

Information Literacy Stipend 2015

Exercise Science 448 – Research Methods

Course Description

Research Methods in Exercise Science (EXSC 448) is designed as a senior capstone class for Exercise Science majors. The purpose of the course is to prepare students to conduct independent research in the vast areas associated with exercise science. A major component of research is to properly use the library and its related resources in order to develop a solid foundation on which to build a research project.

The main project for students in EXSC 448 is to develop a research proposal that is unique and would (if completed) add to the current literature in this area. The objective for the incorporation of the information literacy is to ensure the students know how to properly use all the library resources which they can use for the project in EXSC 448, but importantly learn skills they can use for the rest of their educational and professional careers.

The students of EXSC 448 met in the library 6 times during the course of the spring 2015 semester. Prior to any meetings in the library, students took a pre-test on information literacy (Appendix A). In the initial meetings, the students met with Professor Bonnie Strohl in which she lectured and showed the students what each of the six Information Literacy Frameworks is and how the frameworks help with using and understanding the technology in the library.

The Information Literacy Framework's:

- Scholarship is a conversation
- Research as inquiry
- Authority is contextual and constructed
- Format as a process
- Searching as exploration
- Information has value

Assignments were designed for each framework to reinforce the purpose of each framework. The assignments were not individual presented to students, instead they were worked into the scheme of the project (Appendix B). In addition to learning about and incorporating the frameworks into the final research project, the students in EXSC 448 learned how to reserve and use the new learning commons on the first floor of the library. The students were excited to use these facilities and considering most of these students will be attending the University of Scranton for Physical Therapy School – they will continue to use the learning commons.

Assessment

To determine if the instruction on information literacy was successful a simple pre-test post-test model was employed. Students were given a ten question on Desire2Learn prior to the first meeting with Professor Strohl at the library. These same ten questions were the first ten questions on the EXSC 448 final exam in May 2015. Results from these pre-test/post-test are in Table 1. Post-test scores improved for 80% (8/10) of the questions. Question #2 decreased from 90.63% to 87.88% for a change of 2.75% -- this could be discussed as no change. However, question #5 decreased from 21.88% on the pre-test to 3.03% on the post-test. Based on this change, the discussion of copyright would need to be changed for next time.

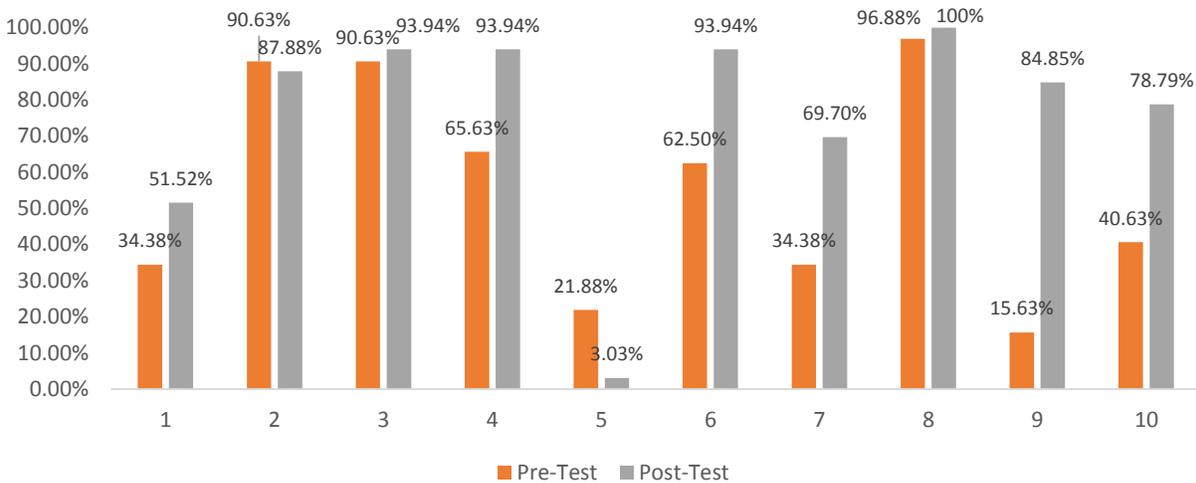


Table 1. Pre-test – Post-test results

Overall, the information literacy had a positive impact on EXSC 448 course and its students. Subjectively, numerous students indicated how much they enjoyed the library component of the course and wish they had this information much earlier in their academic careers. Empirically, the data show the implantation of the information literacy was a success. Such that one group received honorable mention in the spring library research prize. The success of the library research prize was a direct relation to the implementation of the information literacy in EXSC 448.

Appendix A

EXSC 448 Information Literacy Pretest

1. Empirical research studies are examples of the idea that scholarship is a conversation because they begin with a literature review, have an experimental design and....(Note: all the choices are true but only one addresses why research is a conversation)
 - a. tell how subjects were recruited
 - b. discuss statistical results
 - c. suggest topics for future researchers
 - d. give background information on the researcher's expertise

2. As you explore your research question, which of the following should you do if you do not find materials that are useful to you?
 - a. take pieces from best matches
 - b. adjust your search terms
 - c. ask-a-librarian
 - d. b & c

3. When you are trying to decide the best format (book, journal, website, etc.) for useful information, your first consideration is....
 - a. it matches your purpose for finding the information
 - b. it is mentioned in your textbook
 - c. it is easy to cite
 - d. it is available from the Library

4. One of the indicators of a peer-reviewed article is that...
 - a. others frequently cite the article in their own research
 - b. it is in the bibliography at the end of chapters in your book
 - c. the content of the article was approved by subject experts
 - d. it has a bibliography of the sources the author used

5. To comply with the fair use limitation on the rights of copyright owners....
 - a. use is in an educational setting
 - b. the user purchased the item
 - c. copies are not made and distributed
 - d. use is of the smallest amount possible

6. Which of these factors is the least important for deciding if an information source is useful for your research?
- author's expertise
 - extensive bibliography
 - date of publication
 - matches your search terms
7. You are not finding as many articles as you need for your project. What will not work to broaden your results?
- think of synonyms
 - use what you found to find more
 - add more search terms
 - find more things by the same author
8. Marsh, H.W., Marco, I.T& Abcy, F.H. (2002). Cross-cultural validity of the physical self-description questionnaire: comparison of factor structures in Australia, Spain and Turkey. *Research Quarterly for Exercise and Sport*, 73, 257-270.
This is a citation for:
- a book
 - an online resource
 - a journal article
 - an article in an encyclopedia
9. You found too many articles. How can you narrow your results?
- use "and" to add another concept to your search
 - think about the purpose of the research
 - take the first 10 items from your search results because they are the best
 - Use only articles from a recommended list of journals
10. A trade publication:
- is a professional version of Angie's list
 - has evidenced-based research
 - reports activities of professional organizations
 - is available free of charge as a fair trade resource

Appendix B

Information Literacy Framework	Assignment	Assignment
<i>Scholarship is a conversation</i>	Working in teams, students will research a topic provided by the instructor. The students will then have to discuss why certain items were cited more frequently and what future research should be done based on what they found.	The students will be given a professional or career-focused programs assignments that examine how practice and/or procedures evolve over time. Ask them to consider how the profession shares information.
<i>Research as inquiry</i>	Students will have to come up with a new and innovative method to use in their research proposal. They must discuss why and how this new method is better (or worse) and what new information they can gain from using this method.	A researcher/guest speaker attends the class and describes a research project from conception to conclusion. Students attempt to diagram the steps reflected in the description, and then work with the speaker to develop a robust conception of the process (recognizing that the process varies from project to project and researcher to researcher). Students then journal about how their research process relates to that of the researcher, and what changes they might make in order to attempt more authentic, knowledge-generating research experiences.
<i>Authority is contextual and constructed</i>	Give the students three or four references regarding the same topic. They will need to decide and explain which has the most "authority"	Ask the students to consider who has authority within their areas of study and the origins of that authority and explain how they made decisions.
<i>Format as a process</i>	Provide students with several URL's, articles, books, etc. and have them properly develop a proper bibliography for these sources and explain what the value is of each type of source.	Have the students to transform the bibliography they have created in one format to another format, and to write a reflection on what they needed to consider as they went through the process. (secondary) Ask students to write an I-Search paper, whereby they journal their searching processes, including key terms, tools used, and resources/results at each step. They should note how they evaluated their resources, and what information was extracted. Their journal should also reflect their feelings: success, concern, frustration, pride, etc. Pair up students, and ask them to read and comment on each other's journal, and then draw up conclusions and recommendations for their peers.
<i>Searching as exploration</i>	Allow the students to do keyword searches in several different search engines/databases and describe what the differences were and why they saw these differences. They will also have to discuss what makes the databases different and why and when you would choose a particular database.	
<i>Information has value</i>	Within the context of the students' final paper, have the students find several images, graphs, tables they might want to use. Ask the students to figure out how to gain the appropriate permission to use these images, how long it will take to gain that permission and how much it will cost to use these images. Students will discuss the differences between each image and why they think these differences exist.	Ask students to determine what information they can find about themselves or a relative online, and to assess whether steps should be taken to control this personal information.