

Accounting Goes Beyond Number-Crunching! An Alternative Teaching Method to Stimulate Student's Interest in Accounting

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Studies have documented evidence of misperceptions by high school and entry level college students of accounting as a field of study and career path, as it is often regarded as an objective discipline with no room for subjective and creative thinking. We aim to open students' eyes to a different side of accounting that has not received much attention, namely the area of internal controls, fraud detection and fraud prevention. We present examples of how to stimulate students' interest in the field. Exposing students' to this aspect of accounting may present the discipline in a different light beyond simply number-crunching.

INTRODUCTION AND MOTIVATION

Students exposed to financial accounting for the first time at either the high school or college level are primarily taught the bookkeeping side of accounting. We believe this approach to teaching the discipline discourages many bright students from studying and pursuing a career in the field of accounting for several reasons. First, students come to the misconception that accounting is more of an exact science than an art, resulting in the erroneous perception that accounting is an objective discipline with no room for creative thinking or subjective interpretation. Second, the concepts of debits, credits, and the accounting cycle, while often considered to be challenging material for students, are often regarded as boring, redundant, and monotonous. Third, the old idea that accounting is for green eyeshade geeks with little or no personality is still a pervasive view many students have. Despite all of these perceptions, a few students choose accounting as a career path for a variety of reasons, principally among which are the potential job-security this field provides them upon graduation, as well as the reasonably high starting and progressing salary scale compared to other fields of business.

We believe it is important for both high school and college students to recognize that accounting requires a much broader set of skills, involving not only objective, but also subjective elements, with room for creative thinking as opposed to following a rigid, non-imaginative set of rules. We are interested in opening students' eyes to alternative areas of accounting that extend beyond the number-crunching aspects of the field, as well as alerting them to the diverse exciting career paths and opportunities available, should they decide to pursue accounting as their major field of study. Alternatively stated, a primary goal of this case is to present the field of accounting to potential students as one which allows them to be creative, to practice thinking outside-the-box, and to understand the

importance of good oral and written communication skills, all of which are considered equally important to the number-crunching aspect this field typically emphasizes. Further, we illustrate to students that this field offers opportunities for teamwork, another equally important trait for future accountants to have.

An area of accounting which allows us to accomplish many of these goals is that of internal controls; more specifically fraud detection and prevention. We selected this area for many reasons. First, fraud detection is a more qualitative accounting topic, requiring imaginative thinking. For some students the area of forensic accounting, under which fraud detection and prevention falls, may be viewed as a more attractive career path. Second, the idea of solving white collar crimes and catching fraud is one of the more interesting and intriguing areas to all students, especially with so many television shows (e.g., CSI, American Greed) showcasing these crimes and people who work to solve them. Third, many students may be interested in a career with the FBI, which recruits applicants, particularly those with accounting training, backgrounds, and skill-sets for its white-collar crimes division. Lastly, the discussion of organizational internal controls is becoming a critical part of the accounting system, especially as companies continue to struggle with implications of the Sarbanes-Oxley Act. The Sarbanes-Oxley Act of 2002 requires all publicly traded companies to maintain adequate internal control systems and for managers to ensure policies and procedures are in place so their financial statements are reliable, accurate, and transparent, and company operations are efficient (with adequate safeguards of organizational assets). Therefore, an understanding of the importance of good internal controls is becoming one of the more important skills accounting students must have upon graduation from college.

In accounting textbooks, issues relating to adequacy of organizational internal control systems are typically taught by describing: (a) control procedures over cash receipts; (b) control procedures over cash disbursements; (c) preparation of bank reconciliations and (d) controls over petty cash. In this study, we discuss an exercise related to internal controls enabling students to learn about possible employee theft, and the importance of having adequate internal controls in place to detect and prevent fraud in an organization. We use a setting they can relate to, allowing them to creatively think and interact with each other to come up with possible employee theft opportunities, and create the necessary safeguards and organizational controls needed to detect and prevent this fraud from happening. Exercises like the one we present in this study aim to introduce students to the broader areas of accounting that extend beyond number-crunching, allowing students to think creatively about how to detect fraud, and what techniques and stopgap measures should be in place to prevent it before it occurs, with students doing so in a collaborative team-work environment. These are precisely the creative, subjective, and innovative aspects of accounting that cross beyond the usual stereotypical image of accounting as a field of study and career path. In the end, we hope our study helps students understand the costs and financial consequences to companies when adequate controls to detect and deter fraud are not put in place. We develop a classroom exercise which can be used by both high school and college accounting instructors to enable students to understand the importance of internal controls, beyond cash handling and management, and to identify areas where employees of an organization may have a reasonably easy time committing fraud. Our exercise allows students to learn how to develop internal controls which can either prevent fraud from occurring in the first place, or detect it if it occurs.

A question often asked in introductory accounting textbooks is: “can ethics be taught?” Academic accountants have included the topic of internal controls as early as the first financial accounting course, talking about ethics, how internal controls relate to ethics, and the extent to which these controls can be set up to prevent and/or detect fraud to deter employees from pursuing unethical or fraudulent behavior. Introducing cases like the one we propose in this study, while discussing the fraud triangle in introductory accounting courses, helps students better understand the opportunities that can lead to fraud. It also contributes to the larger discussion about reducing pressure and rationalization, which may be more cost effective than trying to eliminate all examples of opportunity.

We argue that stressing these topics in the introductory accounting courses is critical as all business school students, regardless of their major, are required to take introductory accounting classes as part of their general business education requirements. Stressing the notions of internal controls in introductory accounting college level courses, and even introducing them at the high school level to students choosing

accounting as an elective course, may yield substantial societal benefits in bringing forth a new generation of ethical students and future employees. Raising the level of awareness and understanding of the ramifications of violations of proper ethical behavior, and organizational internal controls, should result in more efficiently run organizations, which is naturally a socially desirable outcome.

LITERATURE REVIEW

Prior studies show that students' perceive accounting as a tedious, boring, and monotonous number-crunching field. These perceptions may be exacerbated by lack of adequate information about the diverse aspects of an accounting career, and what accountants do on the job (Albrecht and Sack, 2000, and Dowall et. al., 2012). These perceptions appear to begin at the high school level. Byrne and Willis (2005) stress that the negative perceptions high school students have of accounting is primarily due to the way accounting is taught. In particular, high school accounting courses emphasize the mechanical and bookkeeping aspects of the discipline to the exclusion of other aspects of the field that may be more interesting, involving creative thinking, teamwork, and group brainstorming. Therefore, they recommend changing the way accounting is taught at the high school level to change some of these negative stereotypical attitudes toward accounting, in the hopes of modifying students' perceptions of the field and its career paths. Failure to address this at the high school or entry-level college accounting classes may result in students who do not possess the correct aptitude for accounting in selecting accounting as their field of study, or, more importantly, turning away students with the correct mindset for the discipline from selecting accounting as their career path.

On one hand, evidence (Saemann and Crooker, 1999, and Tan and Laswad, 2009) suggests that students are more likely to choose accounting as a field of study and career path, if they perceive accounting as interesting and enjoyable starting with either high school or college entry-level accounting courses. On the other hand, evidence suggests some students have already decided to major in accounting even prior to entering college regardless of whether or not they have been exposed to accounting at the high school level, compared to other business majors, for a variety of reasons that are unrelated to their preconceived perceptions of the discipline (Dowall et al., 2000). Byrne and Willis (2005) suggest, keeping the issue of how accounting is taught at the high school-level aside, students with exposure to accounting early on (i.e., during high school) are more likely to choose accounting both as field of study at the college level, and as a possible career path subsequent to graduating from college, relative to students with no exposure to accounting until they enter college, even though introductory accounting courses seem to reinforce students' negative perceptions of accounting (Mladenovic, 2000). Therefore, the complete set of motives behind why some students decide to pursue accounting education and career paths, despite the general negative perceptions of the discipline, while others shy away from this field of study is still unclear (Saudagaran, 1996, and Saemann and Crooker, 1999).

Our case study aims to add to the ongoing discussion about students' perceptions of accounting by proposing an approach which may alter many of the negative perceptions of the discipline that are prevalent among students. We do so by introducing the interesting and more subjective aspects of accounting namely, organizational internal control systems. This approach takes students out of their traditional narrow view of accounting as being an objective number-crunching discipline to one where creative thinking, group work, team brainstorming, and subjective thinking are at the center of this view of the field. We propose a group exercise relating to fraud and internal controls to stir students' interest using non-numerical exercises in a group-discussion setting, emphasizing team-generated solutions, allowing us to demonstrate the qualitative thought processes. We believe doing so at the high school level, or early on in introductory college level accounting courses, is important as some studies have shown that the broad cross-section of students' stereotypical negative perceptions of accounting may be changed with proper early exposure to the discipline, possibly as early as high school accounting courses.

BEYOND NUMBER-CRUNCHING: BRAINSTORMING EXERCISES

To begin this exercise, instructors should select an example of employee theft. One potential example of such exercise is that of a bookkeeper stealing money by “lapping” – a common example found in many introductory financial accounting textbooks. The instructor explains the following scenario:

“The bookkeeper accumulates daily payment receipts from customers and takes these payments to the bank to be deposited at the end of each day. The bookkeeper is cashing the checks and keeping some of the money for him/herself. The bookkeeper accomplished this by stealing a check sent by Customer (A). To cover his/her tracks, when Customer (B) pays his/her account, the bookkeeper credits the payment to the receivable for Customer (A), thereby shifting funds from Customer (B) to Customer (A) to cover up the fraud. This cycle repeats as long as the bookkeeper does not get caught, with payments from one customer being applied to another customer’s balance, somewhat similar to a Ponzi scheme.”

Next the instructor discusses ways to prevent this fraud from happening. One solution is to have the person handling checks received from customers and depositing them in the bank different from the person crediting the customer’s accounts receivable account. Another solution is to have the bank directly receive the customer’s checks for deposit, then send a list of customers’ names and deposited amounts to the company’s bookkeeper. A third employee would then prepare a bank reconciliation that confirms that deposits listed on the bank statement (coming from the bank) conform to cash receipts credited against customers’ accounts receivables recorded (by bookkeeper) on the company’s books. At this point the students should begin to understand that employee theft is serious and can cause financial harm to an organization.

The next step is for the instructor to get students involved, stimulating their creative thinking by having students form groups and asking them to come up with other ways to steal money, supplies, or inventory. We believe allowing students to brainstorm different ways by which employees commit fraudulent activity creates a more interesting dialog and takes them away from the internal controls “accounting language” traditionally taught in accounting textbooks to an infinite set of realistic situations where fraud can occur. This activity also helps students develop professional skepticism, which is an important trait for auditors as well as others working in attestation services. The instructor can hand out a form on which students write their ideas and proposed solutions to alternative violations of organizational internal controls. We have developed some ideas an instructor can use if students are having trouble thinking “outside-the-box”, which we list below.

The last step is for the instructor to collect the worksheets and redistributes them to different groups, allowing a different group of students to brainstorm ways to stop the theft. In other words, the students are developing internal controls. We believe by teaching this in reverse order, that is, coming up with ways to steal prior to coming up with preventative controls, allows students to creatively learn how to set up a control environment using their personal thought processes. We believe our case approach may allow students to develop a better understanding of the topic, and generates a more interesting dialogue among them than the traditional method of teaching internal controls first, then explaining how these controls detect and/or prevent theft.

CONCLUSION

Many prior studies have indicated, in general, student perceptions of accounting are unfavorable. We believe these perceptions can be altered by introducing a creative activity early on in a student’s exposure to accounting. Allowing students to brainstorm possible ways of theft within an organization, and approaches to stop such fraudulent behavior, enables them to take a step back from the concrete rules of financial accounting. Thus, viewing the discipline and profession in a different light, showcasing the subjective aspects of accounting, gives them a different view of possible accounting career paths. As more of these exercises are incorporated into high school and college level classrooms, we may begin to

see a systemic change in students' perception of the discipline with more enthusiasm by students for accounting as a field of study and potential career choice.

ADDITIONAL EXAMPLES OF THEFT:

Below are some additional examples of employee theft we believe may be helpful to instructors and students. We developed these examples to fit situations students can relate to by using types of temporary employment opportunities they may have experience with while working part-time or during the summer.

- a) A student is employed by an ice cream shop. If given the opportunity, the student does not enter the sale in the computer, gives the customer the ice cream, and pockets the cash.
- b) A student is employed at Walmart in the "customer return" area. If the customer is returning multiple items of the same product, the student enters "one less" of the item in the computer, and pockets that inventory item.
- c) Student is employed by a yard maintenance company. For some customers (who pay in cash), the student charges extra and gives the customer the receipt for the amount charged. The student prepares a separate receipt (which is less) to bring back to the yard maintenance company and pockets the difference.

All of the above scenarios present additional examples to students of how easy fraud can be committed, and how important it is to have adequate business controls in place to help prevent and limit this fraudulent behavior.

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