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Is Their Foundation Solid Enough to Build On: An Investigation into the Information-Seeking Skills and Self-Efficacy Levels of New Nursing Students

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Background

- Nurses must be able to effectively identify, analyze, and synthesize evidence. (AACN, 2008; ACRL, 2000)
- Literature regarding confidence levels, self-efficacy, and information literacy skills was reviewed. (Freeman, 2004; Gross & Latham, 2012; Swenson-Britt & Reineck, 2009)
- Tools to assess confidence and self-efficacy of information literacy skills were explored. (Kurbanoglu, 2003; Stokes & Urquhart, 2011; Geffert & Christensen, 1998)

Objective

To compare the information-seeking skills and self-efficacy levels of newly enrolled nursing students at the start of their first semester of coursework to their information-seeking skills and self-efficacy levels at the end of their first semester of coursework.

Methods

- Setting was a mid-sized, faith-based university located in the Midwest.
- Data was gathered from newly enrolled nursing students in a baccalaureate, masters, and doctorate in nursing practice program.
- The 28-item Information Literacy Self-Efficacy Scale (ILSES) developed in 2006 by Serap Kurbanoglu was administered to newly enrolled nursing students at the start and at the end of the fall 2012, summer 2013, and fall 2013 semesters.

Valparaiso University – Research Project
Information Seeking Skills and Self-Efficacy Levels of Nursing Students

This scale has been prepared to determine your level of efficacy on issues related to finding, using and communicating information. Please circle the most suitable choice for you. Thanks for your participation!

1 – Almost Never True
2 – Usually Not True
3 – Sometimes but Infrequently True
4 – Occasionally True
5 – Often True
6 – Usually True
7 – Almost Always True

I feel confident and competent to:

	Almost Never True	Usually Not True	Sometimes but Infrequently True	Occasionally True	Often True	Usually True	Almost Always True
Define the information I need	1	2	3	4	5	6	7
Identify a variety of potential sources of information	1	2	3	4	5	6	7
Locate search strategies by subject, language and date	1	2	3	4	5	6	7
Initiate search strategies by using keywords and Boolean logic	1	2	3	4	5	6	7
Decide where and how to start for information I need	1	2	3	4	5	6	7
Use different kinds of print sources (i.e. books, periodicals, encyclopedia, directories, etc.)	1	2	3	4	5	6	7
Locate information sources in the library	1	2	3	4	5	6	7
Use the library catalog	1	2	3	4	5	6	7
Locate resources in the library using the library catalog	1	2	3	4	5	6	7
Use Internet search tools (such as search engines, directories, etc.)	1	2	3	4	5	6	7
Use different kinds (types) of libraries	1	2	3	4	5	6	7
Use many resources at the same time to conduct research	1	2	3	4	5	6	7
Determine the appropriateness, currency and reliability of the information sources	1	2	3	4	5	6	7
Select information most appropriate to the information needed	1	2	3	4	5	6	7

I feel confident and competent to:

	Almost Never True	Usually Not True	Sometimes but Infrequently True	Occasionally True	Often True	Usually True	Almost Always True
Identify points of agreement and disagreement among sources	1	2	3	4	5	6	7
Evaluate web sources	1	2	3	4	5	6	7
Examine search information with previous information	1	2	3	4	5	6	7
Interpret visual information (i.e. graphs, tables, diagrams)	1	2	3	4	5	6	7
Write a research paper	1	2	3	4	5	6	7
Determine the content and form the parts (introduction, conclusion) of a persuasive written work	1	2	3	4	5	6	7
Create bibliography records and organize the bibliography	1	2	3	4	5	6	7
Create bibliography records for Internet pages or resources (i.e. books, articles, web pages)	1	2	3	4	5	6	7
Make correct and use accurate value for the unit	1	2	3	4	5	6	7
Choose a format (i.e. written, oral, visual) appropriate to communicate with the audience	1	2	3	4	5	6	7
Learn from my information problem solving experience and improve my information literacy skills	1	2	3	4	5	6	7
Critique the quality of my information seeking process and its products	1	2	3	4	5	6	7

Please tell us about yourself!

Gender: ☐ Female ☐ Male ☐ Choose not to respond

Age: ☐ 17-19 ☐ 20-24 ☐ 25-29 ☐ 30-34 ☐ 35-39 ☐ 40-44 ☐ 45-49 ☐ 50-54 ☐ 55-59 ☐ 60+ ☐ Choose not to respond

What College of Nursing program are you enrolled in?

☐ Bachelor of Science
☐ Master of Science
☐ Doctor of Nursing Practice (DNP)
☐ Choose not to respond

How familiar are you with Valparaiso University?

☐ This is the first time I've enrolled as a student at Valparaiso University.
☐ I've previously been enrolled in other courses at Valparaiso University.

Prior to this semester, how familiar were you with Valparaiso University's information resources?

(Circle all that apply.)

☐ I was very familiar with using a college/university library for academic research.
☐ I was familiar with using a college/university library for academic research.
☐ I have used a college/university library in 1-5 years.
☐ I have used a college/university library in 6-10 years.
☐ I have used a college/university library in 11-15 years.
☐ I have used a college/university library in 16+ years.
☐ I have not used a college/university library in 16+ years.
☐ Choose not to respond

During this past semester, how have you learned about using the library or how to find information?

(Circle all that apply.)

☐ I attended a library class here at VU focused on using information resources.
☐ I attended multiple library classes here at VU focused on using information resources.
☐ I attended a VU 2013-2014 session and obtained help from a VU librarian staff.
☐ I was helped by a librarian or someone else working at the Writing Center (OCLC).
☐ I was helped by a librarian or someone else working at the Christian Center (OCLC).
☐ I was helped by a librarian or someone else at another library.
☐ I was helped by a parent.
☐ I was helped by a classmate or friend.
☐ I taught myself.
☐ Choose not to respond

At the beginning of this course, how confident were you in your ability to locate information appropriate for your assignments, projects, research and papers using a range of sources?

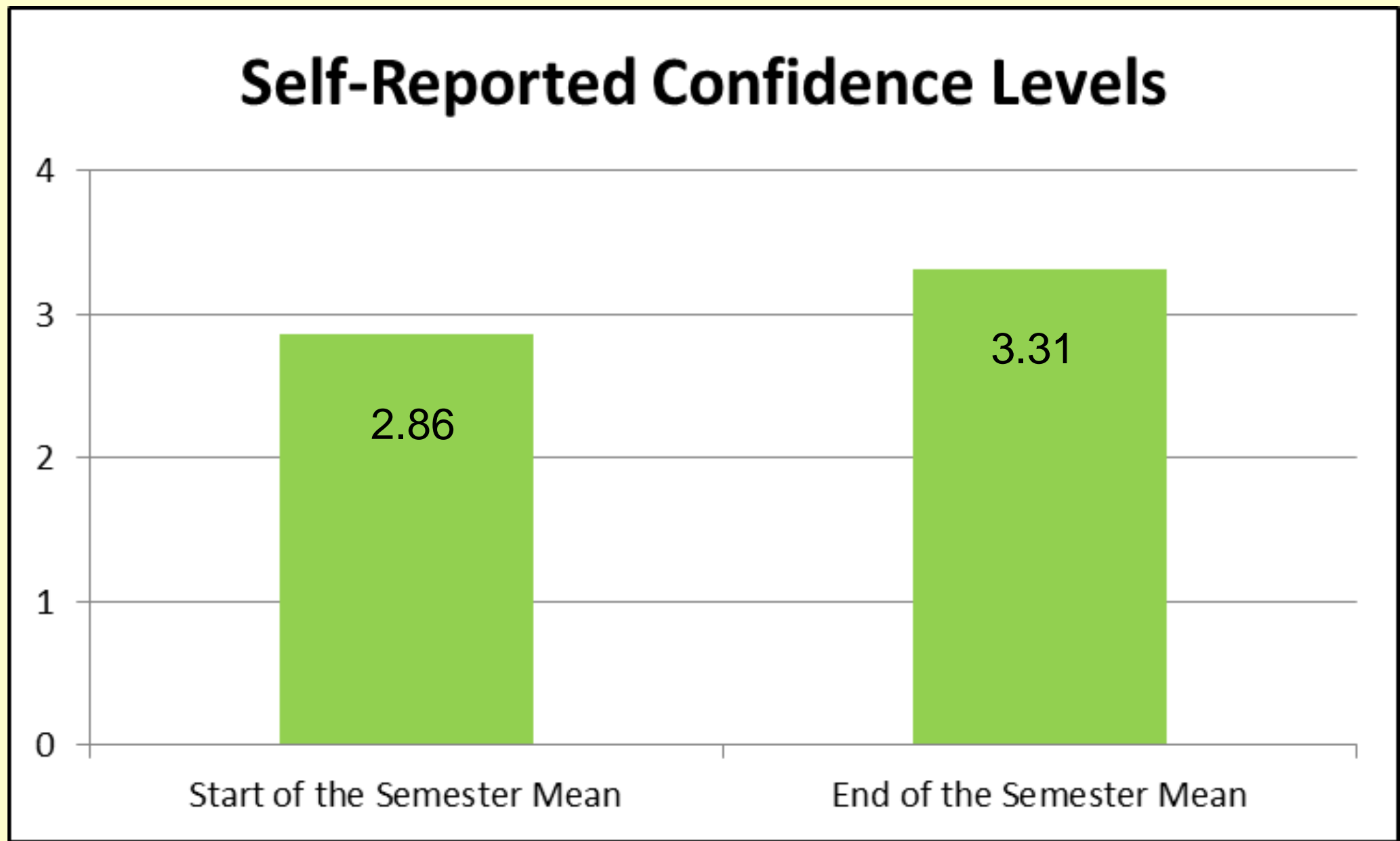
☐ Very confident
☐ Fairly confident
☐ Not very confident
☐ Not at all confident

How confident are you NOW in your ability to locate information appropriate for your assignments, projects, research and papers using a range of sources?

☐ Very confident
☐ Fairly confident
☐ Not very confident
☐ Not at all confident

Thank you for your input with this project!

Results – Self-Reported Confidence Levels



- The self-reported confidence level mean at the start of the first semester (n=227) was 2.86 and 3.31 at the end of the semester (n=108).
- An independent-samples *t* test comparing the mean confidence level from the start of the semester participants to the end of the semester participants found a significant difference between the mean of the two groups ($t(333) = 6.474$, $p < .05$). The mean of the end of the semester group was significantly higher ($m=3.31$, $sd=.63611$) than the mean of the start of the semester group ($m=2.86$, $sd=.58555$).

Results – Self-Reported Information Skills Interventions Utilized

- Students reported using a variety of interventions to learn how to find information or use the library in their first semester of coursework.
- The intervention most reported was attendance at a library led lab session/class – 62% of all students attended a lab session and 43% attended a class. The second most reported intervention was the students themselves – 34% of all students reported teaching themselves.
- A multiple linear regression was calculated to predict participants' self-reported confidence levels based on their use of 11 interventions. A significant regression equation was found ($F(12,95) = 1.947$, $p < .038$), with an R^2 of .197.
- Being helped by a classmate or friend was a significant predictor of confidence levels, $p < .010$. No other intervention was a significant predictor of end of the semester confidence.

Interventions Utilized During First Semester (n=108)		
	Number	%
Attended an undergraduate nursing library/lab session at VU	67	62%
Attended a library class at VU	46	43%
Taught myself	37	34%
Helped by a classmate or friend	30	28%
Helped by a professor	23	21%
Met, talked with or emailed the Writing Center	23	21%
Helped by a librarian or someone else at another library	20	19%
Met, talked with or emailed the VU librarian	17	16%
Met, talked with or emailed someone working at the VU library	12	11%
Attended multiple library classes at VU	10	9%
Chose Not to Respond	4	4%
Helped by parent	1	1%
Note: Percentage does not add to 100 because of multiple answer possibilities by each respondent.		

Conclusions

- Nursing students in their first semester of coursework are fairly confident in their ability to locate information appropriate for assignments, projects, research, and papers.
- Utilizing a combination of information literacy skills interventions throughout the first semester of coursework resulted in a significant increase in students' confidence in learning how to find information or use the library by the end of the semester.
- Peer teaching and learning can make a significant difference in students' confidence in learning how to find information or use the library.
- Additional research is needed to correlate confidence in information-seeking skills to the actual information literacy skills of newly enrolled nursing students within their first semester of coursework.

Recommendations

- Think-pair-share and other active peer-to-peer learning strategies should be incorporated within library led lab sessions/classes.
- To better correlate students' actual skill level with confidence level, self-efficacy and confidence assessment tools should be paired with actual skills assessment tools.
- Students are fairly confident in learning how to find information or use the library at the start of their first semester. Heightening awareness of their actual skill limitations might lead to increased participation in information skills interventions.

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Respondent Demographics Eligible Participants – 285 Newly Enrolled Nursing Students		
	Start of Semester Sample	End of Semester Sample
Number of Respondents from Eligible Participants	227 (80%)	108 (38%)
Sex		
Female	195 (86%)	86 (80%)
Male	29 (13%)	15 (14%)
Chose Not to Respond	3 (1%)	7 (6%)
Age		
17-19 Years	80 (35%)	25 (23%)
20-24 Years	68 (30%)	39 (36%)
25-29 Years	25 (11%)	18 (17%)
30-34 Years	12 (5%)	7 (6%)
35-39 Years	11 (5%)	6 (6%)
40-44 Years	13 (6%)	6 (6%)
45-49 Years	13 (6%)	2 (3%)
50-54 Years	0	1 (1%)
55-59 Years	3 (1%)	1 (1%)
60+ Years	0	0
Chose Not to Respond	3 (1%)	2 (2%)