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ABSTRACT

The motivation for this study came from a desire to improve teaching of the use of accounting information for decision making. The information literacy standards and related performance indicators guided the development of a semester-long case study by accounting faculty and academic business librarians. Their collaboration yielded a series of instruction modules and related student exercises leading up to a group activity involving the evaluation of a company as a potential investment for retirement savings. Students enrolled in two sections of an introductory accounting course volunteered to participate in this study. They provided information about their knowledge before and after all of the activities using a repeated measures research design involving pre-test and post-test questionnaires. The results of the study suggest significant improvements in financial information literacy upon completion of the case study.

Introduction

The American Institute of Certified Public Accountants (AICPA) has been a leader in efforts by the private sector to develop programs aimed at achieving financial literacy. Initiatives such as "360 Degrees of Financial Literacy" and "Feed the Pig" are designed to encourage the American public to effectively manage their personal finances (AICPA, 2007). The success of these programs remains in question as the number of individual bankruptcies soars (Cory and Pickard, 2008). At the same time, the United States (U.S.) Government Accountability Office (GAO) emphasized the growing importance of financial literacy in their report on the progress of the Financial Literacy and Education Commission (Commission). One reason is that "workers today are increasingly responsible for managing their own retirement savings" (GAO, 2007, p. 1).

Therefore, an even greater crisis may be looming in the future as the burden of providing sufficient income during their retirement years falls on individual citizens.

Throughout this decade, information literacy has been a priority of the American Library Association (ALA). In 2000, the board of directors of the Association of College and Research Libraries (ACRL), a division of the ALA, approved the information literacy competency standards. The standards provide "a framework for assessing the information literate individual" and address five levels of proficiency (ACRL, 2000, p. 3). Specifically, the standards for information literacy encompass the capacity to recognize the need for information, the ability to retrieve relevant information, the competency to evaluate the quality of the information, the skill to use the information effectively, and the understanding of the ethical implications of information retrieval and application.

This paper discusses a pedagogical research project designed to measure the effects of a collaboration between accounting faculty and academic business librarians to improve financial information literacy of students. The information literacy standards and related performance indicators provided the framework necessary to craft an interrelated sequence of instruction activities and associated exercises where introductory accounting students applied the knowledge they acquired during the instruction. Questionnaires, using a repeated measures design, solicited information about students' knowledge of accounting concepts and library resources useful in evaluating a potential investment in a company. The objective of this empirical study is to assess whether financial information literacy improved from the beginning to the end of the course in connection with the case study.

Background

Financial Literacy

As part of the Fair and Accurate Credit Transactions Act of 2003, the Financial Literacy and Education Improvement Act (Financial Literacy Act) established the Commission under Title V (U.S. Department of Treasury, 2009). The purpose of the Financial Literacy Act is "to improve financial literacy and education of persons in the United States" to ensure that people are able to manage their own money wisely including their retirement savings (U.S. Department of Treasury, 2009). An important aspect of this management is the ability to effectively invest these funds in various financial instruments including those offered by business enterprises.

The responsibility of individuals to provide for their own retirement has become increasingly important over the past twenty-five years. With Social Security on the road to insolvency (Farnam, May 13, 2009), the steady and dramatic decline of single-employer defined benefit pension plans necessitates an effective retirement investment strategy by each individual. (Pension Benefit Guaranty Corporation, 2009). In defined benefit pension plans, employers promise to pay specific monthly benefits to participants during retirement so the burden of accumulating sufficient funds to satisfy the projected retirement benefit obligations falls to the employer. Many defined benefit plans have been replaced with defined contribution plans where employers contribute specific amounts to pension plans with no guarantee of benefits to be received by participants during retirement. In many defined contribution plans, employees make investment decisions for their retirement account funds that were historically left to plan sponsors in defined benefit plans.

Research aimed at measuring and assessing the benefits of financial literacy programs has been plagued by the "primary challenge [of] defining and quantifying 'success'" (Braunstein and Welch, 2002, p. 449). The authors go on to suggest that the best measures of effective programs are when the program results can be compared with specific outcome measures based on an established goal. The information literacy standards and their related performance indicator outcomes formed the basis for the development of the instruction and various exercises for this project, designed to enhance financial information literacy.

A study on computer usage in the finance curriculum suggests that various databases can be included in classroom student exercises. Clinebell & Clinebell (1995) surveyed finance departments of U.S. colleges and universities and found that fifteen percent of respondents included database usage in their introductory finance courses (p. 135). Information literacy questions in this study addressed the use of databases for company and industry analysis.

Information Literacy

The development of the information literacy (IL) competency standards for higher education followed the efforts by the American Association of School Librarians Task Force on Information Literacy Standards to improve information literacy at the elementary and secondary education levels. The end result was the development of "a continuum of expectations... for students at all levels" (ACRL, 2000, p. 3). In addition, the ACRL detailed multiple performance indicators for each of the standards. In this way, the outcomes of learning activities, designed to measure the achievement of a specific standard, can be assessed. The ACRL believes that "both 'higher order' and 'lower order' thinking skills, based on Bloom's Taxonomy of Educational Objectives, are evident throughout the outcomes... [and they emphasize] that assessment methods appropriate to the thinking skills associated with each outcome be identified as an integral part of the institution's implementation plan" (ACRL, 2000, p. 3). Table 1 lists ACRL's five information literacy competency standards and the related performance indicators.

Several studies have recommended a separate university course to introduce students to available library resources (Sharkey, 2006; Goebel and Neff, 2007; Simon, 2009, referring to Bruner and Lee, 1970). Other researchers have recommended the integration of library resource instruction in "a single (or series of) lecture(s) into the existing curriculum." (Simon, 2009, p. 252 referring to a study by Culley et al., 1977; Alfino, Pajer, Pierce, and Jenks, 2008; Sult and Mills, 2006). Academic librarians have also emphasized the importance of a "course-specific collaborative approach to incorporating IL/BIL (Information Literacy/Business Information Literacy) into individual classroom settings" (Simon, p. 252). In summary, the review of the literature suggests no clear consensus for information literacy instruction. Faculty and academic librarians have struggled to find the correct balance of lecture, course-integrated, and credit-bearing information literacy instruction to meet the needs of faculty and students. The structure of information literacy instruction for this research project is consistent with Zabel (2004) where "it must be integrated, relevant, ongoing, collaborative, and applied" to be successful (p. 20).

Information Literacy in Business and Accounting

The ability to ethically use business information is absolutely essential in the current business environment where it is imperative to quickly find and evaluate new information that becomes available. Hawes (1994) concludes that the inclusion of information literacy education should help students become "competent entry-level knowledge workers in the information society" (p. 60), even though the interaction between librarians and faculty may be informal. "When workers lack information literacy skills there are tangible costs to the business that can result in both operational inefficiency and loss of business opportunities." (Cooney, 2005, p. 4 referring to a study by Cheuk, 2002). Jackson and Durkee (2008, p. 88) also indicate that "(c)ourse-integrated IL instruction sessions are an extremely effective method of introducing students to print and electronic resources in accounting as well as introducing and/or reinforcing information literacy concepts."

Accounting is greatly impacted by technology advancements and changes in global markets. As such, Gabbin (2002) asserts that accounting education must be improved so that graduates enter the workplace with the skills they need in the modern business world. Furthermore, accounting educators reason that the nature of accounting work demands ethical treatment of information and they call for research on how to effectively teach the related skills (St. Pierre, Wilson, Ravenscroft, and Rebele, 2009).

Table 1

Information Literacy Standard	Performance Indicators for Standard
One The information literate student determines the nature and extent of the information needed.	1. Students define and articulate the need for information. 2. Students identify a variety of types and formats of potential sources for information. 3. Students consider the costs and benefits of acquiring the needed information. 4. Students reevaluate the nature and extent of the information needed.
Two The information literate student accesses needed information effectively and efficiently.	1. Students select the most appropriate investigative methods or information retrieval systems for accessing the needed information. 2. Students construct and implement effectively-designed search strategies. 3. Students retrieve information online or in person using a variety of methods. 4. Students refine the search strategy if necessary. 5. Students extract, record, and manage the information and its sources.
Three The information literate student evaluates information and its success critically and incorporates selected information into his or her knowledge base.	1. Students summarize the main ideas to be extracted from the information gathered. 2. Students articulate and apply initial criteria for evaluating both the information and its sources. 3. Students synthesize main ideas to construct new concepts. 4. Students compare new knowledge with prior knowledge to determine the value added, contradictions, or other unique characteristics of the information. 5. Students determine whether the new knowledge has an impact on the individual's value system and takes steps to reconcile differences. 6. Students validate understanding and interpretation of the information through discourse with other individual, subject-area experts, and/or practitioners.
Four The information literate student, individually or as a member of a group, uses information effectively to accomplish a specific purpose.	1. Students apply new and prior knowledge to the planning and creation of a particular product or performance. 2. Students revise the development process for the product or performance. 3. Students communicate the product or performance effectively to others.
Five The information literate student understands many of the economic, legal and social issues surrounding the use of information and accesses and uses information ethically and legally.	1. Students understand many of the ethical, legal and socio-economic issues surrounding information and information technology. 2. Students follow laws, regulations, institutional policies, and etiquette related to access and use of information resources. 3. Students acknowledge the use of information sources communicating the product or performance.

Association of College and Research Libraries (2000). Information literacy competency standards for higher education. Retrieved July 31, 2009 from http://www.ala.org/ala/ mgrps/divs/acrl/ standards/informationliteracycompetency.cfm#stan.

In the context of this introduction to accounting course, three overarching objectives of the class are articulated in the course syllabus. Students should be able to:

- Analyze and interpret the accounting information of business enterprises for making decisions about the three primary activities: 1) operating, 2) investing, and 3) financing.
- Describe the components of the four required financial statements and their interrelationships in the annual report of an enterprise. The four statements are the: 1) Income Statement, 2) Balance Sheet, 3) Statement of Retained Earnings, and 3) Statement of Cash Flows.
- Analyze the annual report of business enterprises in order to assess their performance for decision-making and to identify their major strengths and weaknesses.

Accounting education must be proactive in adopting methods to improve decision-making capability. Having the proper information as well as interpreting that information correctly is essential to accomplishing this purpose. One cannot form appropriate conclusions about business activities and effectively communicate these conclusions to others unless one possesses the information literacy skill set to acquire high quality and relevant information. Therefore, the "call for changes in accounting education to better teach these [critical thinking and continuous learning] skills is congruent with goals of business librarians to teach information literacy skills in disciplines such as accounting" (Cunningham and Anderson, 2005, p. 4).

Past studies have also shown the effectiveness of collaborative teaching efforts for information literacy training. Murphy & Hoeppner (2002) found that the combined efforts of an accounting educator and librarian helped with student preparation for class projects in an intermediate financial accounting course. Jackson & Durkee (2008) also utilized a collaborative approach that had a positive impact on information literacy skills of students in an international accounting course. Still, collaboration between accounting educators and librarians could be further explored. Cooney (2005), in a survey on business information literacy instruction, found that most efforts were directed to graduate students or upper-level undergraduates. Cooney concluded that "(p)erhaps the greatest challenges to collaboration are engaging the interest of faculty who have not collaborated in the past, and enlarging upon the collaborative efforts already in place," (p. 18).

Methods

In order to determine whether there were improvements in students' financial information literacy, a repeated measures research design was used involving a pre-test and a post-test. The primary interest is whether there was a significant shift to greater knowledge as demonstrated by the selection of the correct response after all instruction and related classroom/homework activities were completed. The nonparametric sign test was used to test the significance of the post-pre differences (Siegel and Castellan, 1988). The exact upper-tail p-values were computed using a binomial distribution calculation.

Participants

Sixty-two students enrolled in two sections of an introduction to financial accounting course in a Midwestern University volunteered to participate in this study. The participants were varied in their chosen majors including liberal arts, education, pharmacy, fine arts, and business even though the majority indicated that they were sophomores in business. Both sections were taught by the same professor and a script was used for instruction to eliminate differences associated with section. The responses from fifty-four of the participants were used to analyze the data; the difference between the number of volunteers and usable responses is attributable to two factors, withdrawals from the course (four students) and failure to take the post-test (four students).

Instruction and Student Activities

Two categories of instruction were provided to students over the course of the semester in between the completion of the pre-test and post-test questionnaires. The first category involved the classroom discussions of financial accounting at the introductory level including financial statements and their analysis. The second category of instruction emphasized the effective use of library resources and the ethical use of information. This latter training was divided into three modules. After each training session, students were assigned classroom or homework assignments in order to immediately reinforce the knowledge conveyed in the instruction and ultimately to permit an evaluation of a company as a potential investment (Bloom, 1956). The critical point to note here is that the information gathered on the questionnaires was taught in an applied setting where students actually used the information to evaluate a potential investment in a real company rather than simply parroting the information they were told in accounting lecture or in the library instruction. Refer to Appendix A for an outline of the sequence of instruction and student activities. The training and student exercises were developed to address a specific information literacy standard and performance indicators. Therefore, they are shown in the outline associated with specific student activities.

The first module included instruction on using the library resources including several databases (i.e. Mergent Online, Key Business Ratios, EDGAR, Business Source Complete, and others). Second, hands-on training was provided in which the instructor and librarians guided students through the search process of a publicly-traded company and its industry. Students were encouraged to ask questions along the way and each student completed a search log to document their investigation activities. The last module involved a brief training session on proper citing.

Pre-Test and Post-Test Questionnaires

Two questionnaires were drafted. The twenty-five-question pre-test questionnaire (Pre-Test) captured students' knowledge about using accounting information and library resources to facilitate financial evaluation of a company and its industry. For this section, students were instructed to select the correct response to each question but they were also given the opportunity to choose the response, "I don't know." In addition, this questionnaire collected various types of demographic information about the participants including education and experience. Specifically, the questions consisted of five major types: (1) new accounting concept or library resource; (2) accounting concept or library resource directly covered in an earlier business course; (3) library resource indirectly taught in a previous business course; (4) forms of plagiarism directly covered in an earlier business course; and (5) demographic data. The pre-test questionnaire was not discussed at all during the semester.

The post-test questionnaire (Post-Test) consisted of twenty questions where the first fifteen were identical to the non-demographic questions on the Pre-Test. The remaining five questions in the Post-Test gathered information about students' perceptions of the benefits of library instruction embedded in a course involving collaborations between business faculty and librarians.

The analysis and discussion in this paper is limited to the first category where the instruction of new concepts was relevant to all subjects in this study. Plans for additional analysis are discussed in the Future Research section towards the end of this paper.

Analysis and Expectations

Histograms of frequency of responses to each question on the Pre-Test and Post-Test were examined. For the questions addressing new concepts, it was expected that the most frequent response would be "I don't know" on the Pre-Test. In addition, it was anticipated that the participants would provide the correct response on the Post-Test if the instruction and educational activities were effective.

In order to use the sign test, participant responses were coded according to the correctness of their answers for each question on the Pre-Test and the Post-Test where correct and incorrect responses were scored as 1 and Ø, respectively. The Post-Pre difference was calculated for each item. A difference of 1 indicated a correct response on the Post-Test and an incorrect response on the Pre-Test; a difference of -1 indicated the answer was correct on the Pre-Test but wrong on the Post-Test; and a value of Ø indicated no change. In essence, each subject functioned as his/her own control. A p-value of less than .Ø5 implies that financial information literacy of the students significantly improved with the instruction and student exercises of the case study.

Results and Discussion

There were five questions on both the Pre-Test and the Post-Test that addressed new financial information literacy concepts. Table 2 presents a summary of the findings where significance was found for each question and for all five questions overall.

The first question asked about a potential investor's comparisons of a company's current financial condition to its industry and/or its own financial history in evaluating a potential investment in a company. On the Pre-Test, a sole participant indicated "I don't know," and a surprisingly high percentage of students (79.63%) indicated correctly that both industry and the company's own past financial performance would be relevant to this decision. Students were required to provide at least three years of historical company financial ratios as well as industry ratios in connection with the group project activity of the case study. Almost all students selected the correct response on the Post-Test; the frequency of respondents choosing the correct response on the Post-Test was 96.3%. The sign test showed significance (p<.ØØ2Ø) suggesting a significant improvement in students' knowledge of information useful in evaluating a potential investment in a company.

The second question addressed specific knowledge of common-size financial statements. The researchers' expectations were realized by the Pre-Test results. The results showed that the majority of students (53.7%) responded "I don't know" and that only two participants (3.7%) selected the correct response on the Pre-Test. Therefore, the majority of participants admitted that they did not have knowledge of common-size financial statements at the beginning of the course. Excel-based common-size income statements and balance sheets were generated and submitted by each group as part of the group project portion of the case study. There was no requirement, however, that each student prepare his/her own set of common-size financial statements. On the Post-Test, the correct answer was associated with the highest frequency of responses (61.11%) and the sign test was also significant (p<.ØØØ1). These results suggest a significant improvement in knowledge of common-size financial statements at the end of the course. They also encourage accounting faculty to require all students to apply their knowledge of common-size financial statements through individual student preparation in order to enhance learning effectiveness.

The third question asked about the U.S. Securities and Exchange Commission database which is available to the public without an access charge. In the Pre-Test, 7.41% of the subjects selected the correct response and 55.56% indicated "I don't know" the name of the EDGAR database. The first library instruction module discussed this database and students should have included this database in their search log in connection with the second library instruction session. In addition, students used EDGAR for their group projects to access financial information in the company's Form 1Ø-K for their evaluation of the potential investment. The histogram for the Post-Test results showed the selection of the correct response with a frequency of 85.19%. The sign test showed significance (p<.ØØØ1) consistent with this evidence.

Similar results were found in the data on the fourth question inquiring about the database which allows a user to search for information using a company's ticker symbol. The correct responses accounted for 25.93% of the total and 57.41% of respondents indicated "I don't know" on the Pre-Test. The ticker symbol was introduced in the first library training module. Students were likely to use a company's ticker symbol in their search log even though a student could perform some of their search activities using the company's name or other identifiers. They may have also used the company's ticker symbol in their investigation activities for the group proj-

Table 2
Frequencies and Significance Findings

	Pre-Test		Post-Test	
	n	%	n	%
In evaluating an investment in a company, a potential investor should make comparisons of the company's current financial condition to				
A. its industry.	8	14.81	1	1.85
B. its own financial history.	2	3.70	1	1.85
C. Both A and B are true.	43	79.63	52	96.30
D. None of the above.				
E. I don't know.	1	1.85		
Significance: p<.0020	54	100	54	100
Common-size financial statements involve				
A. Investigating financial statements of companies with similar total asset size.	13	24.07	8	14.81
B. Converting financial statement dollar values into percentages.	2	3.70	33	61.11
C. Evaluating finanacial statements of companies all in the same industry.	9	16.67	9	16.67
D. None of the above.	1	1.85	4	7.41
E. I don't know.	29	53.70		
Significance: p<.0001	54	100	54	100
The U.S. Securities & Exchange Commission provides free access to a database of company filings with this agency. What is the name of this database?				
A. SECFORMS	7	12.96	4	7.41
B. GOVDOCS	2	3.70	1	1.85
C. GASB	11	20.37	1	1.85
D. EDGAR	4	7.41	46	85.19
E. I don't know.	30	55.56	2	3.70
Significance: p<.0001	54	100	54	100
Which database allows you to search for information using a company's ticker symbol?				
A. Market Insight	5	9.26	4	7.41
B. Mergent Online	2	3.70	8	14.81
C. Business & Company Resource Center	2	3.70	2	3.70
D. All of the above.	14	25.93	36	66.67
E. I don't know.	31	57.41	4	7.41
Significance: p<.0001	54	100	54	100
Under which company website heading are you most likely to find a company's financial statements?				
A. Products	1	1.85		
B. Suppliers				
C. Investors	48	88.89	54	100
D. Contact Us	2	3.70		
E. I don't know.	3	5.56		
Significance: p<.0156	54	100	54	100
Note: The correct responses are in bold print.				

ect. Over sixty-six percent of participants subsequently chose the correct response on the Post-Test. Again, the sign test indicated significance (p<.0001).

The findings for the fifth and final question did not conform to expectations. This question addressed the use of company websites to find financial information about a company. Students were asked to select the appropriate link to use on a company's website to find financial statement information. Only 5.56% of subjects chose "I don't know" and 88.89% selected the correct response of Investors on the Pre-Test. A possible explanation for the Pre-Test results could be that millennial young adults are quite internet-savvy (Oblinger and Oblinger, 2005) with online shopping at various publicly-traded companies. It is possible that at least some of them may have browsed company websites in the past and discovered a company's financial statements on their own through the Investors' link. This link was discussed in the first library instruction session and students used this link for their search log. There was complete consensus on this question in the Post-Test where 100% of respondents chose the correct response. The sign test for this question was significant (p<.0156).

The sign test for the combination of all five questions on financial information literacy was also significant (p<.0001). This finding suggests a significant positive effect on financial information literacy for new concepts taught in connection with a case study in an introductory accounting course.

Future Research

Several avenues are anticipated for future research. Data has been collected and has yet to be analyzed regarding differences in financial information literacy related to the demographic characteristics of the participants. Chen & Volpe's (1998) research findings suggest significant differences may exist based on gender and major. Their study found evidence that female subjects tended to be less knowledgeable than their male counterparts about financial matters including investments and that business majors were more knowledgeable about personal finance than non-business students.

In addition, some questions on the pre-test and post-test questionnaires that have not been discussed in this paper, address specific concepts and resources that were taught to some of the business students in an earlier course. The investigation of significant differences on these questions between the trained and untrained participants is important from a pedagogical perspective to see if information literacy skills can be learned and utilized in subsequent coursework. Furthermore, an analysis of students' perceptions of the helpfulness and desirability of instruction and collaborations between accounting faculty and academic business librarians could be performed. Such evidence may lead to increased use of these interactions in the future.

It would be interesting to research potential differences in student learning by comparing classes with an embedded librarian similar to this study with classes where a librarian visits the classes for the standard "one-shot" instruction session. In this way, research into learning effectiveness of a particular instruction methodology could be assessed. Finally, it is important to study the impact of collaborative teaching efforts between faculty and librarians on students' financial information literacy in other course settings and with other subjects.

Summary and Conclusions

This study investigated whether collaborative efforts between accounting faculty and academic business librarians could have significant positive effects on financial information literacy of students in an introduction to accounting course. The information literacy standards and related performance indicators guided the development of a semester-long case study entailing a progression of instruction and student activities integrated into the course design. The results of this study provide some evidence that significant improvements in financial information literacy can be achieved, thereby encouraging faculty and librarians to develop opportunities to pool their collective talents and expertise for the benefit of students.

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Appendix A
Outline of the Sequence of Instruction and Student Activities

Scenario One (applicable to Activities One through Four done on an individual basis):

Last year, you established a retirement savings account and this year, you are interested in selecting several public companies in which to invest. A good friend of yours has suggested that a great potential investment is ***(Public Company's Name)***. Therefore, you want to thoroughly investigate ***(Public Company's Name)*** before you invest any of your money in this company.

I. Information Literacy Standard One: The information literate student determines the nature and extent of the information needed.

A. Performance Indicators for Standard One Relevant to Activity One:

1. Students define and articulate the need for information.
2. Students identify a variety of types and formats of potential sources for information.

B. Activity One:

Exercise 1: Determine the nature and extent of information needed.

Homework Questions – Prepare a word-processed response to each of the following questions. Bring two copies of this homework to class and one copy will be turned in before the beginning of class.

1. Do you need information to accomplish this task? (Yes or No)
   If so, what specific information do you need? If not, why not?
   If so, what types and formats of potential sources of information do you need?

C. Classroom Discussion of Activity One (Led by Accounting Instructor)

Instruction Module One: Library Training on Available Library and Online Resources – Students are instructed about resources available online and through the University's library including databases and print materials. Laptops are made available to students so that they can peruse these resources while the instruction is ongoing.

II. Information Literacy Standard One: The information literate student determines the nature and extent of the information needed.

A. Performance Indicators for Standard One Relevant to Activity Two:

3. Students consider the costs and benefits of acquiring the needed information.
4. Students reevaluate the nature and extent of the information needed.

B. Activity Two:

Exercise 2: You received library training on the resources available through the University's library and online in order to assist you in investigating ***(Public Company's Name)***.

Homework Assignment – Prepare a word-processed response for each of the following requirements.

1. In Exercise 1, students specified the types of information necessary to make good investment decisions about ***(Public Company's Name)*** which included the following:

   a. financial history
   b. ratio analysis
   c. stock price history and dividend trends
   d. future plans
   e. global market considerations
   f. economic and political environment
   g. comparisons with competitors and industry performance
   h. others

Briefly discuss the costs and benefits of acquiring each type of information.

2. In a separate paragraph, describe how you might want to change the types and formats of potential sources of information from your original thoughts based on the library training you received for the project.

C. Classroom Discussion of Activity Two (Led by Accounting Instructor)

III. Information Literacy Standard Two: The information literate student accesses needed information effectively and efficiently.

A. Performance Indicators for Standard Two Relevant to Activity Three:

1. Students select the most appropriate investigative methods or information retrieval systems for accessing the needed information.

2. Students construct and implement effectively-designed search strategies.

3. Students retrieve information online or in person using a variety of methods.

4. Students refine the search strategy if necessary.

5. Students extract, record, and manage the information and its sources.

Instruction Module Two: Library Training on Conducting a Company and Industry Search Including the Preparation of a Search Log – Students receive a search log template at the start of this instruction session. Laptops are provided to students so that they can begin performing their search of a specified company and its industry. They document their search activities through the search log while the course instructor and librarians are available for questions during the hands-on exercise.

B. Activity Three:

Exercise 3: Access the information you need in order to make this investigation. Download information on ***(Public Company's Name)*** and the beverage bottling industry in order to: (1) gain an understanding of the past, present, and future; (2) perform detailed financial analysis of ***(Public Company's Name)***; and (3) assess the current state of the beverage industry in relation to ***(Public Company's Name)***.

Homework (bring two copies – one to be turned in at the beginning of class): Prepare a search log to document the sources you used to research the ***(Public Company's Name)*** and its industry.

IV. Information Literacy Standard Three: The information literate student evaluates information and its success critically and incorporates selected information into his or her knowledge base.

A. Performance Indicators for Standard Three Relevant to Activity Four:

1. Students summarize the main ideas to be extracted from the information gathered.

2. Students articulate and apply initial criteria for evaluating both the information and its sources.

3. Students synthesize main ideas to construct new concepts.

4. Students compare new knowledge with prior knowledge to determine the value added, contradictions, or other unique characteristics of the information.

5. Students determine whether the new knowledge has an impact on the individual's value system and takes steps to reconcile differences.

6. Students validate understanding and interpretation of the information through discourse with other individual, subject-area experts, and/or practitioners.

B. Activity Four:

Exercise 4: Now that you have been able to access information on ***(Public Company's Name)*** and its industry, you should be able to evaluate information and its source critically. Conduct a search on Google using the keywords "soft drink industry" or "beverage industry." From your search output, select one link to evaluate using the criteria listed in the "Evaluating Sources" handout.

Homework Assignment – Prepare a word-processed or an Excel-based response for each of the following requirements.

Requirement 1: Using the "Evaluating Sources" handout as your guide, answer the three questions for each of the criteria (Source, Currency, Scope, Content).

Requirement 2: Based on your evaluation, decide whether or not you believe the source is credible. Explain why or why not.

Instruction Module Three: Library Training on Proper Citations and Plagiarism – A PowerPoint Presentation is prepared and used in the third library training session. Students are also provided information for the group activity including background information, assignment instructions along with the minimum ratio analysis required for satisfactory completion of the project, and the method of evaluation. Several library guides are made available to students through the library website including a Library Tip Sheet specifically designed for this group project as well as citation guides.

Scenario Two (applicable to Activities Five through Seven done in groups of 3-4 students):

Last year, you established a retirement savings account and this year, you are interested in selecting several public companies in which to invest. You have investigated information about ***(Public Company's Name)***. Now, you are going to use this experience to investigate another company as a potential investment.

V. Information Literacy Standard Four: The information literate student, individually or as a member of a group, uses information effectively to accomplish a specific purpose.

A. Performance Indicators for Standard Four Relevant to Activity Five:

1. Students apply new and prior knowledge to the planning and creation of a particular product or performance.

2. Students revise the development process for the product or performance.

3. Students communicate the product or performance effectively to others.

B. Activity Five:

Exercise 5: Download information on your company and industry in order to: (1) gain an understanding of the past, present, and future; (2) perform detailed financial analysis of the company on Excel that must include a common-size balance sheet and income statement and ratio analysis for the most recent three years; and (3) assess the current state of the industry in relation to the company including industry ratio data on Excel for the most recent year.

Deliverable: Generate Excel worksheets to be turned in the day of your group presentation.

VI. Information Literacy Standard Five: The information literate student understands many of the economic, legal and social issues surrounding the use of information and accesses and uses information ethically and legally.

A. Performance Indicators for Standard Five Relevant to Activity Six:

1. Students understand many of the ethical, legal and socioeconomic issues surrounding information and information technology.

2. Students follow laws, regulations, institutional policies, and etiquette related to access and use of information resources.

3. Students acknowledge the use of information sources communicating the product or performance.

B. Activity Six:

Exercise 6: Prepare a PowerPoint Presentation with your group discussing the desirability of investing in this company, short- and/or long-term. In this context, assess the financial health of your company and your company's industry.

Deliverable: Create a PowerPoint Presentation with appropriate citations to share your findings with the rest of the class.

C. Activity Seven: Complete a group member evaluation and evaluate the group project as a learning experience.