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Report on Implementation of an Instructional Plan "Research and Information Literacy" Funded through The Information Literacy Stipend

In the fall of 2013, I worked with *EFND 501 Educational Psychology* graduate course to develop and enhance graduate students' research and information literacy skills as outlined in the document "Information Literacy Competency: Standards for Higher Education." Standards and outcomes targeted in the project are provided in Appendix A. My instructional activities were aligned with the plan that I initially proposed.

1. I collaborated with the librarian Betsy Moylan regarding all components of the plan. In summer of 2013, we discussed assignments for the course, our plan for working with students during the fall semester, and course materials (pre- and post-instruction surveys, grading rubrics, and research reports (or research logs). During the fall of 2014 semester, Betsy and I prepared and delivered two in-class presentations which addressed the skills of working with electronic resources available through the Weinberg Memorial Library and on the Internet.

2. I administered pre- and post-instruction surveys to evaluate students' entry and exit levels of the research and information literacy skills. The comparison of the two surveys revealed that as a result of the instruction students became particularly knowledgeable about educational databases, literature search, the process of preparing a research paper, and APA style. The results of the surveys are reported in Appendix B.

3. I developed a document called "Research Report" which outlines the steps of the inquiry process. Students were asked to record:
   1) initial research question that they chose to pursue;
   2) databases that they researched;
   3) search words and combination of search words that they used to locate literature sources in databases;
   4) modified research question in response to literature located;
   5) tentative list of articles considered for a review; and
   6) the beginning and end dates of the literature search.

   Students prepared a report for each research project that they submitted (three reviews and one final paper). I found this document particularly beneficial. It disciplined students in terms of locating literature through reliable sources and held them accountable for the whole process of inquiry. I have also adopted this document for my *EDUC 223 Educational Psychology* undergraduate course where students are required to complete several research projects (spring 2014). The outline of the research report is enclosed in Appendix C.

4. I developed two rubrics to assess students' research papers, one for research reviews and one for a final paper. The rubrics assess students' skills in completing the process of inquiry and disseminating its results. The rubrics are enclosed in Appendix D.

5. I prepared and delivered two in-class presentations that communicated to students the process of preparing article reviews and a final (summative) research paper. The materials used for the presentations are enclosed in Appendix E.

Overall, I found the work on developing research and information literacy skills very beneficial. Perhaps, the best testimony of the effectiveness of this project is the students' feedback that I received in the post-instructional survey (Appendix B). In response to a request to provide some comments regarding their learning of preparing a research paper students wrote:

"I really enjoyed doing research. I find it to be an excellent method for learning material and a pleasant alternative to the traditional methods of learning. Likewise it is a nice reflection of the real world. I would defiantly recommend it for future classes."

"The most beneficial part of my experience writing a research paper was the explicit instruction we had before a review was due. The most helpful was the workshop we had for our final paper, which I also think will be the most challenging."

"I think this was a great way to encourage us to explore areas we were personally interested in, not just the basics we covered in class."

"I gained more knowledge about issues in education. Improved my thinking ability and writing ability as well."

In addition, I utilized materials developed for this project in my undergraduate classes. For example, in *EDUC 223 Educational Psychology* students prepare a research report upon completion of their literature review papers. A grading rubric that I use to assess three writing assignments in EDUC 223 is also structured around information literacy competencies addressed in this project.

Appendix A

Table 1. Standards and related outcomes adopted from the "Information Literacy Competency: Standards for Higher Education" with reported assessments.

Standards (abridged)	Outcomes (abridged)	Assessments Results
Standard 1: Students determine the nature and extent of information needed.	Student: 1.a. identifies a research topic 1.b. develops a thesis statement 1.c. explores general information sources 1.d. modifies the information needed to achieve a manageable focus 2.c. defines a plan to acquire information 4. a. reviews the initial information for further clarification of the question.	All students completed research reports for three review papers and a final summative paper. Pre- and post-instruction survey (tables 2 & 3).
Standard 2: Students access information effectively and efficiently.	2.a. develops a research plan 2.b. identifies keywords, synonyms 3.c uses specialized on-line or in –person services available at the institution 4. refines the search strategy if necessary 5. extracts, records, and manages the information and its sources	All students completed research reports for three review papers and a final summative paper Pre- and post-instruction survey (tables 2 & 3).
Standard 3: Students evaluate information critically and incorporate into existing knowledgebase.	1 a – c (reads, restates, quotes) 2 a- d (evaluates) 3 a. recognizes interrelated concepts 3b. extends initial synthesis 4c. draws conclusions 4.f. integrates new information with previous information or knowledge	All students completed three reviews and a final research paper. Pre- and post-instruction survey (table 3).
Standard 4: Students use information effectively to accomplish a specific purpose	2.a. maintains a journal or logs activities related to the information seeking, evaluating and communicating process 3.d. communicates clearly and with a style that supports the purposes of the intended audience	All students maintained a log of activities (research report) related to the search/usage of information. Pre- and post-instruction survey (table 3).
Standard 5: Students use information ethically and legally	3.a. selects an appropriate documentation style and uses it consistently to cite sources.	Students were instructed in APA style, provided with necessary hard copy and on-line resources, and were evaluated on its usage in their assignments. Pre- and post-instruction survey (table 4).

Appendix B

Pre- and Post-Instruction Survey Results Pertaining to Students' Progress towards Standards.

Table 2. Evidence of meeting Standard 1(Students determine the nature and extent of information needed) & Standard 2 (Students access information effectively and efficiently).

Question 1	**Pre-instruction survey:** Didn't pose a question about prior training in literature search	**Post-instruction-survey:** Did your instructor provide training about how to locate literature for research projects?	**Post-instruction-survey:** Did you find the training in literature search helpful?
Yes	-	100 % (11 responses)	100% (11 responses)
No	-	0 % (0 responses)	0% (0 responses)
Some	-	0% (0 responses)	0% (0 responses)
Question 2	**Pre-instruction survey:** Do you keep a log of search terms/keywords to locate necessary information?	**Post-instruction survey:** Did you keep a log of search terms/keywords to locate necessary information?	**Post-instruction survey:** Did you find completing a research report helpful for monitoring your literature search?
Yes	41.67% (5 responses)	54.55% (6 responses)	63.64% (7 responses)
No	58.33% (7 responses)	18.18% (2 responses)	18.18% (2 responses)
Sometimes	-	36.36% (4 responses)	18.18 % (2 responses)

Table3. Evidence of meeting Standard 2 (Students access information effectively and efficiently). List of databases reported in pre and post-instruction surveys.

Pre-instruction survey	**Post-instruction survey**
- the library - I usually use the databases accessible through the library's website. - I have used several library resources to locate articles and google scholar. I have had research papers that required I used sources that were only in print aka published articles and book. - Google, JStor, Wikipedia, and whatever I may happen to come across by chance that seems relevant - Either the University of Scranton's library database or Google Scholar. - I usually go to the library's website, and use educational databases- mostly EBSCO. - MLA Bibliograhry Project Muse - u of s database and google - google scholar proquest - The library website thing. Um... Project Muse. Proquest. I don't recall. - Library: EBSCO Host	- Academic Search Elite Education source Proquest Education Proquest Psychology - Eric PsychINFO - Ebsco Psy(Articles) ProQuest - Academic Search Elite EBSCO - library's database - PsychArticles (EBSCO) ProQuest Psych Articles ERIC (EBSCO) - EBSCO for Education - Academic Search Elite (EBSCO) - Education, psychology and sociology. - ebsco - EBSCO - EBSCO, Proquest, Google scholar... in that order.

Table 3. Evidence of meeting Standard 3 (Students evaluate information critically and incorporate into existing knowledgebase) & Standard 4 (Students use information effectively to accomplish a specific purpose).

Question 3:	Pre-instruction survey Did you receive prior training about how to prepare a research paper?	Post-instruction survey Did your instructor provide training about how to prepare a research paper?	Post-instruction survey: Did you find training in writing research paper helpful?
Yes	58.33% (7 responses)	90. 91 (10 responses)	99.90% (10 responses)
No	8.33 % (1 response)	0 % (0 responses)	0 % (0 responses)
Some	33.33 (4 responses)	9.09 (1 response)	9.09% (1 response)

Table 4. Evidence of meeting Standard 5 (Students use information ethically and legally).

Question 4: Do you feel confident in applying APA style to formatting your papers (quotations, citations, references, cover page, abstract)?	Pre-instruction survey	Post instruction survey
Yes	25% (3 responses)	72.73% (6 responses)
Some aspects of APA, but not others	41.67% (5 responses)	27.27% (4 responses)
No	33.33% (4 responses)	0%

Responses to an open-ended survey question: pre-instruction

Question: Provide some other comments about your experience of writing a research paper if you think they are important for the instructor to know (e.g., what you enjoy about the process, what parts of the process you find particularly challenging, and some other comments).

- I am not a pro when it comes to writing a research paper, I know I will learn in this class to become a better researcher. I enjoy the knowledge I acquire during the process. What is challenging is the time consumption.
- I do not like to start a paper and not finish it right away. This becomes a problem with lengthy papers.
- I dislike long papers but I think the length of this research paper will allow me to relax and enjoy the process
- I enjoy the unfolding process that happens before my eyes as I write.
- The most challenging part for me is finding an appropriate topic to do research on.
- I don't necessarily enjoy writing research papers, I find comparing articles and writing/comparing them difficult. Over the past years, I am much better at it.
- Not particularly sure how to write a research paper
- Frequently i find myself researching information and find multiple topics that are either more interesting, or create a much larger issue for me to identify and research. pretty great time.
- The process is quite stressful. I can create a 5 page paper in 3 hours but it has to be during the last 4 hours possible before the due date. This bad habit has followed me during my entire graduate level of college.
- The task of writing a research paper strikes fear in the hearts of all students because it is such a daunting task. The fear of knowing or not knowing what to write or what information to use or if you have enough... is frightening.
- The bulk of my experience is from our statistics class. I found the process enjoyable and would like to further my knowledge.

Responses to an open-ended survey question: post-instruction

Question: Provide some other comments about your experience of writing a research paper if you think they are important for the instructor to know (e.g., what you enjoy about the process, what parts of the process you find particularly challenging, and some other comments).

- It was sometimes difficult finding a topic that was interesting to me. On the other hand, it was frustrating to have found a topic and to be unable to find literature about it. Nevertheless, I found writing these papers rewarding and highly beneficial in terms gaining knowledge.
- I really enjoyed doing research. I find it to be an excellent method for learning material and a pleasant alternative to the traditional methods of learning .Likewise it is a nice reflection of the real world. I would defiantly recommend it for future classes.
- Research papers are completely opposite from anything that i have ever written. However i was comfortable with the transition into research papers even actually enjoying it. I like summarizing and analyzing the articles, seeing how everything connects and plans out.
- would have been nice if we were explicitly told the expectations of the apa format prior to the first paper, rather than after. Or at the very least an option to correct for some amount of points back. researching was fine. I enjoy looking up relevant information for topics   I'm interested in.
- The most beneficial part of my experience writing a research paper was the explicit instruction we had before a review was due. The most helpful was the workshop we had for our final paper, which I also think will be the most challenging.
- I think this was a great way to encourage us to explore areas we were personally interested in, not just the basics we covered in class.
- I really enjoyed learning about the APA formatting, for some reason it was appealing to me. Starting the article reviews was tough but once I started the paper, it became enjoyable.
- I gained more knowledge about issues in education. Improved my thinking ability and writing ability as well.
- I like writing.
- Group work was lots of fun.
- Writing papers can be tedious and so can looking up articles. Some topics were a lot easier to address than other however, all in all, the effort put into the writing and research process was fair. Its not my favorite thing, but it could be a lot worse. Kudos.

Appendix C

Research Report

This report is a part of your assignment. As you work on your review, respond to these questions and provide details when necessary. Thank you!

1) What was your initial research question that you chose to pursue?

2) List of databases that you researched.

3) List of search words and combination of search words that you used to locate literature sources in databases.

   a)
   b)
   c)
   d)

4) What was your modified research question in response to located literature?

5) How many articles did you approximately consider for your review?

6) Please provide the beginning and the end dates of the literature search.

Total – 3 points (1/2 in response to each question)

Research Review

Directions for the assignment:

By the end of each module, students will prepare a research paper based on the review of three peer-reviewed articles around the topic discussed in a module. The goal of the paper is to develop in-depth understanding of a topic.

Students should use the following databases to locate articles: Academic Search Elite (EBSCO Host), Education Full Text, ProQuest Education Journals, and ProQuest Psychology Journals. Readings assigned for this or other courses <u>cannot be used</u> as one of the three sources. Students will include empirical studies as well as conceptual papers in their review. All papers should be prepared in <u>APA style, 6th edition</u> and be 8-10 pages long (double-spaced) including a cover page, an abstract, and a reference page. <u>The grading rubric is attached.</u>

Each review will be supplemented with <u>a research report.</u> The directions for the research report follow the grading rubric for research reviews.

Grading Rubric for Reviews

Criteria	Gradation of quality and points assigned
Introduction	1. No background information for the topic is presented – 0 2. Some background information is presented, but presentation is rather sketchy – 1/2 3. Detailed background information is presented – 1 **Total – 1 point**
Research Question	1. Research question is not stated – 0 2. Research question is vague – ½ 3. Research question is clearly formulated – 1 **Total – 1 point**
Analysis of sources	1. The source is introduced, but substantial details in the analysis of content and quality of the research are missing – 0 2. The source is introduced, but some important details in the analysis of content and quality of the research are missing – 1 3. The source is introduced and the analysis has been completed in full – 2 **Total 3 sources – 6 points**
Flow of the report	1. The report has some direction, but some parts are disjointed – 0 2. Most of the sections are tied together, but some areas lack transition from one section to the next – ½ 3. All sections are tied together coherently – 1 **Total – 1 point**
Conclusion	1. The conclusion is very generic; no attempts have been made to tie conclusion to either articles under investigation or personal experience – 0 2. The conclusion ties together either with articles under investigation or personal experience – 1/2 3. The conclusion is comprehensive and ties together with articles under investigation and personal reflection is provided – 1 **Total – 1 point**
Abstract	1. The paper does not have an abstract - 0 2. The abstract fails to capture the essence of the review – ½ 3. The abstract concisely captures the essence of the review – 1 **Total - 1 point**
APA style	4. No attempts have been made to apply APA style to cover page, in –text quotation or citations, and reference page – 0 5. Some components of the paper are prepared in accordance with the requirements; one or two major errors have been identified – ½ 6. Major components of the APA style are fulfilled. Not more than two minor errors have been identified – 1 **Total – 1 point**

Final Paper

Directions for the assignment:

In this paper, students will present their summary of research on an independently identified topic. While previous research reviews were designed to help students develop in-depth expertise of a particular topic, the goal of the final paper is to develop the skill of presenting a synthesis of literature on a particular topic.

In introduction, students will introduce the reader to the problem and explain the reason for selecting the topic. In the main body of the paper, students will present the synthesis of existing research on a topic around 3 or 4 main ideas as identified in the articles reviewed. In conclusion, students will provide a succinct summary of the review and will reflect upon how studying the topic contributed to their professional growth.

The paper should be based upon analysis and synthesis of at least 7 to 9 resources. At least 4 of the resources should be articles not previously used for reviews or as required reading materials. For this paper, you may use one of your research papers as a starting point. Students' final paper should be 10-12 pages long and should include a cover page, an abstract, a reference page, and written in APA style (6th edition). The grading rubric is attached.

Grading Rubric for Final (Summative) Paper

Criteria	Gradation of quality and points assigned	Instructor's comments
Introduction	1. No background information for the topic is presented - 0 2. Some background information is presented, but presentation is rather sketchy - 1 3. Detailed background information is presented - 2 **Total – 2 points**	
Research question	1. Research question is not stated - 0 2. Research question is not clearly stated – ½ 3. Research question is clearly formulated - 1 **Total – 1 point**	
Overarching ideas (themes) (at least 3 ideas)	*For each overarching idea in your paper:* 1. The idea (theme) is not clearly stated and no supporting sources are provided - 0 2. The idea (theme) is not clearly stated or no supporting or relevant sources are provided - 1 3. The idea (theme) is clearly stated and supporting and relevant sources are provided - 2 **Total (3 ideas): 6 points**	
Supporting details (quotes) to the identified ideas (themes)	*For each overarching idea in your paper:* 1. No supporting details (or quotes) - 0 2. No clear link between the identified ideas and supporting details (quotes) - 1 3. Supporting details are relevant - 2 **Total (3 ideas): 6 points**	
Flow of the report	1. The report has some direction; many parts are lacking transitions and/or disjointed - 0 2. Most of the sections are tied together; some parts are lacking transition - ½ 3. All sections are tied together coherently - 1 **Total – 1 point**	
Conclusion	1. The conclusion is generic and is not tied back to the research question - 0 2. The conclusion is somewhat connected with the research question, but no or some reflection is provided – 1 3. The conclusion is connected with the research question and personal reflection is provided - 2 **Total – 2 point**	
Abstract	1. The paper does not have an abstract - 0 2. The abstract fails to capture the essence of the review – ½ 3. The abstract concisely captures the essence of the review – 1 **Total - 1 point**	
APA style	4. No attempts have been made to apply APA style to cover page, abstract, in –text quotation or citations, and reference page – 0 5. Some components of the paper are prepared in accordance with the requirements; one or two major errors have been identified – ½ 6. Major components of the APA style are fulfilled. Not more than two minor errors have been identified – 1 **Total – 1 point**	

Total – 20 points

Appendix E

Guidelines for Preparing 1st Literature Review

What is the purpose?
Develop expertise on a particular topic.
Making sense of the body of research on a topic.

Categories of Literature
Theoretical
Research
Practice
Policy

Introduction
Why is the topic important?
Provide some background information that sets the paper in a larger context.
Why is it important to you?
You may provide some personal experience that led you to the topic.

Research Question
Research question - a **clear, focused, concise, complex and arguable** question around which you center your research. You should ask a question about an issue that you are genuinely curious about (Writing Center/George Mason University). http://writingcenter.gmu.edu/?p=30

Body of your paper
Results as presented in study 1
Supporting details/quotes;

Results as presented in study 2;
Supporting details/quotes;

Results as presented in study 3
Supporting details/quotes.

Conclusion
Summarize how studies under investigation provided a response to your research question.
Or
Summarize how studies under investigation provided support to your thesis statement.
Connect with your personal experience (if you wish).
Reflect on significance of investigation to your professional/personal growth.

Resources
Aveyard, H. (2007). *Doing a literature review in health and social care: A practical guide.* (2nd Edition)/E-book.
Writing Center at George Mason University
Owl Lab Purdue University

Guidelines for Preparing a Final Research Paper

Introduction
1. Think of your research question (or topic that you are intrigued in)
   and
2. Why this research question/topic is important.

Synthesis of Literature
1. Put together all articles that you found relevant to your research question/topic.
2. Sort available articles into groups: (a) literature review /discussion articles; (b) empirical investigations; (c) others.
3. For each group of articles establish important points:

Literature Reviews/Discussions	Empirical Investigations
Article 1: Discussion point 1 Discussion point 2 Discussion point 3	Article 1: Aim of the study Participants Method Results • XXX • XXX •
Article 2: Discussion point 1 Discussion point 2 Discussion point 3	Article 2: Aim of the study Participants Method Results • XXX • XXX •

4. Look for similarities across identified points and group similar points into themes.
5. Develop a list of themes (or overarching ideas).
   The main body of your paper will be structured around these themes.
6. Provide some supporting examples (or quotes) for each theme.
   Supporting examples should be illustrative, but should not present all the details about the study.
7. Identify points or findings that are unique and haven't been reported in majority of studies.

Conclusions:
1. State how your literature review provided a response to your research question.
2. State about some limitations (limited amount of studies being reviewed).
3. State how your findings fit a larger problem.
4. Reflect how the review informed you/shaped you as a future professional.