

# **Finding the Fraudster: A Problem-Based Learning Activity for the Auditing Classroom**

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## **Abstract**

Problem-based learning activities prepare students for their future careers by requiring them to work together to solve a realistic problem using the knowledge and skills they have learned from a textbook. These activities provide valuable experience applying information to a problem, instead of just memorizing an answer. Created as a role-play situation, a type of problem-based learning, students playing the auditor interview students playing the client about their internal controls and the risk of fraud at the company. Once the interview is complete, students work together to identify weaknesses and design improvements to internal controls, discuss fraud risk factors, and discuss limitations of traditional audit tests. The activity has two major objectives: to provide students with a realistic setting for them to (1) assess internal controls and fraud risk and (2) improve their non-technical skills. The exercise improves students' abilities in professional and accounting competencies. Students overall enjoyed the experience and perceived the activity to be worthwhile, effective, and relevant.

## **Case Overview**

In this role-play classroom activity, students have limited information about their role and the roles of others in their group. Students playing the auditor interview students playing the client about the internal controls and the risk of fraud at the company. Once the interview is complete, students work together to identify weaknesses and design improvements to internal controls, identify fraud risk factors, and discuss limitations of traditional audit tests. The activity has two major objectives: to provide students with a realistic setting for them to (1) assess internal controls and fraud risk and (2) improve their non-technical skills in investigative conversation. The activity puts students in an ambiguous situation where they are required to gather information and exercise professional judgement to make a conclusion.

## **Learning Objectives**

The learning objectives for this assignment are based on the AICPA Core Competencies (see American Institute of Certified Public Accountants 2018), and they also correspond to the IMA Management Accounting Competency Framework (see Institute of Management Accountants 2019). Even though this activity is completed in an auditing class, not all students will become auditors, or even enter public accounting. By aligning this activity with both the AICPA and IMA competencies, the activity adds skills required by all accountants in practice. This activity relates to the AICPA Accounting Competency of risk assessment, analysis and management and the AICPA Professional Competencies of professional behavior, decision-making, collaboration, and communication. This activity best relates to the IMA Competencies of strategy, planning, and performance; reporting and control; business acumen and operations; leadership; and professional ethics and values. Table 1 maps the learning objectives to the AICPA Core Competencies, IMA Management Accounting Competency Framework, and the survey questions asked of students to demonstrate efficacy. The learning objectives are as follows:

1. Work together as a team to gather information from the client in a professional manner,
2. Understand and evaluate control risk and fraud risk,

3. Design preventative and detective improvements to internal controls based on the identified internal control weaknesses,
4. Evaluate the success of audit tests in identifying fraud.

### **Motivation**

Students graduating from college with a degree in accounting need more than just technical accounting skills to succeed in the ever-changing profession. A college degree should prepare students for their future careers by teaching more than just debits and credits. The CPA Evolution initiative, a joint effort of NASBA and the AICPA, has suggested incorporating critical thinking skills into the new CPA exam debuting in 2024<sup>1</sup>. A study conducted by the Institute of Management Accountants identified that students will need non-technical knowledge and skills including listening, understanding a business, writing, and speaking/presentation skills, along with technical accounting knowledge (Siegel and Kulesza 1996). The Accounting Education Change Commission (1990) argues that accounting graduates need communication, intellectual, and interpersonal skills to become successful professionals on the field. Pasewark (2021, 13) calls for future professionals to be able to “act as humans,” as the business world becomes more heavily reliant on technology. We, as accounting educators, have an obligation to provide our students with those skills prior to their entrance into the workforce.

Traditional accounting education usually consists of a lecture followed by practice questions, which assist in the development of technical accounting skills but are not effective in providing students with other skills they will need in their future careers (Sawyer, Tomlinson, and Maples 2000). One way to facilitate the development of these non-technical skills is by using problem-based learning. Problem-based learning is a teaching method that “involves students as active, independent learners and problem solvers in team-based collaborative learning” (Hansen 2006, 221). Problem-based learning motivates students to analyze information and make decisions in a realistic work environment (Hansen 2006). The use of problem-based learning in the classroom can “foster students to think critically and solve complex problems, find and use learning resources, work in teams, use effective communication skills, and become continual learners” (Hansen 2006, 223).

Incorporating problem-based learning activities into a course, in addition to lectures and practice questions, builds on both types of skills that students will need to become successful professionals. McGuigan, Ghio, and Kern (2021, 4) note that “a smarter, more connected world requires individuals to demonstrate enhanced resilience, agility, ethics, and critical thought”. McGuigan et al. (2021, 7) also recommend that accounting curriculum should be creatively designed with “opportunities for students to actively discover, explore, and shape their own professional identities and careers”. Knechel (2000) recommends that students be actively engaged in audit education through an interactive learning experience, such as through role playing, a type of problem-based learning. Additionally, accounting committees have recommended the active learning approach be incorporated into the accounting curriculum. The Bedford Report recommended that faculty should “design educational experiences for students that require them to be active, independent learners and problem solvers rather than passive recipients of information” (American Accounting Association 1986, 187). The Accounting Education Change Commission (1990) agreed that students should be actively engaged in the learning process. One of the student outcomes recommended by the Pathways Commission related to critical thinking and professional judgement specifically suggests the use of role play. It states, students should develop “through the use of case studies, role playing, and other methods, the ability to reason critically and exercise professional judgment by learning decision-making processes and addressing complex ambiguous practice situations” (Pathways Commission 2014, 23). By using problem-based learning and role-playing activities, students become better problem solvers and critical thinkers, important skills to have as they are entering the workforce.

This paper describes an innovative way for students to apply their knowledge of fraud and internal controls in a realistic setting and adds to the growing number of examples of active learning and problem-based learning in accounting (Castrigano, Huber, Huang & Shaffer 2021; Crumbley, Smith & Smith 1998; Crumbley, Smith & Smith 2014; Craig and Amernic 1994; Fletcher, Mullen & Stuart 2018; Laing 2009; Ma 2020; Matherly and Burney 2013)

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<sup>1</sup> See [www.evolutionofcpa.org](http://www.evolutionofcpa.org) for more information on the CPA Exam changes.

and auditing (Barnes and Enget 2021; Boyle and Lloyd 2013; Chiang, Wells, and Xu 2021; Cunningham and Stein 2018; Diaz 2016; Gainor, Blin, and Zheng 2014; Hess and Andiola 2018; Jelinek 2017; Kaciuba 2012). Although many of these problem-based learning assignments used in accounting require students to work in a team and build on their problem-solving skills, few require them interview one another in a realistic, yet ambiguous situation. Hess and Andiola (2018) have students act as auditors and engage in the audit planning of Tesla Motors, asking students to work as a team to hold a fraud risk brainstorming session on the client. However, a significant amount of additional information is given to the students in the form of a case; students are not interviewing the client. Boyle and Lloyd (2013) ask students to engage in a role playing activity to study transaction cycles and internal controls; however, their assignment is meant to be an introduction to controls without analysis or discussion. Craig and Amernic (1994) engage students in a role-playing activity where each student is assigned a different role to act out throughout the multi-day activity. However, the setting of their activity is in the middle of a collective bargaining agreement and set in an industrial relations context.

This activity is similar to the role-play activity created by Craig and Amernic (1994), yet places students in the context of an audit. Students playing the auditor interview students playing the client about their internal controls and the risk of fraud at the company. The activity has two major objectives: to provide students with a realistic setting for them to (1) assess internal controls and fraud risk and (2) improve their non-technical skills. Some of the non-technical skills accounting graduates will need are “the ability to locate, obtain and organize information and the ability to identify and solve unstructured problems in unfamiliar settings, and to exercise judgment based on comprehension of an unfocused set of facts” (Accounting Education Change Commission 1990, 2). The activity puts students in an ambiguous situation where they are required to gather information and exercise professional judgement to make a conclusion.

### **Intended Audience**

The activity can be used either in the undergraduate or graduate auditing course. In the undergraduate course, it is suggested that students first have exposure to internal controls and fraud prior to completing this activity.

### **Implementation Guidance**

The activity will likely take an entire class period of 75 to 90 minutes. Table 2 summarizes the suggested schedule of the management of the activity based on a class start time of 1:00pm and a 75-minute class. If there is more time in class, it is suggested that the extra time is spent on the debrief of the discussion questions. As an alternative, particularly for graduate courses, the discussion questions can also be assigned for homework as either a written response or presentation.

Before the start of class, first determine how the students are going to be broken up into groups and how many groups to have based on the number of students in the class. Each group should ideally have five to seven students. Not all groups in a classroom need to be the same size, but all groups should have at least five students. For example, if there are 32 students in the class, there can be three groups of six students and two groups of seven students for a total of five groups. Figure 1 illustrates the breakdown of students between roles depending on whether the final groups will have five, six, or seven students. If more students need to be added to a group based on class size, it is suggested that more auditors are added.

At the start of class, let the students know that they’ll be doing an activity for the entire class so they can put their notes and computers away. Tell them that they will be split up into groups and will receive something to read. If following the example of a 32-student class, there should be five groups in total, some with six students and some with seven. Groups can be set up ahead of time or paired up based on where they’re sitting.

Within each group, give out three client handouts (Mark Carpenter, the Controller; Lisa Johnson, the Store Manager; Michelle Haas, the Assistant Store Manager), and the remaining students will be auditors. Give them some time to

read through the handouts on their own. The students should know that the information on the handouts is important information for them to read through, and they can underline, highlight, and take notes on the handout. It is also important that students do not share information on their handouts at this time. It may be helpful to let students know they'll be working on a role-playing activity and not to read the information on their sheet to the rest of their group.

Once the students are finishing up reading, let the auditors know they all have the same information, and give them time to start generating questions for the client. They will likely need the most time to work together since they will be leading the interviews. The final group size will change the number of auditors to group together. Following the example of the 32-student class, the three groups of six students will have three auditors, and the two groups of seven students will have four auditors. Let the remaining three students in each group know they're all working for the client and allow them to introduce themselves to one another. When they look like they're ready, or after a few minutes, let them know it's time to begin. This whole process takes between 10 and 15 minutes depending on class size.

From this point on, let the activity run its course. The students have all the information they need on their handouts. They should work on the interviews for about 20 to 25 minutes, ending the discussion about 30 to 40 minutes into class. Once the designated time is up, end the interviews and come together as a whole class to debrief. Ask one student from each of the roles to share with the class what they knew. Start with the auditors, since they knew the least, then work to Mark, then Lisa, and then Michelle. Take this time to ask them how it felt to be in the role they were in and what questions or answers they struggled with. To see the rest of the class nodding in agreement lets them know they weren't alone in their struggle. Try to reiterate that their struggle was part of the activity. They don't always have all the information, and they need to treat the information they do get with professional skepticism. This usually takes another ten minutes.

With the next 10 to 15 minutes of class time, they work in their groups to answer the discussion questions at the end of the assignment. Everyone in the group should work together to answer the questions, regardless of their initial role. For once in the class, they do have all the information. To save time, groups can also be assigned different discussion questions and share their answers with the class. The last ten minutes of class should be used to discuss the answers to these questions as a whole class. As an alternative, students can write up their answers as an assignment or present their answers the following class.

### **Implementation Guidance for an Online Classroom**

This activity can be reconfigured to be held in an online classroom. If this activity is to be used online, it would best be used in a system where breakout rooms or small groups can be utilized. This will not work in a large group setting. It is recommended to create groups and assign roles before class. At the start of class, email students their individual handout. It should be a total of four emails – one to all the students playing Mark, one to Lisa, one to Michelle, and one to the auditors. Setting up the email ahead of time as a draft will allow for quick changes if a student doesn't show up to class that day.

In setting up the breakout rooms, there should be double the number of breakout rooms that will eventually be needed. The goal is to first separate the auditors from the clients so they can talk separately before they are brought together for the activity. In a 32-student class, there should be 10 breakout rooms since there will eventually be five groups. There would be five groups of three clients each, three groups of three auditors, and two groups of four auditors. If breakouts can be created ahead of time, doing so would save time at the start of class. There is time to work on assigning breakout rooms while the students are reading their handouts if breakout rooms cannot be preassigned. After a few minutes to read the handout and discuss with the other members of the breakout, send the auditors into the breakout rooms with the clients, and let them get started.

### **Classroom Validation**

This activity was used in five semesters, starting in Spring 2019 through Spring 2021. It was used in first undergraduate auditing course at one college and in a graduate level auditing course at another college. Prior to beginning the activity, the students were given a survey about their understanding of internal controls and fraud. In

both courses, students had already covered internal controls and fraud. Students also completed a post-activity survey. The surveys will provide pre-test post-test data as evidence for the efficacy of the activity. In Table 2, the learning objectives are mapped to the survey questions.

### *Learning Objectives*

In the initial pre-test survey, students responded to six questions addressing the Learning Objectives. There were 105 students who filled out the survey in total, 68 undergraduate and 37 graduate students. All students filled out both the pre-test and post-test as it was completed during class time. They were asked to rank their agreement with the statements on a 5-point Likert scale, with one being strongly disagree and five being strongly agree. Table 3 presents selected Pearson correlations between the demographics, pre-test, post-test, and perception variables.

In reviewing the Pearson correlations, level (undergraduate or graduate) was only significantly correlated with the pre-test answer of “I understand how to design audit tests to search for different means for committing fraud” ( $p < .05$ ). Graduate students have a better understanding of how to conduct audit tests prior to the activity, which is expected as this was their second auditing course. Online (whether the activity was implemented in person or online) was significantly, negatively correlated with the following variables: post-test answer of “I understand how internal control weaknesses can create opportunities for fraud to be committed” ( $p < .01$ ), “overall, completing the fraud exercise was a valuable learning experience” ( $p < .01$ ), “the exercise was effective as a means of reinforcing textbook coverage of internal controls in a realistic situation” ( $p < .01$ ), and “the exercise was effective for illustrating mistakes that auditors might make, which can help me avoid making similar mistakes” ( $p < .01$ ). This activity was designed as an in-person role-play activity and was then modified to fit an online format as a result of the Covid-19 pandemic. Even though it appears that the students who participated in this activity online did not get as much out of it, their overall response to the activity is still quite positive. This may be more indicative of the “Zoom fatigue” and burnout that students have a result of being in online classes all day (Reinach Wolf 2020). In response to this surprisingly negative feedback from the online activity, the results from the students who participated in the activity online will be compared to those who completed the activity in person later in the paper.

With the pre-test post-test data, a paired sampled T-test was performed to determine the effect the activity had on their assessment of the learning objectives. Detailed results are found in Table 4. Across all students, there is a significant difference in means in the pre-test and post-test results for all questions ( $p < 0.01$ ). Overall, this assignment provides significant improvement to their understanding of the relevant learning objectives<sup>2</sup>.

### *Online Activity*

Since the results from the students who completed the activity online were negatively correlated to some of the survey questions, the results of those who completed the activity in person are compared to those who completed it online. The results for a paired sample t-test for just the online students are located in Table 5.

For just students who completed the activity in the online format, there were significant increases in the responses to five of the six survey questions ( $p < .01$ ). The one survey question without a significant result is “I understand how internal control weaknesses can create opportunities for fraud to be committed”. Based on the feedback received from students in the survey, some students in the group didn’t realize that the information they had on their handout shouldn’t be shared with the rest of the group (i.e., the fraudster shared that they had committed fraud without a proper investigation by the auditors). This really undermined the intent of the activity. In the qualitative feedback from the students, one said “next time the exercise is done, ensure that everyone knows they're playing a part, so that we all don't just share all of our information with each other at first”. Although this was communicated to students, perhaps

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<sup>2</sup> An additional independent sample t-test was performed on the undergraduate students versus the graduate students. There was no significant difference in any of the results. Results of in person versus online students is presented later in the paper.

in an online environment, there needs to be more emphasis placed on making sure students knew they were playing a role. Additionally, more time should be dedicated to reading through the handout. It's difficult to know when everyone is done reading when online. Maybe some students felt the pressure of needing to join the breakout rooms even though they weren't done reading, and then they didn't really understand their assignment. The other five survey questions could be adequately addressed through the discussion questions to complete after the activity, but this question is really targeted at the activity itself. One student mentioned "you did a nice job going over it all in the end though". The discussion questions at the end of class were able to supplement the learning of the other survey questions, which is a potential reason why the rest of the survey questions still had significant improvements in the results. Although online students were, for the most part, still able to enjoy and learn from the activity completed online, the students who completed the activity in person reported greater improvement in the learning objectives.

### ***Student Perceptions***

In the post-test survey, there were additional questions included to gather students' perceptions of the activity. The additional questions are as follows: (1) overall, completing the fraud exercise was a valuable learning experience; (2) the exercise was interesting and relevant to the auditing course; and (3) I would recommend using the fraud exercise in future classes. The means for each of three questions are 4.69, 4.78, and 4.81, respectively (see Table 6, Panel A for results). To further address the relevance of this activity, students were also asked if (4) the exercise was effective as a means of reinforcing textbook coverage of internal controls in a realistic situation and if (5) the exercise was effective for illustrating mistakes that auditors might make, which can help me avoid making similar mistakes. The means for these questions are 4.50 and 4.47, respectively (see Table 6, Panel A for results). Students perceive this to be a relevant and effective activity to bring to life textbook problems.

To further investigate the initial concerns about the students completing this activity online, the results from the five perception questions are separated by in person and online students (see Table 6, Panel B for results). Although many of the responses from the online students were lower, all results are above a 4.0. Even though students in person rated this activity higher than those who completed it online, their perception of the activity was that it was worthwhile, effective, and relevant.

There was also an optional section in the survey for them to share any additional comments. Only 38 students shared written comments. Of the 38 comments, 26 expressed enjoyment with the activity, through use of the words like 'good', 'great', 'interesting', 'fun', 'like', or 'enjoy'. One of the students said, "my favorite class to date! I think most of my group enjoyed the interactive element meshed in with class material". Another said, "this was fun because we had no idea what anyone else's paper said so no one knew who did it except them". There were seven students that expressed that they would have liked more information about the assignment. One student mentioned that "a review sheet or helpful tips" would have made it easier to complete. This illustrates the reliance that students place on textbook material and traditional classroom activities that do not simulate the professional world; they wanted something to tell them what to do. One of the objectives of this activity was to simulate a real-world environment by not providing them with all the answers at their fingertips. Although that may have been frustrating for some students, it teaches them a valuable lesson. Of the 38 comments, 15 students shared that the exercise helped them understand the material, using words like 'help', 'valuable', and 'learn'. One student commented, "our group had a lot of fun! I also feel that I learned a lot from it". Another student echoed, "overall a great way to teach about internal controls. This was more valuable to me than PowerPoint slides!". One mentioned, "great exercise to apply the material from this chapter to a real-world scenario". Another said, "I wanted to die, but it helped me learn". Although this exercise may have been uncomfortable for those not used to interviewing others, it overall was a positive and memorable learning experience for them. Another in agreement commented, "it was an interesting exercise and definitely helpful. Confirmed my thoughts that I don't want to be an auditor but COOL".

### ***Professional Perceptions***

One suggestion presented by Pasewark (2021, 5) to strengthen the relationship between academics and the profession was to work "with the profession to produce research that can be utilized in practice". Partners and entry-level staff shared their feedback on the activity in terms of its relevance to practice and the skills that entry-level staff starting in the profession would need to be successful.

One Partner in a regional accounting firm provided the feedback that “this activity mirrors real world experiences and provides benefits beyond the traditional methods”. He specifically mentioned the skill of developing investigative conversations as being important because “as auditors we need to build rapport and extract answers without being accusatory or revealing the true nature of our questions,” and “being able to have conversations in uncomfortable situations is relevant and common”. Interviewing skills, or investigative conversations as he calls them, are important for students to learn, yet traditional teaching methods do not provide students an opportunity to practice these skills. Even case studies, while less traditional yet valuable exercises, do not allow students to place themselves into a realistic and complex example of a day in the life of an accountant.

A staff member at a regional firm who did not partake in the activity commented that she encountered a very similar experience during her first year at the firm. She mentioned that a client had lost money due to a fraud, and they suspected someone internal played a role in the fraud. Her firm was formally hired to investigate the design and implementation of internal controls, but all members of the engagement team were to keep their eyes open for potential signs of fraud. She mentioned, “we had to ask the tough questions, and based on the answers to our initial set of questions, follow up with more in-depth questions”. She also mentioned that it was “not something I was expecting to experience within my first full time year at the firm. However, it was a great learning experience that helped me to carry on a lot of lessons to future jobs”. Providing students with a similar kind of experience in the safe space of the classroom will help them feel more prepared when presented with the next similar situation in the professional world.

Three former students who completed the activity in class also commented on how the activity helped prepare them for their careers in public and private accounting. Their comments echo the importance of practicing a real-world scenario in the classroom before they become professionals. One former student said:

“This activity helps to demonstrate the way one has to think and react in the profession. You must take in all information provided along with behaviors to ensure you have the right information or go about solving a situation appropriately. The benefit of this activity over a lecture is it puts the students in a real world and at times awkward situation but teaches them how to work through it.”

Another student added:

“This classroom activity enables students to experience real-world situations and issues that professionals face, which are often not clearly understood through a lecture or textbook problem. The activity requires critical thinking and problem-solving skills while adding a factor not truly encompassed by textbooks, the human factor. In real-world situations, the facts are not always clearly stated, as clients may not be forthcoming with or have all the answers. The skills developed through this and similar activities are crucial to the development and growth of students both academically and professionally.”

Another student said:

“A student should be able to identify where there is a lack of internal controls and recommend ways to reduce the chance of fraud. This is a regular practice that I see in my position at work. This practice is helpful to a student because it gives them a real-life example of how a lack of internal controls can lead to fraud, since just reading about it in a textbook does not always fully explain the threats. Another helpful thing about this exercise is that [the client] withholds any information that they don’t want to share to cover up their mistakes. If someone is trying to save their jobs in real life, they may leave out some pertinent information that would’ve otherwise exposed the internal control issue or fraud issue. Therefore, auditors need to know what questions to ask their client and when to dive deeper for more information if they suspect facts are being withheld. Overall, I think this exercise is a great way to get students involved while learning important skills they will need to have in the field.”

The positive feedback shared by former students, staff, and partners in regional firms reiterate the importance of teaching students critical thinking, investigative, and problem-solving skills in the classroom. Although the activity

is completed in the auditing course, these critical thinking and investigative skills are valuable for all accountants, not just auditors.

### **Summary and Conclusions**

Although this activity can be modified into an online format, it was originally intended to be in person and appears to be most enjoyable and effective in that format. Students need to be able to easily talk with one another and evaluate non-verbal cues of the others around them to help them solve the fraud mystery. Larger teams with more auditors will also be more effective than smaller ones, if the class size allows. Students are generally somewhat uncomfortable with the open-endedness of the activity. Having a larger group of auditors working together to brainstorm and develop interview questions will help them navigate the uncertainty. A classroom discussion to debrief after the activity has worked well, but the questions can also be assigned as written homework after class.

Problem-based learning gives students an opportunity to solve a realistic problem using the knowledge and skills they have learned from a textbook. It provides them with experience applying information to a problem, instead of just memorizing an answer to an example from the end of the chapter. This type of activity also provides an opportunity to learn non-technical skills that students will need to be successful in their careers, such as collaboration and professional skepticism. Role playing activities are effective problem-based learning activities to teach both course material and professional skills that are difficult to teach in traditional classroom activities. These activities are also entertaining and engaging experiences for students.

By completing this problem-based learning classroom activity, students develop a better understanding of assessing internal control weaknesses and fraud risk at a client. They also build on the skill of investigative conversation, which a partner at a regional public accounting firm noted was an important skill for students entering the profession. This is one of the few activities in the accounting education literature that provides students an opportunity to ask questions of one another and investigate a problem. Students thought that the exercise was effective as a means of reinforcing textbook coverage of internal controls in a realistic situation and effective for illustrating mistakes that auditors might make. It is a day in class that my students look forward to all year. The exercise improves students' abilities in professional and accounting competencies. Students overall enjoyed the experience and perceived the activity to be worthwhile, effective, and relevant.

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**Table 1: Learning Objectives Mapped to AICPA Core Competencies, IMA Management Accounting Competency Framework, and Survey Questions**

Learning Objectives	AICPA Core Competencies	IMA Management Accounting Competency Framework	Survey Questions
Work together as a team to gather information from the client in a professional manner	<ul style="list-style-type: none"> <li>• Professional behavior</li> <li>• Collaboration</li> <li>• Communication</li> </ul>	<ul style="list-style-type: none"> <li>• Leadership</li> </ul>	<p>a. I understand how to request information from a client that is needed to complete an audit task in a professional manner.</p>
Understand and evaluate control risk and fraud risk	<ul style="list-style-type: none"> <li>• Risk assessment, analysis, and management</li> <li>• Decision-making</li> </ul>	<ul style="list-style-type: none"> <li>• Strategy, planning, and performance</li> <li>• Professional ethics and values</li> </ul>	<p>a. I understand how internal control weaknesses can create opportunities for fraud to be committed.</p> <p>b. I understand how fraud could be committed at a client's organization.</p>
Design preventative and detective improvements to internal controls based on the identified internal control weaknesses	<ul style="list-style-type: none"> <li>• Decision-making</li> </ul>	<ul style="list-style-type: none"> <li>• Strategy, planning, and performance</li> <li>• Reporting and control</li> <li>• Professional ethics and values</li> </ul>	<p>a. I understand the difference between internal controls that are effective for preventing fraud and internal controls that are effective for detecting fraud.</p> <p>b. I understand how to provide suggestions for improvements to internal controls.</p>
Evaluate the success of audit tests in identifying fraud	<ul style="list-style-type: none"> <li>• Decision-making</li> </ul>	<ul style="list-style-type: none"> <li>• Reporting and control</li> </ul>	<p>a. I understand how to design audit tests to search for different means for committing fraud.</p> <p>b. The case was effective for illustrating mistakes that auditors might make, which can help me avoid making similar mistakes.</p>

**Table 2: Suggested Time Management of Activity**

<b>Allocated Time</b>	<b>Class Time</b>	<b>Activity</b>
15 minutes	1:00 – 1:15pm	Break up into roles, read assignments, and discuss with other members of the same role
25 minutes	1:15 – 1:40pm	Interviews
10 minutes	1:40 – 1:50pm	Debrief as a class by role
15 minutes	1:50 – 2:05pm	Answer discussion questions in groups
10 minutes	2:05 – 2:15pm	Debrief discussion questions as a class

Figure 1: Student Groups

Five Students	Six Students	Seven Students
Three clients (Mark, Lisa, and Michelle):  Two auditors: 	Three clients (Mark, Lisa, and Michelle):  Three auditors: 	Three clients (Mark, Lisa, and Michelle):  Four auditors: 

**Table 3. Selected Pearson Correlations**

	Online	Grad
Online	1.000	-0.117
Grad	-0.117	1.000
Pre_IC_Weak	0.018	-0.153
Pre_Prev_Det	-0.059	0.126
Pre_Fraud	-0.036	-0.186
Pre_Audit_Tests	0.042	0.198*
Pre_Improve	-0.004	0.028
Pre_Request	-0.057	-0.078
Post_IC_Weak	-0.308**	0.077
Post_Prev_Det	-0.187	0.179
Post_Fraud	-0.136	0.102
Post_Audit_Tests	0.061	-0.026
Post_Improve	-0.140	0.154
Post_Request	-0.083	0.016
Valuable	-0.297**	0.057
Reinforcing_Textbook	-0.267**	0.145
Mistakes	-0.228*	0.049
Interesting_Relevant	-0.134	0.084
Recommend	-0.119	0.089

N = 105

\* and \*\* indicate significance at the 5% and 1% levels, respectively.  
See Appendix for Variable Definitions.

**Table 4: Results of Paired Sample T-test**

Question	N	Pre-Test Mean	Post-Test Mean	Difference	SD	t	p (2-tailed)
I understand how internal control weaknesses can create opportunities for fraud to be committed.	105	4.26	4.62	0.36	0.695	5.335	0.000 **
I understand the difference between internal controls that are effective for preventing fraud and internal controls that are effective for detecting fraud.	105	3.50	4.22	0.72	0.925	8.018	0.000 **
I understand how fraud could be committed at a client's organization.	105	4.13	4.54	0.41	0.661	6.352	0.000 **
I understand how to design audit tests to search for different means for committing fraud.	105	3.00	4.03	1.03	0.860	12.256	0.000 **
I understand how to provide suggestions for improvements to internal controls.	105	3.40	4.31	0.91	0.833	11.242	0.000 **
I understand how to request information from a client that is needed to complete an audit task in a professional manner.	105	3.46	4.14	0.69	0.902	7.789	0.000 **

\*\* indicates significance at 1%.

**Table 5. Results of Paired Samples T-test for Online Activity Only**

Question	N	Pre-Test Mean	Post-Test Mean	Difference	SD	<i>t</i>	<i>p</i> (2-tailed)
I understand how internal control weaknesses can create opportunities for fraud to be committed.	48	4.27	4.44	0.17	0.724	1.594	0.118
I understand the difference between internal controls that are effective for preventing fraud and internal controls that are effective for detecting fraud.	48	3.44	4.06	0.63	1.024	4.230	0.000 **
I understand how fraud could be committed at a client's organization.	48	4.10	4.46	0.35	0.668	3.673	0.001 **
I understand how to design audit tests to search for different means for committing fraud.	48	3.04	4.08	1.04	0.874	8.256	0.000 **
I understand how to provide suggestions for improvements to internal controls.	48	3.40	4.21	0.81	0.842	6.686	0.000 **
I understand how to request information from a client that is needed to complete an audit task in a professional manner.	48	3.40	4.06	0.67	0.975	4.738	0.000 **

**Table 6: Means and Standard Deviations from Survey Results**

<b>Panel A: All Students</b>		
<b>Question</b>	<b>Mean</b>	<b>Std Dev</b>
Overall, completing the fraud exercise was a valuable learning experience.	4.69	0.577
The exercise was interesting and relevant to the auditing course.	4.78	0.500
I would recommend using the fraud exercise in future classes.	4.81	0.462
The exercise was effective as a means of reinforcing textbook coverage of internal controls in a realistic situation.	4.50	0.735
The exercise was effective for illustrating mistakes that auditors might make, which can help me avoid making similar mistakes.	4.47	0.708
<b>Panel B: In Person and Online Students</b>		
<b>Question</b>	<b>In Person Mean</b>	<b>Online Mean</b>
Overall, completing the fraud exercise was a valuable learning experience.	4.84	4.50
The exercise was interesting and relevant to the auditing course.	4.84	4.71
I would recommend using the fraud exercise in future classes.	4.86	4.75
The exercise was effective as a means of reinforcing textbook coverage of internal controls in a realistic situation.	4.68	4.29
The exercise was effective for illustrating mistakes that auditors might make, which can help me avoid making similar mistakes.	4.61	4.29

**Appendix A: Variable Definitions**

Online	0 – Student participated in the activity on campus, 1 – Student participated in the activity online (the entire class was either on campus or online)
Grad	0 – Student was an undergraduate student in an undergraduate auditing class, 1 – Student was a graduate student in a graduate auditing class
Pre_IC_Weak	Pre-test response on a 5-point Likert scale to “I understand how internal control weaknesses can create opportunities for fraud to be committed.”
Pre_Prev_Det	Pre-test response on a 5-point Likert scale to “I understand the difference between internal controls that are effective for preventing fraud and internal controls that are effective for detecting fraud.”
Pre_Fraud	Pre-test response on a 5-point Likert scale to “I understand how fraud could be committed at a client's organization.”
Pre_Audit_Tests	Pre-test response on a 5-point Likert scale to “I understand how to design audit tests to search for different means for committing fraud.”
Pre_Improve	Pre-test response on a 5-point Likert scale to “I understand how to provide suggestions for improvements to internal controls.”
Pre_Request	Pre-test response on a 5-point Likert scale to “I understand how to request information from a client that is needed to complete an audit task in a professional manner.”
Post_IC_Weak	Post-test response on a 5-point Likert scale to “I understand how internal control weaknesses can create opportunities for fraud to be committed.”
Post_Prev_Det	Post-test response on a 5-point Likert scale to “I understand the difference between internal controls that are effective for preventing fraud and internal controls that are effective for detecting fraud.”
Post_Fraud	Post-test response on a 5-point Likert scale to “I understand how fraud could be committed at a client's organization.”
Post_Audit_Tests	Post-test response on a 5-point Likert scale to “I understand how to design audit tests to search for different means for committing fraud.”
Post_Improve	Post-test response on a 5-point Likert scale to “I understand how to provide suggestions for improvements to internal controls.”
Post_Request	Post-test response on a 5-point Likert scale to “I understand how to request information from a client that is needed to complete an audit task in a professional manner.”
Valuable	Post-test response on a 5-point Likert scale to “Overall, completing the fraud exercise was a valuable learning experience.”
Reinforcing_Textbook	Post-test response on a 5-point Likert scale to “The exercise was effective as a means of reinforcing textbook coverage of internal controls in a realistic situation.”
Mistakes	Post-test response on a 5-point Likert scale to “The exercise was effective for illustrating mistakes that auditors might make, which can help me avoid making similar mistakes.”
Interesting_Relevant	Post-test response on a 5-point Likert scale to “The exercise was interesting and relevant to the auditing course.”
Recommend	Post-test response on a 5-point Likert scale to “I would recommend using the fraud exercise in future classes.”

## Appendix B: The Case (For Instructors Only)

### Fraud Activity: Audit Team

**Situation:** You are one of the senior auditors for PYMD, a national auditing firm. This is your first year working on the audit of Robert's Ribs, a privately held restaurant chain in Southern Florida with headquarters in Orlando. This is the second year that PYMD has performed the audit of Robert's Ribs. In the first-year audit, you did not have any identified deficiencies in internal controls. The CEO has come to you with concerns about fraud as it relates to their store sales. One of the stores in Gainesville, FL has seen an unusual fluctuation in sales. The CEO isn't sure what to do or even the amount of the difference, but he wanted you to investigate it further. You're meeting with Lisa Johnson, the store manager of the Gainesville store in question, and Mark Carpenter, the controller of Robert's Ribs.

**First:** You and the other seniors on the job are to come up with a list of questions you would like to ask the client. Make sure you ask the right questions to identify any appropriate fraud risks. Your ultimate objectives are to make suggestions for improvements in preventive and detective internal controls and to determine if there is fraud occurring at Robert's Ribs.

**Second:** Once you have developed your list of questions, have the meeting with the client.

**Finally:** Come up with your suggestions for improvement to present to the CEO, determine if there is fraud occurring, and who is committing the fraud (if anyone).

### Fraud Activity: Client (Store Manager)

**Situation:** You are Lisa Johnson, the store manager for the Gainesville, FL location of Robert's Ribs, a privately held restaurant chain in Southern Florida. You are meeting with Mark Carpenter, the controller of Robert's Ribs, and senior auditors from the audit team of PYMD, a national auditing firm. This is the second year that PYMD has performed the audit of your company, but you did not have any interactions with the auditors last year.

You are unsure what the meeting is about, but you are nervous it is to tell you that they are thinking of closing the store. You have been working for the company since it opened in Gainesville seven years ago, and there are not a lot of other opportunities nearby to get a job. You feel that you do a good job and enjoy working there.

Sales in your store are made up of two major components: food and drink. You have seen a decline in your location's sales of drinks with a consistency in sales of food. You don't really look at the costs of either of these two items. Headquarters can deal with that. Although your customers appear to be returning and happy with your location, these customers could just as easily be served out of another nearby location in Ocala.

A few things have changed since the last audit. You have hired two new employees. They are both college students and lack responsibility. They often arrive late to work or ignore customers. You are thinking they will probably be let go after the semester is over. You also caught one of them trying to give their employee discount to a friend. They both work in the restaurant bussing tables, assisting waiters, and cashing out customers. You are pretty sure they're not stealing, but you could probably do a better job supervising cash. You count it at the end of the day, deposit it, and reconcile it yourself. The amounts deposited always agree to the cash register sales for the day. You make deposits regularly. You have been watching them to make sure they do a good job, but you are not always there when they are.

The other management level employee that works in the store is the assistant manager, Michelle. She does a good job and has been with the company for about three years. She is not as tough on the new employees, and it appears she wants to be friends with them instead of their supervisor. You overheard Michelle telling one of them that she doesn't get paid enough for working there and thinks she deserves a raise after this year for working so hard. Overall, she is a decent employee. She is also in charge of ordering the inventory for the store. She is the one that places orders and receives the orders when they arrive at the location. She double checks the shipping document to make sure that the amounts received and prices are correct. She initials the invoices and gives them to you for payment. You often don't check her work because things move quickly in and out of the restaurant. You trust that the payments are to the correct supplier because all suppliers are approved as valid suppliers through headquarters. There is no way for you to process a check unless the supplier has been approved.

**First:** You want to speak with Mark first to determine what the meeting is about.

**Second:** Answer the questions of the auditors to the best of your ability. Remember that you don't want to lose your job. Don't lie about anything, but you may withhold some information that makes you or your location look like it would be a liability to the company.

### Fraud Activity: Client (Controller)

**Situation:** You are Mark Carpenter, the controller of Robert's Ribs, a privately held restaurant chain in Southern Florida with headquarters in Orlando. You work in the Orlando headquarters. You are meeting with Lisa Johnson, the store manager of the Gainesville, FL location, Michelle Haas, the store assistant manager, and senior auditors from the audit team of PYMD, a national auditing firm. This is the second year that PYMD has performed the audit of your company. You have had significant experience with auditors in general, but this is your first meeting with these two auditors.

You have a very good relationship with the audit partner at PYMD. He is your neighbor down the street, and you have known him for years. In fact, you were the one who suggested to the CEO that you use PYMD when he wanted to change auditors.

You know that the meeting is about some unusual fluctuations in sales in the Gainesville location. Sales in the store are made up of two major components: food and drink. In reviewing the store level financial statements, it appears that there has been a consistency in food sales with a decrease in drink sales. This in itself wouldn't seem unusual, but you were visiting your nephew at the University of Florida one weekend during Football season and happened to walk past that location. You noticed that it was incredibly busy, and most of the people were in the bar area of the restaurant. There were very few people seated at tables. You have also seen a surprising increase in the amount of food purchases occurring that don't align with your understanding of food sales. All of this information together has heightened your suspicions, but you're not sure of what yet. As long as total sales are increasing at that location, that's really all that matters to you. The transactions related to sales and inventory get recorded at the store by Lisa, but the financial statements are reconciled at the headquarters in Orlando.

There really haven't been any significant changes to the processes at headquarters since the last audit. You supervise three bookkeepers that compile all the information from the individual stores into the total company financial statements. All three of the bookkeepers had previously worked as store managers at locations throughout Florida, so they have a good idea as to how the company works. They are trusted, competent, and have been with the company for many years. Since most of the transactions have been already recorded at the store level, there is not a lot of risk in your location. Knowing this, you have been a little less diligent in your review of store level financial statements. You have a lot on your plate since the CEO goes on vacation all the time and leaves you with his work. Sometimes you catch yourself signing off on things without actually looking at them. You're just too busy to read everything your employees give you. You do check that the amounts agree to the supporting invoices, but that's usually all you look at. You are also diligent in tracking the same store sales year over year to make sure in total they are increasing. Your bonus depends on that.

**First:** You want to speak with Lisa and Michelle first to let them know what the meeting is about.

**Second:** Answer the questions of the auditors to the best of your ability. Remember that you don't want to lose your job. Don't lie about anything, but you may withhold some information that makes you look like you're not properly supervising your employees.

### Fraud Activity: Client (Store Assistant Manager)

**Situation:** You are Michelle Haas, the store assistant manager of Robert's Ribs, a privately held restaurant chain located in Southern Florida with headquarters in Orlando. You work in the Gainesville, FL location. You have been working in this location for three years. This is the second year that PYMD has performed the audit of your company, and you have not had any previous interaction with the auditors. You don't intend to have any significant interaction with them today either.

You actually started working in the nearby Ocala location. When you started at Robert's Ribs, you were working under Andy Rollins, a store manager you got along with very well. He is a nice, smart guy, and you became friends while working for him. Three years ago, he got pulled up to work in the accounting department at headquarters. You didn't like the new store manager they hired, so you moved to the Gainesville location to work under Lisa.

You like Lisa but know that she is a little scatterbrained. She is a great salesperson but honestly has no idea about anything accounting related. Andy did a great job of training you with the accounting part of the restaurant. You have no idea how Lisa got the store manager job. You totally deserve it over her.

About a year ago, you met up with Andy for lunch when he was in town. The two of you got to talking and realized there was some opportunity. Your supervisor Lisa doesn't have any idea about the accounting system and approves anything you give her. In fact, you found out you made an error on one of the documents, and she paid it anyways. Andy told you that his boss Mark is overworked and doesn't do any store level financial statement analysis at all. He only looks at same store sales year over year. Andy is also the only one at headquarters that approves suppliers. The two of you devise a plan to make some money. Andy set up a supplier company in his sister's name and gave it a PO box address. You created a fake shipping document and invoice with this new supplier. You made a small invoice for \$200 to see if you could get it through. You put it in with the other invoices, and Lisa paid it. No one questioned it. The check was sent to the P.O. box that Andy owns in his sister's fake company's name. You have stolen about \$50,000 in a little over a year.

Lisa has hired two new employees. They are both college students and lack responsibility. They often arrive late to work or ignore customers unless they are at the bar. You are thinking they will probably be let go after the semester is over. They are going to make great scapegoats if anyone ever gets suspicious. You also overheard Lisa scolding one of them trying to give their employee discount to a friend. They both work in the restaurant cashing out customers. There are almost no controls over cash, so they could definitely be stealing money too.

**First:** Remember, you are not trying to draw any attention to yourself. Don't speak unless questions are specifically directed at you. Let Mark or Lisa fill in the blanks.

**Second:** You don't want to get caught. Divert attention to anyone other than you and Andy at all costs. You are willing to sacrifice anyone else. You are finally getting what you deserve.

**Case Questions:**

1. Identify internal control weaknesses that provided the opportunity for Michelle and Andy to commit the fraud.
2. What aspects of the fraud triangle were at play in this case? This may pertain to more than just Michelle and Andy.
3. What recommendations would you make for strengthening controls at Robert's Ribs in both the restaurant and at headquarters? Include in your answer both preventive and detective internal controls.
4. Robert's Ribs had external audits, although the fraud was not uncovered by the external auditors. Explain how the auditors should have searched for fraud. What tests could the auditors have performed that might have detected the fraud? Be specific.

### **Appendix C: Suggested Solutions to Case Discussion Questions (For Instructors Only)**

#### **Who is the fraudster?**

Based on my experience using this in the first auditing course, there are a few groups of students who think the fraudsters are the college kids, and some students do find out Michelle is the fraudster. The groups who do figure out it's Michelle also think they have the answer solved and stop looking. I have never had a group determine that there is another person involved in the fraud. After I have each of the students discuss their roles, I ask who is Andy? The number of confused looks tells me that they didn't get that far into the case. That is a great time to discuss the limited view that auditors can have (we don't know everyone in the organization) and the impact that collusion can have in overriding controls.

I'll now discuss some potential student answers to the discussion questions at the end of the case. I like to discuss these at the end of the class period, but you can have your students prepare a written response or a presentation at the start of the next class. They often have different answers to the questions, specifically with the internal control improvements. I appreciate being able to share their thoughts immediately after completing the case, but there is the opportunity to add in written and oral communication learning objectives.

#### **Discussion Questions 1 and 2:**

1. Identify internal control weaknesses that provided the opportunity for Michelle and Andy to commit the fraud (LO 2).
2. What recommendations would you make for strengthening controls at Robert's Ribs in both the restaurant and at headquarters? Include in your answer both preventive and detective internal controls (LO 3).

I tend to discuss the answers to both questions one and two simultaneously. It seems to flow well being able to address the control weaknesses with an improvement to that control in the same thought. I will present the weaknesses and improvements together below.

#### ***Control environment***

- There is a lack of accountability at all levels, both at the store and at headquarters. Both Mark and Lisa appear to be just going through the motions with respect to their control responsibilities with no repercussions.
- Michelle may be a better store manager than Lisa, but Lisa was promoted without all the correct skills (at least according to Michelle). There appears to be a lack of commitment to competence.
- The CEO is lacking in presence. According to Mark, he is on vacation all the time. He is not setting a good tone at the top. This can be improved by discussing the importance of accountability, commitment to competence, and setting the correct tone with the CEO.

#### ***Separation of duties***

- There is a lack of separation of duties with cash. Lisa counts it at the end of the day and deposits it at the bank. To improve upon this, Lisa and Michelle count cash at the same time, fill out a form that they both sign indicating the amount, and give that form to headquarters for when they reconcile the bank account. It would be significantly more difficult for Lisa to steal cash if both she and Michelle were counting it. It would also be difficult for her to steal the cash in transit to the bank since the amount of the deposit was indicated on the form and given to headquarters for their reconciliation. These would be preventative controls since Lisa would be aware that others know the amount of the cash deposits and reduces the opportunity for her to steal cash.
- Although there is no information given about the register and cash throughout the day while the restaurant is open, students often suggest that the register should have access codes for employees to track who is using the register. This would be a preventative control. Unless cash was counted after every sale, we would not be able to determine who had put in the wrong amount. If each employee had their own register (like at a grocery store), that would be a detective control. Each employee has responsibility over their own drawer, and we would be able to determine who had been stealing cash.
- There is also a lack of separation of duties with purchasing. Michelle order and counts all of the purchases for the store. She could be (and is) creating fake purchases. There are a few improvements that can be made here. First, Michelle could request to make purchases through a PO that would be approved by Lisa and/ or headquarters. This would be a preventative control to ensure that only goods that are needed for the store are purchased and only approved vendors are used. Michelle can continue to place the order, but Lisa should count

the order when it comes in and agree the products and amounts to the PO and the invoice. This would be a detective control. If Michelle had ordered anything improperly, Lisa would know since it didn't agree to the PO.

#### ***Proper authorization***

- Although Lisa is signing off on invoices to be paid, she is just going through the motions. She is not taking the time to actively approve invoices. The controls are in place in writing but not in reality. I suggest taking this opportunity to talk about the differences between controls on paper and controls actually in effect. Just because they're written down, doesn't mean they are working effectively. This is one of the most important reasons to do walkthroughs of internal controls instead of just using a narrative prepared by the client.

#### ***Adequate documents and records***

- In the purchasing cycle, both the PO and the invoice should be sent to headquarters before payment is approved. Checks should only be paid if both forms are present and approved. This would be a preventative control. If Michelle tried to put through invoices without supporting documentation or approval, the check would not get cut.
- The deposit slip for cash could also be considered adequate documents and records.

#### ***Independent checks on performance***

- In the cash disbursements cycle, before signing checks, the check signer should ensure that there is an approved PO and invoice with signoffs from Lisa and Michelle and that the names and amounts agree to the check. This would be a detective control as it would stop any incorrect payments from being issued.

#### ***Monitoring***

- There is a lack of monitoring, likely because Mark is overworked. We know that there are some parts to his job that he's not doing, but we don't know the extent of his lack of responsibility. We should discuss with Mark the importance of his function in monitoring even though he is busy and suggest delegating other tasks to some of the bookkeepers.

#### **Discussion Question 3:**

3. What aspects of the fraud triangle were at play in this case? This may pertain to more than just Michelle and Andy (LO 2).

#### ***Incentives/Pressures***

- It is interesting that Mark's bonus is tied to increases at same store sales, but his role at headquarters has no impact on the sales at any location. He seems to be improperly motivated to fictitiously increase sales.

#### ***Opportunities***

- Mark does have the opportunity to either create fictitious sales or write fictitious checks. It appears that most of the time the CEO is gone or at least not acting in an oversight role. We don't know a lot about the controls surrounding cash disbursements or sales, but a lot of control, and opportunity, is at the headquarters level.
- Lisa has an opportunity to steal cash with the minimal oversight in cash receipts and deposits. Since she has total control. She could miscount cash or only deposit some of it into the bank account.
- Michelle has total control over purchasing, which provides her with the opportunity to create fake purchases and invoices. This is how she and Andy perpetrated the fraud.
- We know little about the controls over food and drink inventory, but that is a key control concern with restaurants and bars. Since the college kids were caught giving their employee discounts to friends, it is likely there is opportunity to misuse those discounts.

#### ***Attitudes/Rationalization***

- The key attitude in this case is Michelle's. She feels as though she is more qualified than Lisa for the Store Manager job. She also has been working hard and feels as though she deserves more than she is currently making. She feels as though her skills and hard work are neglected and ignored.

- Mark is overworked keeping up with all the work the CEO is giving him while he is on vacation. It is not clear, but Mark could also feel as though he is working much harder than the CEO while the CEO is making all the money.

An interesting application of the fraud triangle in this activity is that Mark has all three aspects of the fraud triangle present, while Michelle really doesn't have any incentives or pressures that we're aware of. This is a good time to discuss that the likelihood of fraud occurring increases when all three parts of the fraud triangle are present. However, it does not mean for certain that there is fraud (Mark is not committing fraud). It also doesn't mean that all three parts need to be present for someone to commit fraud (Michelle only has two and is the fraudster).

**Discussion Question 4:**

4. Robert's Ribs had external audits, although the fraud was not uncovered by the external auditors. Explain how the auditors should have searched for fraud. What tests could the auditors have performed that might have detected the fraud? Be specific (LO 4).
  - Internal control walkthroughs should have found the deficiencies in internal control in cash and purchasing. Through inquiry and observation, the auditors should have determined that Mark and Lisa, and likely other employees, were just going through the motions and not truly implementing the controls. Note that this likely would not have been identified by just reading the client's internal control narratives as the controls were in place but not working effectively.
  - The auditors could have also identified the fraud through ratio analysis. By analyzing the change in the gross profit percentage by division (food and drink), they should have seen a decrease in GPP in food. Although there was an increase in sales of food, there was also an unusual increase in purchases of food (per Mark).
  - An alternative approach could be to visit the store location. The auditors could have observed the people at the store to help to estimate how much in total sales there should have been (if they were thinking that revenue was related to the fraud). This is a tactic that some auditors use to estimate the total amount of sales by extrapolating the sales from one day and accounting for any changes in the estimate. This is much less reliable and likely not the best way to find fraud. However, this visit could also be tied with the internal control walkthroughs, which would be a much better way to find the weaknesses and controls and potentially the fraud.

This is a good time to discuss the difficulty for external auditors to find fraud, particularly with collusion. If Michelle can't directly benefit from processing an erroneous invoice, what purpose would she have to do so? Since Michelle is not approving vendors, she presumably can't benefit from a change. However, once Michelle teams up with Andy, who does approve vendors, all of those assumptions change. The controls are written to be effective and most appear to be in place; however, two or more people working together to circumvent those controls would prevent them from working effectively. It is nearly impossible for auditors to determine that there is collusion. This is one of the many reasons that external auditors are not responsible for finding fraud.