TO: Charles E. Kratz
             Dean of the Library and Informational Fluency

FROM: John A. Ruddy, CPA, CFA

DATE: March 11, 2014

SUBJECT: 2013/2014 Information Literacy Research and Report

I. Introduction

      The below is a follow-up report in regards to the information literacy proposal submitted on November 1, 2013 (See Appendix A- Information Literacy Proposal 11.01.13). It is also a follow-up to your letter of response dated December 10, 2013 (See Appendix B- CK_InfoLitStipend). This report details the efforts and results to integrate information literacy into the cross listed accounting course in the Kania School of Management (KSOM) titled "ACC 463" - Financial Statement Analysis & Research and "ACC 527" - Financial Reporting and Research. The course was offered and completed during Intersession 2014. Herein, the course is referred to as "ACC 463/527".

      As you are aware, information literacy regards the ability to know when there is an information need. According to the 1989 Presidential Committee on information literacy, it also regards the ability to locate, evaluate and effectively use needed information. In regards to ACC 463/527, the primary information literacy goal was to strengthen student research skills concerning financial statement and company financial analysis. However, the information literacy skills obtained by students during the course might also be applied more broadly in other facets of student life. It might also help students deal with the ever increasing technological availability within society. Whether an information need involves academic, personal or professional topics, students face an overwhelming selection of information sources and an astounding amount of data. This information "overload" forces students to 1.

This remainder of this report is organized as follows: Section I provides a brief introduction on Information Literacy as well as a layout of the remainder of the paper. Section II details the University's inter-college collaborative efforts on matters pertaining to information literacy for ACC 463/527. Section III details the ACC 463/527 course requirements and components that pertain to information literacy. Section IV provides the information literacy results from student entrance and exit questionnaires. This includes both summary statistics and an initial statistical analysis. Section V provides the limitations of the current resear

III. Course Requirements

To complete the ACC 463/527 course requirements, students were required to submit a total of ten assignments. The assignments were split into three categories: 1. Questionnaires on Information Literacy - at the course onset and completion, students responded to twenty statements regarding their research abilities; 2. Research reports - once per week for four weeks students conduct research by reviewing accounting and financial topics in peer reviewed journals; and 3. Financial Statement and Company Analysis - once per week for four weeks, students applied the theory derived from their research reports to analyze a company's financial statements. The following (Table 1) describes each of the required submissions:

Description	Number
Entrance and Exit Questionnaire on Research Abilities	2
Research Efforts and Reports on Financial Topics	4
Financial Analysis Reports on Company Financial Statements	4
Total Number of Assignments Submitted	10

asked students "When given a research assignment, I feel confident in determining the topic that I need to search." The following (Table 2) provides a copy of the Likert scale:

1	2	3	4	5	6	7
Strongly Disagree			Neither Agree nor Disagree			Strongly Agree

Both an entrance and exit questionnaire format was utilized to determine changes in student feelings about research and assignments from the beginning to completion of the course. Between the completion of the entrance and exit questionnaires, students were provided research training. First and as was indicated above, the students were provided with Professor Moylan's on-line guidance on conducting financial research. Second, voluntary workshop sessions with students were held 1-2 times per week in Brennan Hall's Alperin Financial Center. Lastly, the workshop sessions were supplemented with individual tutorial sessions. Details on the results of the entrance and exit questionnaires are provided in Section III below titled "Information Literacy Results".

2. Research Efforts and Reports involved database searches and subsequent research efforts on various financial topics of the student's selection. Each student selected a different topic to research each week. The instr1-rfforts u7 T, whi research.286(s)]TJ 10.8.72

Different financial statement analysis materials covered in each of the course's four weeks. The submissions were graded using the KSOM rubric for writing intensive courses (See Appendix F - Writing Rubric). The course materials mirrored the material provided by the course textbook Financial Reporting, Financial Statement Analysis and Valuation: A Strategic Perspective, 7th Edition, Cengage Learning by Wahlen, Baginski and Bradshaw. The course material covered each week, as taken from the course syllabus (Table 3), was as follows:

| Date	Topic & Material	Corresponding Textbook Chapters
01/06-01/12	Introduction, Company Overview, Industry Analysis and Ratio Analysis	Chapters 1, 2, 4 and 5.
01/13-01/19	Statement of Cash Flows: Financing, Investing and Operating Activities	Chapters 3, 6, 7 and 8.
01/20-01/26	Pro Forma Analysis: Dividend Discount Models	Chapters 10 and 11.
01/27-02/01	Cash Flow vs. Earnings Based vs. Relative Value Approaches to Valuation	Chapters 12, 13 and 14.

IV. Information Literacy Results

Background – Nine students participated in the 2014 Intercession ACC 463/527 course. All nine of the students completed an entrance questionnaire and all nine of the students completed the exit questionnaire. Each of the questionnaires comprised 5% of the student's final grade and thus in total, the questionnaires combined to be worth a total of 10% of each student's final grade. The questionnaire submissions were reviewed for completeness and full credit was awarded for a complete submission. All of the submissions were evaluated and deemed to be sufficiently complete.

Summary Statistics – As was noted above, an entrance and an exit questionnaire were provided to each student at the beginning and end of the course. A complete sample questionnaire can be located in Appendix S. Summary statistics of the entrance and exit questionnaire are included in Appendix E. The summary statistics include four items: 1. the mean response of the entrance and exit questionnaire: 2. the variance of the entrance and exit questionnaire responses; 3. the difference in the mean of the entrance and exit questionnaire responses; and 4. the correlation coefficient between the entrance and exit questionnaire responses. An explanation of the results provided in Appendix E is as follows: when the nine students completed an entrance and exit questionnaires, they could respond with an answer ranging from 1 for "strongly disagree" to 7 for "strongly agree". Using question 1 as an example, the mean of the nine responses was 5.11 (column 1) and the variance was 0.61 (column 2). When the nine students answered the same question on the exit questionnaire, the mean response was 6.00 (column 3) and the variance was 0.75 (column). Thus, the question one difference in the averages between the entrance and exit questionnaire was 0.89 (col

coefficient across the twenty questionnaire responses was approximately 66.5%. This relationship is conveyed graphically in Figure 1 below, which contains a scatter plot diagram of all the responses for all twenty questions (180 data points).   The question with the highest correlation between the entrance and exit questionnaire responses was number 15, which had a correlation coefficient of approximately 85.7%. This is conveyed graphically below in Figure 2 below. Both the question 15 and overall results indicate a high degree of association between the entrance and exit questionnaire responses.

Figure 1 - Scatter Plot Diagram with line of best fit
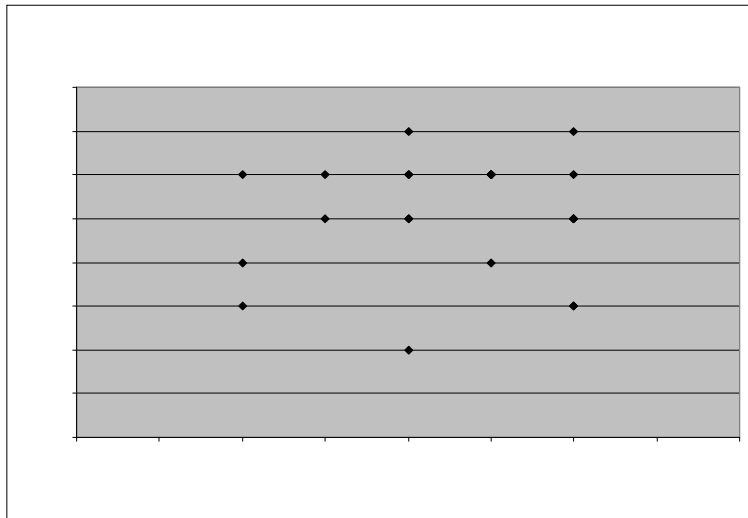
The high degree of association between the entrance and exit questionnaire responses indicates that pre-existing student differences explain much of the variable differences. The relation between entrance and exit questionnaire responses impacts the appropriate statistical methods used to analyze the data. This is one the topics covered in the following section on inferential statistics.

Inferential Statistics While the above summary statics quantify the results of the entrance and exit questionnaires as well as the direction of change between

$_1 > 0$). This indicates that only an increase in proficiency is considered extreme and unlikely. It also means that it's highly unlikely that providing stude

summary, 45% (nine out of twenty) of the Likert items showed statistical significance at a 95% confidence level for an increase in information literacy during ACC 463/527.

V. Summary, Limitations and Implications for Future Research

The above information literacy research was conducted during a course held in January 2014. The course requirements involved three facets: data collection via questionnaires, student research into peer reviewed journals and research application by analyzing company performance. While the research involved only nine students, the data collected prior to and after the course suggest an improvement in information literacy. More specifically, both the summary and inferential statistics of the entrance and exit questionnaires data indicate students improved their information literacy during ACC 463/527. While the researchers noted positive results when conducting their research, several limitations exist in the research, which are detailed as follows:

The first and most obvious limitation of the research was the small sample size of only nine students. While the nine students in the course showed improvement in research capabilities, the question as to whether similar results would be achieved across the larger sample sizes should be considered. Potential impacts include whether the small class size may have enabled students a higher degree of comfort and or increased access to instruction during the course. This limitation could be addressed by increasing the class size when attempting to replicate the results achieved during the ACC 463/527 course.

A second research limitation was that the results were obtained during a one month focused time period between the fall and spring semesters ("Intercession"). The question as to whether the results could be achieved during either the fall or spring semesters needs to be considered as well. Several of the students commented on how having the research course without having to be concerned with four or five other courses enabled them to complete the training more easily. This limitation could be addressed by repeating the questionnaires and training during the spring and fall semesters. The question as to whether researchers can replicate the results achieved in the above research needs to be considered. The researchers plan to attempt this during the Spring 2014 semester.

Lastly, all nine of the students have a major degree of study in accounting (accounting is at least one of each student's fields of study). This means that the students were not a random sample of the student population and therefore may not be representative of the student population. Complicating the issue is that the students elected to take the course during Intercession. This "selection bias" raises the question as to whether intercession students are representative of the average student. If the ACC 463/527 students were not representative of the student population, it would preclude generalization of the information literacy results from the sample to the overall student population.

In closing, information literacy concerns whether students have the skills and desire to conduct a quest of life long learning and research once they are finished with their formal education. The research conducted during ACC 463/527 contains results that indicate that increasing information literacy during a short time period may be possible. The purpose of the research was to integrate information literacy into an academic course and to develop the information literacy skills of students. While the above research shows promising results, the research might be expanded to determine if the work can be repeated across larger sample sizes, longer course schedules and different courses of study.

Appendix A - Information Literacy Proposal

TO: Charles E. Kratz, Dean of the Library and Information Fluency

FROM: John A. Ruddy, CFA, CPA
            KSOM, Accounting Faculty Specialist

DATE: November 1, 2013

SUBJECT: Information Literacy Proposal

Please consider the below proposal with respect to the requirements for the Information Literacy Stipends that are defined at on the University's website at the following web address:
http://www.scranton.edu/academics/wml/infolit/stipends/index.shtml.

The stipend will apply to the following cross listed course: ACC 463 - Financial Statement Analysis & Research and ACC 527 Financial Reporting and Research. The combined course is scheduled to be taught during Intercession 2014. The course is mandatory for students who major in forensic accounting and an elective for students who major in general accounting. As the university's 2013-2014 undergraduate course catalog indicates, the course is designed to provide students with the skills necessary to conduct financial research. More importantly, the course has the potential to provide students with a broader research focus, which would include the skills needed to assess, locate, retrieve, and utilize financial information. At the conclusion of the course, each student should be able to :

1. Research a given financial topic using peer reviewed journals. Potential areas for review include how to assess future company performance using historical accounting data, analyzing company performance from the perspective of a company shareholder in contrast to company lender. Lastly, the research could also include the limitations of financial statement analysis.

2. Apply the research and theory by analyzing a current company's financial statements. This would include utilizing trend analysis, ratio analysis as well as horizontal and vertical analysis to analyze company performance.

3. Write a research report which includes the analysis conducted in step 2. This would include explaining the importance of comparisons and trends in financial statement analysis.

As part of the proposal, the instructor will collaborate with Mrs. Betsey Moylan to develop aspects of the course. More specifically, the proposal includes:

1. At the beginning of the course, the students will have to state the specific research objective that they plan to pursue with respect to their assigned company. As the students progress through the course, the students will have to document the databases that they search, the search strings utilized to locate literature sources, any modification to the original research questions and a preliminary list of articles considered for review.

2. The course will require at least three research reviews on given financial topics. Each research review will require students to analyze peer-reviewed articles on given financial topics. After obtaining information on each research topic, students will apply the research to the analysis of an actual company's financial data.

3. For the course's final submission, students will combine the above referenced research reviews along with an overall assessment of the company. The combined assessment and analysis will satisfy the requirement for the course's final paper.

All three of the above items will be submitted to the instructor for his review. The quality, thought and depth of each student's research will determine each student's final grade.

1   2   3   4   5   6   7

Appendix D -Research_Question_Form

ACC 463/527 Research Question Form, the below form has been provided to assist you in conducting and documenting your research questions and efforts.

1. What is/was the initial research topic and/or question that you would like to pursue?

2. What databases and / or journals did you search?

3. What were the search words and/or search strings that they used to locate peer reviewed journals in the databases?

4. Assuming you modified your original research question, what were the modified research questions that you chose in response the peer reviewed journals you located in step #3?

5. What is the list of articles that you are considering for review (consider a minimum of 3 and a maximum of 5 that were issued in the last 10 years)

   a.

   b.

   c.

   d.

   e.

6. What are the beginning and end dates of the literature search?

7. In the space provided on the next page, summarize the above 3-5 peer reviewed journal articles and how the articles will help you conduct this week's company analysis.

	Appendix E Questionnaire Summary Statistics					

Question Number	Entrance Questionnaire		Exit Questionnaire		Difference in Averages	Correlation Coefficient
	x_D	12	x_D	12		
1	5.11	0.611	6.00	0.750	0.89	73.9%
2	3.33	2.000	4.00	2.250	0.67	70.7%
3	5.22	0.444	5.78	0.944	0.56	47.2%
4	3.67	2.750	3.44	1.278	0.22	28.9%
5	4.22	2.694	3.56	1.278	0.67	73.4%
6	6.00	0.750	6.44	0.528	0.44	59.6%
7	2.78	2.444	2.44	2.278	0.33	52.4%
8	4.22	2.194	5.67	0.250	1.44	28.1%
9	3.78	1.194	6.11	0.861	2.33	52.0%
10	3.67	1.750	6.22	0.694	2.56	41.6%
11	4.33	1.750	5.89	0.611	1.56	20.1%
12	2.44	0.778	2.89	3.361	0.44	57.6%
13	5.33	0.750	5.22	0.944	0.11	64.4%
14	2.78	1.194	3.22	1.444	0.44	70.8%
15	5.56	1.778	6.22	0.944	0.67	85.7%
16	5.67	1.250	6.33	0.500	0.67	31.6%
17	4.11	1.611	5.11	1.361	1.00	41.3%
18	3.11	1.861	3.00	2.000	0.11	77.7%
19	5.22	0.444	5.67	0.500	0.44	70.7%
20	5.67	0.750	6.11	0.861	0.44	51.8%

The average of the correlation coefficients for all 20 questions equals 66.47%

Writing Rubric

TRAIT	Does Not Meet Expectations 1	Meets Expectations 1.5 2 2.5	Exceeds Expectations 3	Score
Logic & Organization	Does not develop ideas cogently, uneven and ineffective overall organization, unfocused introduction or conclusion.	Develops unified and coherent ideas within paragraphs with generally adequate transitions; clear overall organization relating most ideas together, good introduction and conclusion.	Develops ideas cogently, organizes	