

SCAVENGER HUNT: AN EXPERIENTIAL LEARNING ASSIGNMENT

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When students study accounting for the first time in a Principles of Financial Accounting course, they are nascent learners, just as they are when learning a foreign language or a musical instrument. Beginners learn debits and credits, t-accounts, adjusting and closing entries, the basic financial statements, the journal entry process, and the account choices used to record various business transactions. These topics help students learn how accounting happens in response to business transactions. Experiencing why accounting is needed to make decisions and how that process transpires represents an opportunity for accounting information to come to life as decision-making material. The Scavenger Hunt assignment requires student teams to use comparative 10-K filings to search for specific accounting amounts and disclosures, analyze differences between firms, make an investment choice, and present the information that led to the investment. The assignment is designed to be used in a Principles of Financial Accounting course, to expose beginning accounting students to how the outcome of the accounting process can be used to make decisions. In the assignment, collaboration, critical thinking, and presentation skills can be exercised. Quantitative evidence suggests student efficacy in accessing and using accounting information to make investment decisions increases. Qualitative evidence supports improvements in students' awareness of the decision-making possibilities of accounting information. The teaching note includes an instructor's guide for implementation.

Introduction

Learning can be accomplished in many ways, including reading, watching, listening, and experiencing. Evidence suggests that experiential learning can transmit knowledge in ways that sustain the passage of time (Hawtry, K. 2007). Experiential learning typically focuses on the individual learning process. However, some learning in accounting and much learning will in professional life occurs in collaboration with others (Beard 1993; Vera-Muñoz, Ho & Chow 2006). Therefore, an experiential assignment completed in teams can simulate professional practice (Gittings, Taplin & Kerr 2020; Opdecam & Everaert 2012).

Learning *how* the accounting process occurs is part of mastering accounting. Learning *why* the accounting process matters and how the accounting result can be used to make decisions provides an additional layer of understanding. Students can develop confidence in using accounting information to make investment decisions through doing, reflecting, thinking, and applying (Butler, Church & Spencer 2019)

A principles of accounting course exposes students to the basics of accounting: (1) debits and credits, (2) accruals and deferrals, (3) adjusting and closing entries, (4) the basic financial statements, and (5) the journal entry process used to record various economic events in the accounting records. The overarching nature of this learning is in *how* accounting occurs.

This teaching note provides an extension of the *how* by demonstrating a way for teams of beginning accounting students to collaborate on a “*hunt*” for accounting information to make an investment decision. The assignment described in this note requires student teams to use accounting results found in publicly traded companies’ 10-K filings to make an investment decision. Data analytics and technology tools are not necessary for this assignment. The assignment is intentionally intended to cause students to read, digest, and thoughtfully consider the accounting data and information in 10-K filings alone.

The assignment has been designed for implementation in introductory accounting courses, but with adjustment, may also be suitable for other courses, including upper-level accounting courses. Using the assignment in introductory financial accounting courses can provide beginning accounting students with an opportunity to use the outcome of the accounting process to make decisions, specifically, a choice of investment in one of two publicly traded companies.

The remainder of this Note is structured as follows: first, a discussion of the motivation for creating and implementing the assignment and the assignment's teaching objectives. The theory-based research question is then presented, followed by a discussion of the methods employed, and the requirements of the assignment. This note concludes with a discussion of both quantitative and qualitative evidence of effectiveness of the assignment, implications for teaching, **learning and curriculum**, and an overall conclusion.

Talent Assignment Motivation and Objective

I created this assignment as an out-of-class exercise (with an in-person presentation as the final deliverable) for principles of financial accounting students. The development came from my desire to demonstrate how the journal entries beginning accounting students were learning in the course could ultimately end up in financial information used to make investment decisions. I also sought to increase students' confidence in both finding and using accounting information to make investment decisions, and with increased confidence from experience, increase students' understanding of the purpose of accounting.

The assignment is not linked to specific chapter topics in an introductory course.

Implementation is recommended in the final third of the semester, so that students have been exposed to the basics of the accounting process, along with several asset areas of the balance sheet (e.g., cash, receivables, inventory), so that students can complete the assignment with a working knowledge of the accounting information gathered and analyzed. Certain topics

beyond an introductory financial accounting course are included in the assignment, including the auditor's opinion, the risk factors **section of the 10-K**, and certain footnote disclosures, to allow for further exposure to the financial reporting process.

Theory and Research Question

Self-efficacy can be defined as belief in one's capacity to perform certain behaviors to produce certain outcomes (Bandura 1977, 1986, 1997). Confidence, a general cognitive construct, can be thought of as a proxy for task specific self-efficacy. In the context of assessing the assignment's effectiveness, the task for beginning accounting learners is to locate and use accounting information to make investment decisions. In Bandura's model of self-efficacy, efficacy expectations represent *"the conviction that one can successfully execute the behavior required to produce the outcomes"* (Bandura 1977).

Consequently, self-efficacy beliefs provide the foundation for motivation that results in action. Bandura (1977) notes that efficacy expectations moderate the relationship between the person (the beginning accounting student) and his or her behavior (the search for and use of accounting information to make investment decisions). Efficacy expectations are theorized by Bandura (1977) to be derived from four major sources of information or influences potentially available to an individual in a decision context: (a) performance accomplishments, (b) vicarious experience, (c) verbal persuasion, and (d) emotional arousal. Among the four major information sources, performance accomplishments are posited to be the source that is the most influential. This source of efficacy expectations leads to the research question:

Will the experience of searching for and using accounting information in this assignment increase students' confidence in using accounting information?

Method

The assignment was implemented in three semesters across five principles of financial accounting courses. The last semester, covering two classes, was the basis for the assignment, including the evidence of effectiveness outlined below. Two principles of financial accounting classes at a small, private liberal arts institution in the southeastern United States in the Spring of 2020 completed the assignment.¹ I obtained institutional review board approval for the study. Informed consent was obtained from the 46 students (out of 60) who agreed to participate.

A pre-implementation survey was administered during the week the assignment was introduced to the students to capture perceptions of confidence (efficacy) in accessing accounting information on Form 10-K and secondly, in using the information to make an investment decision.² The pre-implementation survey questions were:

- (1) how often have you used accounting information in a 10-K, filed with the SEC, to make investment decisions?
- (2) I am confident in my ability to locate accounting information in a 10-K filing;
- (3) I am confident in my ability to use accounting information in a 10-K filing to make investment decisions.

Question 1 used a 5-point Likert scale, with 1 being 'Never' and 5 being 'Always.' Questions 2 and 3 used a 7-point Likert scale, with 1 being 'Strongly disagree' and 7 being 'Strongly agree.' The post-implementation survey repeated questions 2 and 3 from the pre-implementation survey to measure differences.

¹ Due to the COVID-19 pandemic, on Friday, March 13, 2020, the institution announced the closure of all in-person activities for the week beginning Monday, March 16, 2020, and fully remote instruction began on Monday, March 23, 2020. Therefore, the interaction within the teams and, ultimately, the presentations at the end of the assignment occurred remotely. The impact of completing the assignment remotely is not known. However, despite the jarring change to the students' academic environment, efficacy gains occurred and perhaps would have been higher if the assignment had been researched, prepared, and presented in person.

² The pre-implementation survey responses were received between March 5 and March 12, 2020.

The post-implementation survey included a third question to elicit qualitative responses:

“Based on your experience with the case, briefly describe how your thinking or understanding may have changed regarding accounting information.”

Completing the pre-and post-implementation surveys were not required as part of the class assignment to mitigate the risk of favorable response bias. Because participation was anonymous, using survey participation to affect assignment grading was not possible. Direction to students noted the pre- and post-implementation surveys were voluntary and designed to assess whether the assignment impacted their confidence level to find and use accounting data in a 10-K filing to make an investment decision. The surveys were anonymized, and codes or other identifiers for respondents were not used, to further anonymity. This decision did not permit a case-by-case measurement of individual differences in perception. However, I chose this approach because I sought the highest level of comfort among the respondents to share their authentic views. Only students in the two classes were provided the survey links. Therefore, it is likely that all 29 respondents to the post-implementation survey also completed the pre-implementation survey.

Assignment Requirements

The assignment required groups of students to identify two publicly traded companies in a common industry and to obtain each company’s most recent Form 10-K. A common industry for the two selected companies was required so that there was comparability within the financial statements to facilitate the comparative analysis required in the assignment. A sample of publicly traded companies was provided to the students from which to choose, or the student teams could choose a pair of companies not on the list, subject to my approval to ensure reasonable comparability. The students were directed to access each company’s

website, search for the Investor Relations page, and then select Annual Filings, to obtain the most recently filed 10-K.³

Discussion – Quantitative Evidence of Effectiveness

As noted in Exhibit 1, Panel A, before the assignment, students had little experience using accounting information in Form 10-K filings to make investment decisions. Interestingly, despite this lack of experience, Exhibit 1, Panel B shows that a majority of respondents (24 out of 41) perceived confidence in their ability to locate accounting information in a Form 10-K filing. This perception continued (Exhibit 1, Panel C) when asked about perceived confidence to use accounting information in a Form 10-K filing to make investment decisions. Half of the respondents (21 out of 42) perceived some level of confidence above neutral.

Exhibit 1. Panel A. Responses

How often have you used accounting information in a 10-K, filed with the SEC, to make investment decisions?

	<u><i>n</i></u>	<u><i>%</i></u>
Never-1	35	87.5
Rarely	2	5
Sometimes	1	2.5
Often	2	5
Always-5	-	-
Total	<u>40</u>	<u>100</u>

³ Downloading the PDF version of the filing to facilitate ease of searching the document through the Ctrl-F function was recommended. Each group was required to email the two PDF files to me before beginning the assignment to ensure the correct filing was obtained (*i.e.*, not the glossy annual report, not the 10-Q).

Exhibit 1. Panel B. Responses

I am confident in my ability to locate accounting information in a 10-K filing.

	<u><i>n</i></u>	<u><i>%</i></u>
Strongly agree-7	2	4.9
Agree	5	12.2
Somewhat agree	17	41.5
Neither agree nor	4	9.8
Somewhat disagree	3	7.3
Disagree	8	19.5
Strongly disagree-1	2	4.9
Total	<u>41</u>	<u>*100</u>

** does not equal 100% due to rounding*

Exhibit 1. Panel C. Responses

I am confident in my ability to use accounting information in a 10-K filing to make investment decisions.

	<u><i>n</i></u>	<u><i>%</i></u>
Strongly agree-7	-	-
Agree	6	14.3
Somewhat agree	15	35.7
Neither agree nor	4	9.5
Somewhat disagree	5	11.9
Disagree	8	19
Strongly disagree-1	<u>4</u>	<u>9.5</u>
Total	<u>42</u>	<u>*100</u>

** does not equal 100% due to rounding*

After completion of the assignment, students were surveyed using the same questions to identify any differences in their perceived confidence in accessing and using accounting information to make decisions upon completion of the assignment.⁴ Exhibit 2 presents the results.

⁴ The post-implementation survey responses were received between April 26 and May 2, 2020.

Exhibit 2. Panel A. Responses

*I am confident in my ability to **locate** accounting information in a 10-K filing.*

	<u><i>n</i></u>	<u><i>%</i></u>
Strongly agree-7	6	20.7
Agree	11	37.9
Somewhat agree	12	41.4
Neither agree nor	-	-
Somewhat disagree	-	-
Disagree	-	-
Strongly disagree-1	-	-
Total	<u>29</u>	<u>100</u>

Exhibit 2. Panel B. Responses

*I am confident in my ability to **use** accounting information in a 10-K filing to make investment decisions.*

	<u><i>n</i></u>	<u><i>%</i></u>
Strongly agree-7	3	10.3
Agree	12	41.4
Somewhat agree	14	48.3
Neither agree nor	-	-
Somewhat disagree	-	-
Disagree	-	-
Strongly disagree-1	-	-
Total	<u>29</u>	<u>100</u>

All respondents perceived increased confidence in their ability to **locate** accounting information in a Form 10-K filing; over half of the respondents (58.6%) agreeing or strongly agreeing. The average Likert scale response increased from 4.2 (41 respondents) to 5.8 (29 respondents). When the question inquired about confidence in **using** the accounting information to make decisions, again, all respondents perceived some level of confidence in their ability to use the accounting information to make decisions; over half of the respondents (51.7%) agreeing or strongly agreeing. The average Likert scale response increased from 3.9 (42 respondents) to 5.6 (29 respondents). As noted in Exhibit 3, the pre- and post-implementation survey question, “*I am confident in my ability to locate accounting information in a 10-K filing*” contained both unequal populations (41; 29) and unequal variance (1.61 s.d.; 0.76 s.d.).

Exhibit 3. Descriptive Statistics

	Pre-test			Post-test		
	<i>n</i>	Mean ^a	<i>s.d.</i>	<i>n</i>	Mean ^a	<i>s.d.</i>
I am confident in my ability to <u>locate</u> accounting information in a 10-K filing.	41	4.20	1.61	29	5.79	0.76
I am confident in my ability to <u>use</u> accounting information in a 10-K filing to make investment decisions.	42	3.86	1.63	29	5.62	0.67

^a means scaled 1 – Strongly disagree, 7 – Strongly agree

A Student's *t*-test was not used to assess statistical significance between mean values because of the unequal populations and unequal variances. As a substitute, I used an unequal variances *t*-test (i.e., Welch's *t*-test), which is more robust than the Student's *t*-test and maintains type I error rates close to nominal for unequal variances and unequal sample sizes under normality (Derrick, Toher & White 2016; Ruxton 2006). Exhibit 4, Panel A presents the results which suggest a statistically significant difference in means between the pre- and post-survey questions that investigated self-reported perceptions of confidence in locating accounting information in a 10-K filing.

Exhibit 4. Inferential Statistics, Panel A

I am confident in my ability to locate accounting information in a 10-K filing.

ANOVA					
DV	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	43.374	1	43.374	23.941	<.001
Within Groups	123.198	68	1.812		
Total	166.571	69			

Robust Tests of Equality of Means				
DV	Statistic ^a	df1	df2	Sig.
Welch	29.852	1	60.714	<.001
^a Asymptotically F distributed.				

As noted in Exhibit 4, Panel B, the pre- and post-implementation survey question, "*I am confident in my ability to use accounting information in a 10-K filing to make investment decisions*" also contained unequal populations (42; 29) and unequal variances (1.63 *s.d.*; 0.67

s.d.). An unequal variances *t*-test (i.e., Welch's *t*-test) was again used to assess statistical significance between mean values. The results suggest a statistically significant difference in means between the pre- and post-implementation survey question that investigated self-reported perceptions of confidence in using accounting information in a 10-K filing to make investment decisions.

Exhibit 4. Inferential Statistics, Panel B

I am confident in my ability to use accounting information in a 10-K filing to make investment decisions.

ANOVA					
DV	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	53.354	1	53.354	29.696	<.001
Within Groups	123.970	69	1.797		
Total	177.324	70			

Robust Tests of Equality of Means				
DV	Statistic ^a	df1	df2	Sig.
Welch	38.711	1	58.403	<.001
^a Asymptotically F distributed.				

Possible Pre-Implementation Student Overconfidence

As noted earlier, the pre-implementation survey began, *"How often have you used accounting information in a 10-K, filed with the SEC, to make investment decisions?"* The survey included this question to gauge the self-reported frequency of experience using accounting information in a 10-K filing. In Table 1, Panel A, among the forty respondents to this question, 88% reported never having used accounting information in a 10-K filing to make investment decisions. Only 7.5% reported using such information *"sometimes"* or *"often."* Contrary to this lack of experience using accounting information in a 10-K to make investment decisions, respondents reported a relatively high confidence in their ability to find and use accounting information in a 10-K to make investment decisions. Exhibit 1, Panel B, and Panel C present evidence that most respondents agreed that they had the confidence to do so (despite a pronounced lack of experience doing so). What may be considered unwarranted confidence in the pre-

implementation survey responses is relevant when evaluating the difference in means between the two questions of interest. It appears the difference in means could have been higher if the respondents completed deeper self-reflection before reporting their confidence to find and use accounting information in 10-K filings to make investment decisions in the pre-implementation survey.

Discussion – Qualitative Evidence of Effectiveness

As part of the post-implementation survey, participants were asked, *“Based on your experience with the project, briefly describe how your thinking or understanding may have changed regarding accounting information.”* The goal of capturing qualitative responses to open-ended questions was to gauge the depth of confidence change and overall perceptions of the assignment’s ability to improve confidence and learning. Of the 29 respondents to the post-implementation survey, 27 responded to this question. Among the 27 respondents, three indicated no changes:

“It kind of stayed the same.”

“It has not changed.”

“No changes.”

The remaining 24 respondents (88.9% of respondents to this question) indicated changes to their understanding of accounting information’s use in the financial markets, increased awareness of the complexity and scale of information available to make investment decisions, and a positive perception of their awareness and confidence in using accounting information to make decisions. The following quotes highlight the student’s perspectives in response to this question (emphasis added):

*“Before this project I was not aware these kind of financial statements could be viewed, **now I would be much more confident in my investing decisions** (especially if I am investing a large sum of money!) in a company with this knowledge. A very helpful and useful thing to learn about despite the document’s length and intricacy! I would have been far too intimidated to read 10k’s on my own without some serious guidance and*

encouragement. An intimidating project at first, but very cool and worthwhile by the end!”

*“This project helped me ease up about accounting. I have been so focused on learning terms and such for the course **i completely forgot the whole point until we got to think about investing.**”*

“It's one thing to learn about it in class, however, it's another thing to actually put it into practice and take the time to delve into the financial statements of companies. I think it was a beneficial experience and I'll definitely use it in the future to make investment decisions.”

*“Prior to this project I thought investments should be done solely on the trend of the market price of a company's stock, but **now I know that I can analyze a company's 10-K financial statement to find out if they would be a worthy investment.**”*

*“I definitely feel **I have a better way to assess a company's success.** I also found that the information we learned in class was solidified through the project.”*

*“My understanding of the process investors go through to know if a certain business is a good investment has changed. Because we acted like investors and looked at all their numbers and pros and cons of the business, **I now have a much better understanding.**”*

I solicited these qualitative responses to both add color to the statistics used to measure change and also to provide additional evidence of students' reactions and perceptions after the assignment. While it cannot be generalized, it can serve to characterize the participants who completed the project in my courses.

Implications for Teaching, Learning and Curriculum

The Scavenger Hunt represents a possible addition to principles of accounting courses to reveal a fundamental purpose of accounting to beginning accounting students – using accounting information to make investment decisions. The assignment does not impose a financial cost on students, nor does it require a technological learning curve for either the instructor or the students. The assignment occurs in the second half of the course and may serve as a capstone project.

AACSB accreditation standards emphasize using technology in the classroom (AACSB 2021). The assignment does not use technology and, as a result, does not provide evidence that would comply with AACSB standards. However, using 10-K information to make a ‘manual’ decision can complement technology-oriented materials by initially identifying answers that can lead a further inquiry of the respective companies through technology.

Most business (and accounting) students likely recognize the need for investors to use financial information to make capital allocation decisions, even before enrolling in a principles of accounting class. However, we expect a difference between tangentially knowing that reality - and knowing that reality by experiencing how it works.

The supply and demand imbalance in the accounting profession has persisted for years, and enrollment in accounting programs has been in decline (Dawkins *et al.* 2020; Gabbin, Irving & Shifflett 2020; Hood 2016). Introduction of the use of accounting results in a decision-making context may provide an opportunity for business students to ‘see’ why accounting information matters to our capital markets and economy. Increased awareness may motivate students to consider the accounting major in ways that may not have previously existed in their minds.

Conclusion

Beginning accounting students can benefit from experiencing the ‘end game’ of the accounting process. This assignment provides students experiential evidence of *why* accounting matters and how investment decisions can be informed by accounting information. Evidence from administration of the assignment suggests an increase in students’ confidence to navigate a Form 10-K to find accounting information and to use the information to improve investment decision making. It is unsurprising that mean responses of confidence to locate and use accounting information in a 10-K increased due to this assignment. Detailed directions to find

specific 10-K elements for making an investment decision were provided to the students. After completing the topic, increased confidence would naturally follow.

However, the contribution of this assignment is to suggest a path for faculty to introduce how accounting information can be used to make decisions in an introductory accounting class, through an out-of-class, team-based project. There typically isn't time within a principles course to demonstrate the use of the results of the accounting process with publicly traded companies because such courses focus on debits, credits, and the basics of the accounting process. This assignment offers an option to introduce this reality to beginning accounting students.⁵

This assignment has several limitations, including small sample sizes and the passage of approximately seven weeks between the pre- and post-implementation survey. During this time, classroom learning continued, which may have influenced the confidence reported by students to both find and use accounting information. In addition, emotive or mood differences from the first administration to the last may have influenced the participant's responses. Self-reported measures can suffer from social desirability bias in a power dynamic between student and instructor. However, I believe the anonymity protections and the lack of connection between completing the pre- and post-implementation survey and each student's grade on the assignment mitigate this risk. Finally, since some students completed the pre-implementation but not the post-implementation survey, there is a risk that the mean differences found on the two questions of interest could be different if all students completed both surveys.

My experiences as an instructor indicate that principles of accounting (and the financial accounting curricula overall) courses focus on the *how*. How journal entries are recorded using

⁵ A comparison of survey responses from students who completed the assignment, with those who did not, using similar pre- and post-survey timing within a principles class might have been useful to evaluate this efficacy of this assignment. However, I chose not to compare groups using this approach because it stands to reason that a group that uses the assignment would have more confidence than those that have not been exposed to it because using SEC filings to make investment decisions is not a normal part of an introductory course in accounting.

debits and credits, how financial statements are prepared, and how various business transactions are “*accounted for.*” This assignment exposes students to *why* accounting matters by experiencing *how* accounting information can be used. Specifically, to understand the relative positions of two firms, use the collected information to make an investment decision, and present *why* the investment decision was made.



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Appendix A. Instructor's Guide

Learning Objectives

The learning objectives are primarily to (1) demonstrate to beginning accounting students how accounting process information in an introductory financial accounting class could ultimately end up in financial information used to make investment decisions, and (2) increase the students' confidence in both finding and using accounting information to make investment decisions, and through this increased confidence from experience, provide a path for increased student clarity of the purpose of accounting.

Discussion Questions

The following are questions that could be used to guide the discussion during the class period where each team presents their results and conclusions. These questions can also be provided prior to the assignment, with a team written deliverable required, so that class time is not taken away from the required presentation discussion.

- a. Accounting information presents what has happened in the past, but the risk factors section of the 10-K discusses what may happen in the future.
 - i. How did this look at prospective information inform your investment decision?
- b. We have studied the journal entries associated with accounting for many types of business transactions. We have also studied three financial statements (i.e., the income statement, the balance sheet, and the statement of stockholder's equity). Many ratios were required to be computed from financial statement information, providing further tools for analysis.
 - i. Discuss which ratio or ratios provided the most decision-useful information beyond the financial statements.
- c. You were asked to conclude which company the team trusted more and why.
 - i. Discuss which specific financial or non-financial items made a difference in the team's conclusion regarding the more trustworthy company.
- d. This assignment required you to work with information relatively new to you
 - i. Discuss what parts of the obtained information that was most confusing or where you would like further explanation of its meaning.

Teaching with the Assignment

Introduction

The assignment begins with assigning groups of 3-4 students. Each group is then tasked with a 'scavenger hunt' to obtain or calculate decision-useful information, including from (1) the financial statements, (2) the Risk Factors section, (3) the audit opinion, and (4) various footnotes. In addition, students calculate various ratios and other figures (e.g., gross profit, if not presented on the income statement). The requirements were chosen based on the topics discussed in the class before the administration of the assignment, augmented by new topics (e.g., risk factors and the audit opinion) to further learning outcomes.

Team Development

I strongly encourage faculty who use this assignment to build the teams very intentionally. Teams were randomly assigned at the beginning of the semester and communicated at approximately the mid-point of the semester during the first three uses of the assignment. This approach resulted in suboptimal outcomes due to an inequitable allocation of accounting aptitude among the groups. In one instance, a

group contained three of the top six students in the class. Not surprisingly, that group performed at a very high level, leaving other groups with an allocation of colleagues that were not sufficiently up to the task of completing the assignment with a reasonable level of quality.

In response to this experience, I changed how the teams were formed, which appeared to result in a substantially better outcome for the students. First, teams were determined at approximately the mid-point of the semester (i.e., once completing at least one exam, and several chapters of homework assignments and quizzes). This approach allowed me to utilize actual performance to allocate the various students to the teams, resulting in each team having a similar blend of class performance (and by extension, a similar blend of combined aptitude for the assignment).

The approach used may be referred to as a ‘snake draft.’ First, the grade book containing the cumulative points for all students was exported and sorted from highest point total to lowest. The first four students were members of four different teams, with the fifth-ranked student joining the team of student #4, the sixth-ranked student joining the team of student #3, the seventh-ranked student joining the team of student #2 and the eighth-ranked student joining the team of student #1. To continue, the ninth-ranked student joins the team with student #1 and student #8 and the tenth-ranked student joins the team with student #2 and student #7, and so on.

I then calculated the average point value among the members of each team, to ensure that the entire team averages were within a narrow margin from each other. The result was a much more uniform and equitable allocation of student skill sets within each team, providing each team with the opportunity to generally have a student performing at an A level, one at a B level, one at a C level, etc. Doing so also provided the students with the experience of working with others who may not have the same abilities as they possess, which can prepare students for the collaboration needed in professional life.

Choosing Firms

The students were told to use only the two companies’ information obtained in the Form 10-K documents. I recognized that I could not prevent the students from accessing other information, such as company websites, social media feeds, Reddit threads, analysts’ reports, and equity trading sites/apps (e.g., Robinhood). I indicated to the students the assignment intended to demonstrate how accounting information available from required filings of publicly traded companies can be used to make investment decisions. Further, I discussed the bias and relative reliability in sources other than the Form 10-K for information on a potential investment’s financial position, profitability, risks, and opportunities. Specific discussion points included the difference between information without independent assurance (e.g., Reddit threads, social media postings) and the value of audited financial statements that possess some inherent assurance through the independent, external audit function. We discussed the credibility and reliability difference between those two information sources and the value of trustworthy information to facilitate investment decisions.

First Stage

The first stage of the assignment requires the groups to prepare a Word document draft of their answers to the scavenger hunt questions. I encouraged the students to resist the urge to ‘divide and conquer’ on the assignment. For example, I discouraged the groups from assigning one person to read the Risk Factors section and comment for the group. This communication to the teams was to ensure all team members worked on all questions and then compared the results with each other so that the group agreed on both the scavenger hunt findings and the team’s analysis and conclusion on the

recommended investment. I also encouraged the students to use the assignment as an opportunity to 'explore' the world of accounting and think of being in a position with several thousand dollars to invest on behalf of a family member they did not want to disappoint.

Instructor feedback is then provided, including comments regarding how to improve the accuracy of information the group captured. As this was a draft, I did not look for a finished product, and instead, I sought evidence as to whether there was an earnest attempt to answer the questions. This feedback is then used to prepare the final draft for the next part of the assignment requirements. I reviewed this submission to ensure their analysis documented an accurate summary of the various financial and non-financial items required of the assignment.

Second Stage

The second stage of the assignment preparation requires the groups to prepare a PowerPoint deliverable for presentation to the class to 'tell the story' of what happened over the last three fiscal years for each company. The presentation is based on the accounting data in the respective 10-K filings and the results of their work to answer the scavenger hunt questions. I encouraged the students to avoid a question-by-question response in the presentation; instead, the assignment requires a synthesis of the findings, with input from all team members, using the information gathered from the scavenger hunt. As with the first submission, I also gave the groups feedback on the PowerPoint document.

Third Stage

The third and final stage of the assignment was the group's presentation of their findings to the class. The presentation requires 6 to 8 minutes of discussion, leaving time for comments and questions from the class and me. Each group is required to recommend one company as an investment, including why the team preferred the company of choice.

At the outset of the assignment, I implored the students to use the presentation as an opportunity to prepare well for and confidently deliver an oral presentation. Finally, I suggested sufficient preparation can calm presentation nervousness if they were nervous speaking in front of a group. On presentation day, I reserved the right to ask any team member questions regarding the contents and the team's collective thought process on any of the assignment parts.

I saw my role as an observer first and facilitator of questions second during the assignment presentations. My goal was not to provide a critique of the accuracy of understanding by the presenting team nor to evaluate presentation skills. Nascent accounting students in their first accounting course are not typically fully capable of explaining to others the accounting information used to make the decision. Therefore, I sought evidence of balance in presentation responsibility by the members of the teams and thoughtfulness and earnestness in attempting to communicate the findings in an organized manner.

There were little to no questions from other students after most presentations. I expected more questions, but perhaps the lack of questions was due to the students thinking about their presentation that same day or nervousness about asking a question on a topic that was still relatively new to them.

I typically took a few minutes to complement aspects of the presentation and expand on certain parts to further the discussion among all in attendance, including the overriding reasons financial reporting of accounting information occurs, the critical thinking necessary to interpret management's presentation of financial performance, and the assurance function that auditors provide. My goal was not to 'test'

the knowledge the team obtained from the assignment but to explore the two companies and their accounting information further.

Each team is also required to make a statement, supported by evidence, regarding which company the team trusted more and why. This 'trust' requirement is included in the assignment because I wanted the students to think beyond what was necessary to find the information required in assignment to support the investment decision. During the courses, I discussed the reality of management's bias in financial reporting and the assurance function provided by independent certified public accountants that can serve to mitigate this bias. The trust question required the teams to consider the trustworthiness of the accounts and disclosures in the SEC filings. I allowed the students to make the trust decision independent of a specific guideline for what trust means rather than provide a basis for determining trustworthiness. During the presentations, answers to the trust question allowed me to explore the topics of management's assertions and what makes amounts and disclosures trustworthy.

Point Allocation

The point allocation for this assignment totaled 180 points. The group's development and delivery of the presentation was worth 90 points, with 90 points based on an individually prepared peer evaluation form. The peer evaluation form was incorporated to prevent 'freeloading' by any student within the group. Using this form, the student only rated others in the group, allowed me to gauge each student's effectiveness more transparently. By independently obtaining scores for other team members, without a self-rating as part of the process, the authenticity of the blended rating should exceed that of a self-rating.

Appendix B. Detailed Scavenger Hunt Instructions to Students

Below are the assignment instructions. I uploaded this information into the learning management system when implementing the assignment, and also discussed the instructions in class.

IMPORTANT – Within the submission, all calculations must be shown to document how the team arrived at the ratios and any other calculated amounts.

1. Summarize the following information for each company. In all cases, pay particular attention to the dollar amounts presented (are they in millions or thousands?) and also the years. In some cases, the most recent year is listed first from left to right and in some cases, the oldest year is listed first from left to right.
 - a. Net income (loss) for each of the three years presented (income statement)
 - b. Gross profit percentage for each of the three years presented (income statement)
 - i. See me if a gross profit dollar figure isn't presented on the income statements, which may be the case in certain industries
 - c. Cash flows provided by (used in) operating activities for each of the three years presented (statement of cash flows)
 - d. Cash flows provided by (used in) investing activities for each of the three years presented (statement of cash flows)
 - e. Cash flows provided by (used in) financing activities for each of the three years presented (statement of cash flows)
 - f. Basic earnings per share for each of the three years presented (income statement)
 - g. Current ratio for both years presented (balance sheet)
 - h. Debt ratio for both years presented (balance sheet)
 - i. Use total short and long-term debt for the numerator for this calculation, not total liabilities – this is a more precise measure of financial leverage and reliance on debt to finance the business.
 - i. Return on assets ratio for the most recent year presented (balance sheet and income statement)
 - i. Use net income from item 1a. above as the numerator
2. Read the Risk Factors (Item 1A) section for each company:
 - a. For each company, select 3 of the risk factors that the team ranks as most concerning when considering buying the respective company's stock.
 - b. Summarize the 3 selected risk factors for each company (describe the risks that management has identified) and present the team's collective thoughts on these risk factors, considering your pending investment decision; specifically, why they are concerning to the team.
3. The Audit Opinion by the Independent Registered Public Accounting Firm:
 - a. State which public accounting firm completed the audit.
 - b. Was there anything that stood out to you regarding what the auditors said in their opinion on the financial statements?

- c. Did they share anything that concerned you as a potential investor?
- d. How long has the audit firm served as the company's auditors?
- e. What are your thoughts on the length of time the auditor has served the respective companies?

4. Income statements:

- a. What was the largest revenue line item, for the most recent year (exclude subtotals)?
- b. What was the largest expense line item, for the most recent year (exclude subtotals)?
- c. Find the largest change in a **revenue** line item (in absolute value terms) between the most recent year presented and the year prior, and describe the change (i.e., which line item; what was the dollar and percentage change from last year to this year; what information was provided in the footnotes or Item 7 – Management's Discussion and Analysis to explain the reason for the change?)
- d. Find the largest change in an **expense** line item (in absolute value terms) between the most recent year presented and the year prior, and describe the change (i.e., which line item; what was the dollar and percentage change from last year to this year; what information was provided in the footnotes or Item 7 – Management's Discussion and Analysis to explain the reason for the change?)
- e. When identifying the changes for 4.c. and 4.d above, be sure to use distinct line items, not subtotals within the income statement (e.g., do not select gross profit or operating income). Rather, analyze the individual line items presented on the income statements.

5. Balance sheets:

- a. What was the largest asset, at the most recent balance sheet date?
- b. What was the largest liability, at the most recent balance sheet date?
- c. Find the largest change in an **asset** balance sheet line item (in absolute value terms) between the most recent year presented and the prior year, and describe the change (i.e., which line item; what was the dollar and percentage change from last year to this year; what information was provided in the footnotes or Item 7 – Management's Discussion and Analysis to explain the reason for the change?)
- d. Find the largest change in a **liability** balance sheet line item (in absolute value terms) between the most recent year presented and the prior year, and describe the change (i.e., which line item; what was the dollar and percentage change from last year to this year; what information was provided in the footnotes or Item 7 – Management's Discussion and Analysis to explain the reason for the change?)
- e. When identifying the changes for 5.c. and 5.d above, be sure to use distinct line items, not subtotals within the balance sheet (e.g., do not select current assets or current liabilities). Rather, analyze the individual line items presented on the balance sheets.

6. Statements of cash flow:

- a. What is the largest operating, largest investing and largest financing cash flow item, for the most recent period (in absolute value terms)?
- b. What were the major reasons for the change in total cash for the year? (Review Item 7 – Management's Discussion and Analysis, for information regarding changes in the statement of cash flows).

- i. The line-item descriptions in the statement of cash flows can also be helpful to explain the source of and use of cash flows within the three sections of the statement.
- c. What was the net increase or decrease in the cash balance from last year to this year (this will be near the bottom of the statement of cash flows)?
- d. When identifying the changes above, be sure to use distinct line items, not subtotals within the statement of cash flows (e.g., do not select operating cash flows). Rather, analyze the individual line items presented on the statements of cash flows.

7. Footnotes:

- a. In note 1
 - i. What does each company disclose as their inventory costing assumption used (if they are an inventory-based business)?
 - ii. What does each company disclose regarding their depreciation method used?
 - iii. What does the company say about how their business is managed?
 - 1. For example, which segments are identified to manage the company's operations?
 - 2. Use Ctrl + F to search the PDF for 'segments' – there should be a specific footnote in the document.
 - iv. In *Description of the Business* (or something to that effect – typically in Note 1), was there anything the company was involved with that the team did not realize, or was surprising?
- b. In the Acquisitions and Dispositions note (Note 2 typically, but could also be later in the footnotes):
 - i. If any, select the largest acquisition or disposition (buying another company or selling a division or assets) and summarize the transaction.
 - ii. In the summary, specifically discuss what was bought (if it was an acquisition) and what was sold (if it was a disposition/divestiture).
 - iii. If it was an acquisition, based on what you know about the company, do you think the acquired business fits well or does not fit well, within the existing company?
 - iv. If it was a disposition/divestiture, what was the gain or loss on the sale?
- c. In the Property, Plant and Equipment footnote:
 - i. What is the largest type of plant asset as of the most recent balance sheet date?
 - ii. What was the largest change (increasing or decreasing) from the balance sheet date last year to the balance sheet date this year, in any one of the plant asset categories?
- d. In the Income Taxes footnote:
 - i. What is the effective tax rate for the three years presented?
 - 1. This will typically be in a table, with a lead in sentence that is something like “A reconciliation of the statutory U.S. federal tax rate and our effective tax rate is as follows:”

Appendix C. Allocation of Points

Below are individual steps followed by the students and the associated point values when implemented.

Step	Deliverable Description	Points
1. Assignment of teams	Create teams and communicate who is on each team.	None
2. Choose two publicly traded companies within the same industry, and obtain their most recent annual financial statements.	From the company website, search for the Investor Relations page, and then Annual Filings, to obtain the most recently filed 10-K. I suggest you download the PDFs, as it is easy to search (Ctrl-F). One member of the team needs to email the PDFs to me by the deadline, including the team number in the email. I will confirm whether the correct documents have been accessed.	5
3. Answer a series of questions regarding each of the two companies (provided below), and submit the collective results to me via an emailed Word doc.	Work as a unit to answer the questions provided below, on each company. This is a draft , so I am not looking for the final version. <i>I will provide feedback on this draft.</i> I expect the feedback will be incorporated into your final presentation.	35
4. Feedback on deliverable provided to groups		
5. Prepare a deliverable for presentation to the class to 'tell the story' of what happened over the last 3 fiscal years, based on the accounting data in the financial statements and the results of your work to answer the questions in #3 above. Do not simply regurgitate a question-by-question response to the questions below; rather, develop a synthesis of the findings, with input from all members of the team, using the information you gathered in question #3 above as the basis. Submit the deliverable to me via an emailed PowerPoint doc.	Work as a unit to prepare a deliverable for presentation to the class. This is a draft , so I am not looking for the final version. <i>I will provide feedback on the presentation.</i> I expect the feedback will be incorporated into your final presentation.	15
6. Feedback on PowerPoint provided to groups		
7. Presentation of findings to the class	Present your findings from #5 above over 6-8 minutes, leaving time for comments and questions. Include in your analysis a recommendation of one company over another as an investment, based on the content in the SEC filings (i.e., the financial statements and supporting materials in the 10-K). Justify the recommendation with reasons the company of choice is preferred by the team. Include in the analysis a statement, supported by the evidence obtained, regarding which company the team trusts more and why . Be specific with examples from the SEC filings of the selected company.	35
8. Peer Evaluation Form	Each person will complete the peer evaluation form, allocating a percentage of combined effort, to each other team member. Your peer evaluation form should be emailed directly to me. I will use the ratings provided by your team members of your contributions, and consider the reasons provided for particularly high or low evaluations. Consistency between raters will be evaluated to provide a measure of accuracy of relative contribution for each student.	90
Total points		180

Appendix D. Peer Evaluation Form (Self-excluded)

Use this form to evaluate the contributions of each team member to the group effort. Consider attendance and participation in team meetings, individual contributions to idea generation and research, communication within the group, etc. *This evaluation is completely confidential and will never be shown to your team members. Please respond as honestly as possible.*

Allocate a total of 100 percentage points among your team members, *excluding yourself*, with higher percentages going to those members who contributed most. In the case of equal contribution, points should be divided equally among team members.

Your name: _____
Your team number: _____

	% Points *
Member 1 name: _____	_____
Member 2 name: _____	_____
Member 3 name: _____	_____

* Sum must equal 100%

1. Explain any particularly high or low allocations, providing concrete examples to illustrate your reasoning.
2. Describe your involvement in the assignment, including specific areas where you contributed to the team's effort (e.g., organization, research, presentation development, etc.).

Appendix E. Sample List of Publicly Traded Companies

Fashion and Apparel Companies

	Company name	Ticker
1	Abercrombie & Fitch Co.	ANF
2	American Eagle Outfitters, Inc.	AEO
3	Capri Holdings, Ltd (Michael Kors)	CPRI
4	Columbia Sportswear Company	COLM
5	Dicks Sporting Goods, Inc.	DKS
6	Foot Locker, Inc.	FL
7	Fossil Group, Inc.	FOSL
8	Guess? Inc.	GES
9	Hanesbrands, Inc.	HBI
10	Jos. A. Bank Clothiers, Inc.	JOSB
11	Macy's, Inc.	M
12	Nike, Inc.	NKE
13	Nordstrom, Inc.	JWN
14	Ross Stores, Inc	ROST
15	Skechers USA, Inc.	SKX
16	Tapestry, Inc. (Coach, Kate Spade)	TPR
17	The Gap, Inc.	GPS
18	The Marcus Corporation (Neiman Marcus)	MCS
19	Under Armour, Inc.	UAA
20	Urban Outfitters, Inc.	URBN

Restaurant Chains

	Company name	Ticker
1	Bloomin Brands, Inc. (Outback, Carrabba's)	BLMN
2	Chipotle Mexican Grill, Inc.	CMG
3	Chuy's Holdings, Inc.	CHUY
4	Cracker Barrel Old Country Store, Inc.	CBRL
5	Darden Restaurants, Inc. (Olive Garden, LongHorn)	DRI
6	Dave & Buster's Entertainment, Inc.	PLAY
7	Denny's	DENN
8	Domino's Pizza, Inc.	DPZ
9	Jack In The Box, Inc.	JACK
10	McDonald's Corporation	MCD
11	Papa John's International, Inc.	PZZA
12	Red Robin Gourmet Burgers, Inc.	RRGB
13	Restaurant Brands International (Burger King, Popeyes)	QSR
14	Ruth's Hospitality Group (Ruth's Chris Steak House)	RUTH
15	Shake Shack, Inc.	SHAK
16	Texas Roadhouse, Inc.	TXRH
17	The Cheesecake Factory Incorporated	CAKE
18	Wendy's Company	WEN

19	Wingstop, Inc.	WING
20	Yum! Brands, Inc. (KFC, Pizza Hut, Taco Bell)	YUM

Defense Contractors

	Company name	Ticker
1	Boeing Company (The)	BA
2	General Dynamics Corporation	GD
3	L3Harris Technologies, Inc.	LHX
4	Honeywell International, Inc.	HON
5	Lockheed Martin Corporation	LMT
6	Northrop Grumman Corporation	NOC
7	Raytheon Technologies Corporation	RTX

Food and Beverage Companies**Brewing:**

	Company name	Ticker
1	Anheuser Busch Inbev S.A.	BUD
2	Diageo Plc.	DEO
3	Molson Coors Beverage Company	TAP

Diversified Food:

	Company name	Ticker
1	Campbell Soup Company	CPB
2	ConAgra Foods, Inc.	CAG
3	General Mills, Inc.	GIS
4	The J M Smucker Company	SJM
5	Kellogg Company	K
6	Kraft Heinz Company	KHC

Candy:

	Company name	Ticker
1	The Hershey Company	HSY
2	Tootsie Roll Industries, Inc.	TR

Grocery Stores:

	Company name	Ticker
1	The Kroger Company	KR
2	Wal Mart Stores, Inc.	WMT

Soft Drinks:

	Company name	Ticker
1	The Coca Cola Company	KO
2	Keurig Dr Pepper	KDP
3	Monster Beverage Corporation	MNST
4	Pepsico, Inc.	PEP

Manufacturing Companies

	Company name	Ticker
1	Tesla, Inc.	TSLA
2	Ford Motor Company	F
3	General Motors Company	GM
4	Caterpillar, Inc.	CAT
5	Deere & Company	DE
6	The Boeing Company	BA
7	Toyota Motor Corporation	TM
8	Honda Motor Company, Ltd.	HMC

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