the first steps in approaching a research paper is to develop an approach to finding needed information. Which of the following is NOT recommended as part of a good strategy?

> e.   Analyzing and evaluating information sources of various types
> f.   Identifying the main concepts or keywords underlying your topic
> g.   **Using Google and Internet sources to find all your information**
> h.   Reading background information on your topic

> **Pre-Test**
> **Course Section 1: 14/14 (100%)**   **Course Section 2: 12/15 (80%)**

> **Post-Test**
> **Course Section 1: 20/21 (95%)**   **Course Section 2: 16/16 100%)**

> **McMillan Comments: At this point, most students know that instructors do not want them to rely only on Google for locating their information. This question might have an obvious answer.**

2.   Which of the following is a complete Library of Congress call number that will allow you to find the book on the shelf:

> a. 142.780973   b. **HQ 766.5 U5 D44 2008**
> b. JOHANSEN J643 P   d. 781414481432 (pbk.)

> **Pre-Test**
> **Course Section 1: 3/14 (22%)**   **Course Section 2: 3/15 (20%)**

> **Post-Test**
> **Course Section 1: 19/21 (90%)**   **Course Section 2: 16/16 (100%)**

> **McMillan Comments: This question had the lowest correct score on the pre-test and the greatest growth on the post-test. Considering that many students have little experience using a physical library and specifically a college or university using the LOC classification system, the lack of knowledge is not surprising. It is good to see that they left the workshops having learned this concept as it will aid**

them in locating materials in a library.

3. An advanced Google search which is looking for PDF type documents on government websites regarding gun laws in California might look like this:
   a. Semi-automatics in California site:.edu
   b. gun laws california site:.gov filetype:pdf
   c. "gun law in California" site:.gov

Pre-Test
Course Section 1: 12/14 (86%)   Course Section 2: 9/15 (60%)

Post-Test
Course Section 1: 12/21 (57%)   Course Section 2: 6/16 (38%)

McMillan Comments: It is interesting to note that students did more poorly on the post-test with this question. It is likely due to the fact that, in the workshops, in addition to covering domain types (e.g. .gov), I also focused on using quotation marks for phrase searching. I did not spend time covering specific file types (e.g. pdf) so student might have selected the answer that included both of the search strategies I covered in the class.

4. Which is NOT an article database?
   a. EbscoHOST Masterfile Premiere
   b. Sierra Catalog
   c. ProQuest National Newspapers Expanded

Pre-Test
Course Section 1: 8/14 (57%)   Course Section 2: 7/15 (47%)

Post-Test
Course Section 1: 11/21 (52%)   Course Section 2: 4/16 (25%)

McMillan Comments: There was unfortunately little change in the responses of the first course section, but it is more concerning that the second course section had a significant drop in correct responses. The bulk of wrong answers selected Proquest Newspapers. I did not demonstrate this database in the class (although it was mentioned verbally and in the ppt slides) as the instructor wanted to primarily focus on the journal article databases and books, which might have led to students thinking this was not one of the databases. However, it is disappointing that they still struggle to remember the word "catalog" as being related to searching for books.

5. When searching the Internet you should keep in mind:
   a. That you can find any information online if you just search long enough

b. That all information is free and available to the public at no cost

c. That because of copyright laws, nothing worthwhile is ever published on the Internet

d. That not all online sources provide reliable or authoritative information

Pre-Test

Course Section 1: 13/14 (93%)   **Course Section 2: 14/15 (93%)**

Post-Test

Course Section 1: 20/21 (95%)   **Course Section 2: 16/16 (100%)**

McMillan Comments: Again, most students at this point know that this is the answer we want them to select. However, they still typically rely more heavily on open internet sources rather than academic or library resources because this is what they are more comfortable using. Oftentimes, they think it is easier to search Google than an article database.

6. Match the correct answers below by entering the appropriate letter in the underlined space.

    A. Popular magazine   B. Scholarly journal   C. Trade publication

a. **B** - is a publication that consists of articles written by specialists, most of them having been reviewed by peer specialists prior to publication.

b. **C** - is a publication that focuses on a specific profession such as video production, aviation, interior design, publishing, etc.

c. **A** - covers mainstream news and the articles are written mostly by staff or freelance writers.

Pre-Test

Course Section 1: 10/14 (71%)   **Course Section 2: 12/15 (80%)**

Post-Test

Course Section 1: 18/21 (86%)   **Course Section 2: 11/16 (69%)**

McMillan Comments: For unknown reasons, there was an increase in correct answers for course section 1, but a drop in correct answers for course section 2. The material was covered in the same way for both sections.

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Library Instruction SAO Information Literacy Pre/Post-test Results and Analysis

Pre-Test	Q1	Q2	Q3	Q4	Q5	Q6	
1	100	0	100	0	100	100	
2	100	0	100	100	100	100	
3	100	100	100	100	100	33	
4	100	0	100	100	100	100	
5	100	100	0	100	0	0	
6	100	100	100	100	100	33	

7	100	100	0	100	0	100
8	100	0	100	100	100	100
9	100	0	100	100	100	100
10	100	0	100	0	100	100
11	0	100	100	100	100	100
12	0	0	0	0	0	33
13	100	0	0	0	0	100
14	100	100	100	100	100	100
15	0	100	100	100	100	33
16	100	0	100	0	100	100
17	100	0	100	0	100	33
18	100	0	100	100	100	100
19	100	0	0	0	100	0
20	0	0	100	0	100	100
21	100	0	0	100	100	100
22	100	0	0	100	100	33
23	100	0	0	0	100	100
24	100	0	100	0	0	100
25	100	0	0	0	100	100
26	100	0	0	100	100	100
27	0	100	100	0	0	0
28	100	100	0	100	100	0
29	100	100	100	0	0	0
30	100	100	100	100	0	0
31	0	100	100	0	100	0
32	100	0	100	100	0	0
33	100	100	100	100	100	100
34	0	0	0	100	0	0
35	0	100	0	100	0	0
36	0	100	100	0	0	0
37	100	0	100	0	100	100
38	100	0	100	0	100	0
39	0	0	100	0	0	100
Avg.	72.97	40.54	64.86	54.05	64.86	56.70
Overall Avg.	59.00					

Post-Test	Q1	Q2	Q3	Q4	Q5	Q6
1	100	100	100	100	100	100
2	0	100	100	0	0	100
3	100	100	0	100	100	100
4	0	100	100	0	100	100
5	100	100	100	100	0	33
6	100	0	0	100	0	0
7	100	100	100	0	0	0
8	100	100	0	100	0	0
9	100	0	100	0	100	100
10	100	100	0	0	100	33
11	100	100	0	100	100	100
12	100	100	100	0	100	100
13	100	100	100	0	100	100
14	100	100	100	100	0	100
15	100	0	0	0	100	100
16	100	100	100	0	100	33
17	100	100	0	100	0	33
18	100	0	0	100	100	100
19	100	100	100	100	100	100
20	100	100	100	0	100	0
21	0	0	100	0	0	33
22	0	100	100	100	100	100
23	100	100	0	0	100	33
24	100	100	100	0	100	100
25	100	100	0	0	100	0
26	100	100	100	100	100	100
27	100	100	100	0	100	100
28	100	0	0	100	100	100
29	100	0	0	100	100	100
30	100	100	100	0	100	0
31	100	0	0	100	0	100
32	100	100	100	100	0	100
33	100	0	0	100	0	0
34	0	0	0	0	0	0
35	100	0	0	100	100	100
36	100	100	100	100	0	0
37	100	0	100	0	100	33
38	100	100	0	100	0	0
39	0	0	100	100	0	0
40	100	100	100	100	0	0
41	100	100	100	0	100	33

42	0	100	0	0	0	100
43	100	100	100	100	100	0
44	100	100	0	0	100	33
Avg.	**85.71**	**69.05**	**54.76**	**52.38**	**61.90**	**54.69**
Overall Avg.	**63.08**					

Josephides Analysis and Comments:

The class orientation went smoothly, but the post results did not produce favorable percentages. The results for questions 3, 4, 5, and 6 decreased by an overall 17%. Questions 1 and 2 increased overall by 41%. Overall, there was a 4% increase in overall results between the pre/post test. Questions 1 and 2 had the greatest improvements while questions 3, 4, 5, and 6 dropped. Question 2 showed the most significant increase by 29% and Question 3 showed the worst decrease by 10%.

OVERALL ANALYSIS AND COMMENTS: It seems clear across all the classes that students have a fairly robust understanding of the pitfalls of relying solely on the internet for source materials for research, but the gain in scores in most classes indicate that this is an information literacy skill worth reinforcing as it cannot be taken for granted especially given the highly varied levels of student preparedness, and as noted, the fact that students still typically rely more heavily on open internet sources rather than academic or library resources because this is what they are more comfortable using .

Considering that one of the college's completion objectives is transfer, It is good continue to highlight the Library of Congress classification as this will benefit the students as they enter the university academic library as well as with the more immediate goal of aiding them in locating materials in the ECC library. Also, this was one of the weakest areas, and considering that many students have little experience using a physical library, and specifically a college or university using the LOC classification system, the lack of knowledge is not surprising, but instruction librarians will all be asked to highlight this area/literacy skill during instruction sessions. These findings will also be shared with all librarians as this knowledge will be helpful to bear in mind during reference desk instruction and interactions.

Also as we pilot the Discovery One Search, where the items are "mixed together" students may need additional help in interpreting the various results presentations and a thorough grounding in the basics will be invaluable.

It was heartening to note that, with the exception of one class, the average scores went up, as shown by the post-test) after an instruction session. This speaks to the value of the instruction sessions in introducing students to the college library experience and faculty research expectations, and the value of not assuming any student familiarity with library and research concepts. The fact that the students still lack understanding on certain issues show the value of repeating that further assistance is available at the reference desk and keeping all librarians aware of areas of confusion so that these can be addressed in future interactions. Addressing the issues noted will aid in student success and student information literacy.

Suggestions moving forward:
- it may be worth exploring the idea of reducing the number of pre/post and reformat test questions to better make time for administration of them in the future.
- be to change out/rephrase some of the questions.
- Introduce a question related to One Search.
- Introduce a question related to evaluation – for instance "fake news" sites.

Cs/2016

Library Instruction SAO   Information Literacy Pre-test and Post-test Instrument

When researching an assignment topic, one should develop a research strategy that includes analyzing the topic to identify keywords/concepts, checking various resources for background information on your topic, locating books using the library's online catalog, and searching computer databases for articles.

1. One of the first steps in approaching a research paper is to develop an approach to finding needed information. Which of the following is NOT recommended as part of a good strategy?

- d.   Analyzing and evaluating information sources of various types
- e.   Identifying the main concepts or keywords underlying your topic
- **f.   Using Google and Internet sources to find all your information**
- g.   Reading background information on your topic

2.   Which of the following is a complete Library of Congress call number that will allow you to find the book on the shelf:

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- a.   Semi-automatics in California site:.edu
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- c.   "gun law in California" site:.gov

4.   Which is NOT an article database?

- a.   EbscoHOST Masterfile Premiere
- **b.   Sierra Catalog**

      c.   ProQuest National Newspapers Expanded

5. When searching the Internet you should keep in mind:
      a.   That you can find any information online if you just search long enough
      b.   That all information is free and available to the public at no cost
      c.   That because of copyright laws, nothing worthwhile is ever published on the Internet
      d.   **That not all online sources provide reliable or authoritative information**

6. Match the correct answers below by entering the appropriate letter in the underlined space.
      A. Popular magazine   B. Scholarly journal   C. Trade publication
      a.   **B**___ is a publication that consists of articles written by specialists, most of them having been reviewed by peer specialists prior to publication.
      b.   **C**___is a publication that focuses on a specific profession such as video production, aviation, interior design, publishing, etc.
      c.   **A**___covers mainstream news and the articles are written mostly by staff or freelance writers.