Journal of Forensic & Investigative Accounting
Volume 8: Issue 1, January–June, 2016

Reporting Truthfully: Assessing Ethical Behavior of Accounting Students

Akhilesh Chandra

Thomas G. Calderon

Mark M. Welfley[*]

Introduction

In this paper, we examine the ethical behavior of accounting students in a due diligence task that required them to review several documents, verify the accuracy, provide corrections, and make recommendations. Ethical behavior is a broad construct that includes truthfulness and integrity as key guiding principles, especially for accounting professionals (Lewis 1985; Audi and Murphy 2006; Abdolmohammadi 2008; Federation of European Accountants, 2009; AICPA 2013; Bonaci et al., 2013). While the literature often uses the terms ethics, truthfulness, and integrity interchangeably, in order to remove ambiguity in our paper, we use truthfulness in reporting their work as a proxy to measure the ethical behavior of students. Truthful reporting is the foundation of accounting regulation and policy (Bayou et al., 2011, Evans 2003; Alexander and Jermakowicz 2006). In this context, our primary research interest is to examine whether students report their due diligence work truthfully.

Entry-level professional accountants and auditors often perform due diligence work to assess the integrity of data, processes, procedures, and controls. Truthful documentation of their activity is the cornerstone of much of the work of these professionals. Therefore, students in our exercise are similar to junior members of an assurance team who are expected to report their work truthfully. In contrast to prior studies (e.g., Lipshitz and Strauss, 1997; Tse and Au, 1997; Green and Weber, 1997; Borkowski and Ugras, 1998), which focus on ethical perception, attitudes, or self-reported behavior, our study adopts an action-based approach that evaluates students' actual work to assess their ethical behavior. An action-based approach is descriptive in nature and more useful for understanding ethics (Dallmann, 1998; Jones et al., 2002).

Our results suggest that students struggle to report their due diligence work truthfully. We show an association between students' demographic characteristics and their truthfulness in reporting their work. In the context of the accounting profession, which relies on truthful reporting (Abdolmohammadi 2008; Federation of European Accountants, 2009; AICPA 2013), we interpret this as an ethical issue. We observe that students tend to be ethical in documenting the first half of their work, but tend to become increasingly unethical as they progress. We refer to this phenomenon as a *midway sign-off strategy*.

The remainder of the paper consists of a review of the related literature and our research questions, a description of the exercise and definition of variables, the results of our analyses, a discussion of the results and limitations, and the conclusion and implications of the findings.

Background and Research Questions

Most studies investigating ethics have used self-reported perceptions (of others' or of students' own behavior) as a proxy for ethical judgment. Studies examining actual ethical conduct in due diligence

[*] The authors are, respectively, Professor of Accounting at the University of Akron, Professor of Accounting at the University of Akron, and Instructor at the University of Akron.

tasks are rare. This paucity of research is even more pronounced in the accounting literature. Some authors, including Procario-Foley and Mclaughlin (2003), suggest a need for active learning and research in this area. They suggest that students can learn about ethics more effectively in an active learning environment, rather than in an environment in which students simply read and discuss ethics cases. Similarly, Misiewicz (2007, 20) observes that "objectives of teaching of ethics must expand…to challenging students to evaluate their value systems, what helps them act with integrity, and how to recognize and evaluate ethical issues." Students have a significant stake in learning about ethics and in behaving ethically (Adkins and Radtke, 2004). The potential dysfunctional effects of ethical lapses are costly to accounting firms and to corporations. In this context, we examine the six research questions presented below.

RQ1: Do students report their work truthfully?

We provide evidence on the truthful reporting of students using objective data. While we use a hypothetical scenario to engage students, the behavior that we examine is students' responses to questions about what they claimed they did in the exercise relative to what they actually did. Business professionals are expected to behave ethically in making decisions, and they are expected to be truthful in their reports to regulators, customers and other stakeholders, and government authorities. This expectation is more pronounced for accountants, where standard-setting bodies and regulators have specific requirements for sufficient and appropriate evidential matter and working papers to support decisions. For example, Auditing Standard No. 3 stipulates "audit documentation must clearly demonstrate that the work was in fact performed" (PCAOB 2004). Failure to comply with standards could result in significant fines and even expulsion from the profession.

RQ2: Is there an association between students' maturity and ethical behavior?

The literature suggests that ethical development may be associated with maturity (Kohlberg, 1976; Svensson and Wood, 2003; Sweeney, 1995; Smith and Rogers, 2000; Thorne and Magnan, 2000; Bernardi, 1994; Karcher, 1996). Nonetheless, studies that specifically examine the effect of maturity on students' moral development and ethical sensitivity report mixed results (Fulmer and Cargile, 1987; Green and Weber, 1997). Some studies actually document a decline in ethical behavior with maturity (Thorne, 2001; Ponemon, 1992; Ponemon, 1995; Shaub, 1994; Dreike and Moeckel, 1995), yet other studies, such as Cohen et al., (2001) and Thorne (1999), fail to observe an association between maturity and ethical reasoning. We examine whether upper-level students behave differently from lower-level students.

RQ3: Is there an association between performance and ethical behavior?

Some studies (e.g., Shaub, 1994; Chan and Leung, 2006; Sweeney, 1995) suggest that students' academic performance (measured by GPA and ACT scores) correlates positively with their understanding of ethical behavior. Other studies, such as Wright et al., (1998) and Karcher (1996), did not observe such a correlation. Therefore, we examine whether ethical behavior correlates with superior academic performance.

RQ4: Is there an association between major and ethical behavior?

Existing studies suggest that the ethical orientation of accounting majors seems to be no different than that of other business majors (Borkowski and Ugras, 1998; St. Pierre et al., 1990; Eaton and Giacomino, 2000; Gibson and Frakes, 1997). Actually, Sankaran and Bui (2003) suggest a decline in the ethical values of accounting majors. In contrast, Cohen et al., (2001) report that accounting majors are more ethically sensitive than non-accounting majors. Ironically, business majors, especially MBAs, tend to rationalize increasingly as they take more business courses (McCabe et al., 2006; Eynon et al., 1997). Therefore, we examine whether the ethical behavior of accounting majors is different from that of non-accounting majors.

RQ5: Is there an association between time pressure and ethical behavior?

Evidence suggests that time pressure imposes constraints on students' ability to make appropriate ethical decisions (McLain and Keenan, 1999; Ackerman and Gross, 2003; Goodie and Crooks, 2004). When faced with time pressure, inexperienced individuals are considerably less effective than their more experienced counterparts (Spilker and Prawitt, 1997; Buckley and Cameron, 2011). We, therefore, examine the association of time pressure with students' ethical behavior.

RQ6: Is there an association between gender and ethical behavior?

Many authors report no significant association between gender and ethical behavior (Armstrong, 1987, Arnold and Ponemon, 1991; Bay and Greenberg, 2001; Ponemon, 1992; Radtke, 2000). Some authors find females to have higher ethical sensitivity (Eynon et al., 1997; Bernardi and Arnold, 1997; Thorne, 1999) while Thorne (2001) reports that male students have higher ethical sensitivity. Gender may have an association with ethical behavior in the early stages of a professional's career, but the association seems to disappear among more seasoned professionals (Smith and Rogers, 2000). Additionally, gender differences are more prominent when task clarity is ambiguous (Smith and Rogers, 2000). We, therefore, examine the association of gender with ethical behavior.

Exercise Details

Students at a large public U.S. university with a diverse student population performed a due diligence task at the end of the semester in a classroom environment. The task required them to review a client's data, obtain relevant information, and verify the accuracy of computations. Figure 1 shows a high-level schema of the exercise. We obtained the approval of the University's Institutional Review Board (IRB) for our research. The IRB granted approval to conduct the exercise, analyze the results, and publish findings only in aggregate form, without attributing results to specific students.

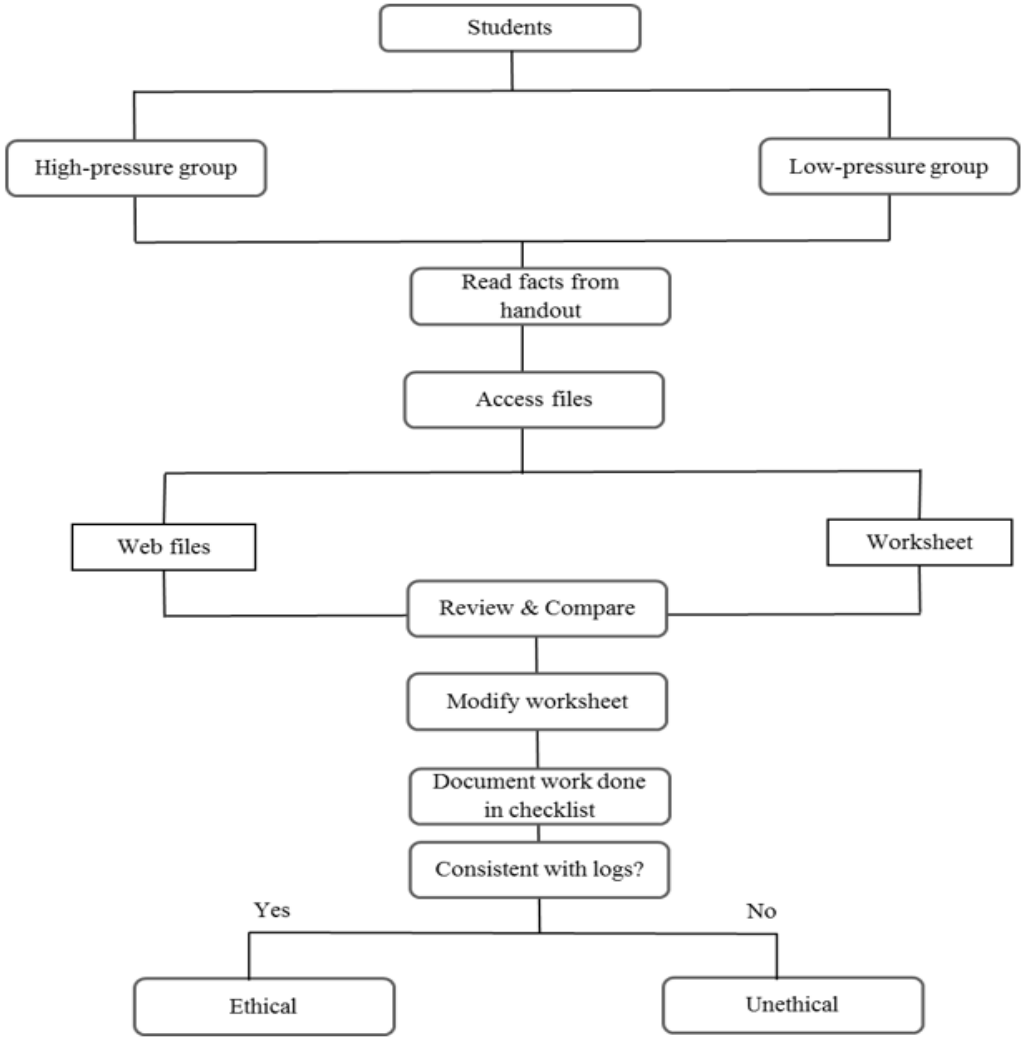


Figure 1: Schematic representation of the exercise

The due diligence task required students to evaluate, assess, and verify the accuracy of a profitability analysis for a new product in a division where they purportedly work. Students received an overview handout describing the task, including a statement that the company would close their division if it did not innovate and introduce new products regularly.

Search and Discovery (SD)

Students accessed (through the University's web-based course management system) and reviewed information from seventeen different files that contained an average of three short bullet lines with general and product-specific information. Not every file contained relevant information. We refer to this step as the search and discovery (SD) phase of the exercise.

Analysis and Computation (AC)

Students downloaded, through a shared network drive, an Excel worksheet that contained computations of the proposed product's EBIT. This worksheet contained errors in formulae and values. Using information from the SD phase, students made changes to the Excel worksheet as needed. We refer to

this step as the analysis and computation (AC) phase of the exercise. This design mirrors an actual due diligence task where professionals must sift through files, extract evidence, and organize relevant material. The course management system maintained a log of all documents accessed in the SD phase, and we tracked all changes made to the Excel worksheet (through Track Changes) in the AC phase.

The instructor provided students with a pre-formatted note to keep track of: (a) the files they accessed during the SD phase; and (b) the changes they made to the Excel worksheet during the AC phase. We required these steps to assist students with reporting their work at the conclusion of the exercise.

Decision

The Excel worksheet automatically recomputed the modified EBIT for the new product introduction each time a student made a change in the worksheet. Students used that information to determine and recommend whether the division should launch the new product. Students also certified the accuracy of their work. We refer to this step as the decision phase of the exercise.

At the end of the exercise, students completed a checklist (working paper) to document whether they accessed and reviewed each file in the SD phase and whether they changed items in the Excel worksheet as needed in the AC phase. We used the checklist as evidence of the work that students said they performed. We matched students' checklists against the logs maintained by the system and used the results to assess whether students reported their work truthfully. We classified students' responses as unethical if they reported completing a task when the evidence from the logs indicated otherwise.

Students' Backgrounds and other Details

We used students in lower-level and upper-level accounting courses for the exercise. The two samples allowed us to test the differential effects of students' major and maturity level, which we proxy by students' cumulative credit hours completed, and their enrollment in an upper-level or lower-level class. Concepts of ethics are extensively embedded in both lower- and upper-level courses through various means, including case analyses, exercises, and discussions. All students had extensive training in the use of both Excel and the course management system. Thus, the academic performance and maturity of all students who participated in the exercise were sufficient for effectively completing the task as given.

Students were not told of any moral temptation at the beginning of the task. They were randomly assigned to two groups regardless of their course level (lower or upper): high-pressure (ten minutes' exercise time) or low-pressure (twenty minutes' exercise time). The system automatically timed students out at the end of the assigned duration. These two groups allowed us to assess the association between time pressure and students' ethical behavior. Initially, we conducted a pilot test to determine, among other things, whether students could complete the exercise in the allotted times. As a result of the pilot test, we adjusted the time constraint, modified the information files, and added non-relevant files.

Students performed the exercise as an end-of-semester course assignment that could earn them either zero or full points based on arriving at the new EBIT after making all necessary modifications in the Excel worksheet. The exercise was worth six percent of their overall course grade. The potential to get zero for the assignment approximated the negative ramifications that an employee would face in practice. Thus, the task had two types of simultaneous incentives to ensure students' active engagement in the exercise. First, each student had the chance to get a perfect score for the correct answer, which is possible only if the student reviewed the files in the SD phase and made the necessary corrections in the AC phase. Second, the exercise cues told students about the possibility of a hypothetical promotion with increased compensation if the product is introduced. Students should recommend introducing the product only if the computed EBIT meets or exceeds the target EBIT; however, the lure of promotion and increased compensation if the product is introduced operated as an ethical dilemma for the student to manage.

Debriefing Session

After the students completed the exercise, the instructor engaged them in a debriefing session to discuss ethical issues in the task, alternative ways to address the ethical issues, and implications of non-ethical conduct for professionals. During the debriefing, some of the students mentioned professional accounting standards from the IMA and AICPA that require members to abide by their respective codes of conduct. The debriefing was also critical in order to discuss explicitly the moral hazards, which included:

a) misrepresent EBIT;
b) certify the accuracy of the computations without reviewing the spreadsheet;
c) recommend the new product even when the computed EBIT was lower than the benchmark EBIT;
d) make changes in the MS Excel worksheet without reviewing the source documents; and
e) report reading source documents when, in fact, the students failed to read them.

Students observed that the required tasks applied the spreadsheet-based skills they had learned during the semester and employed those skills in response to cues. They noted that the exercise challenged them to sift through information to obtain relevant data, modify the Excel worksheet, and assess the correctness of the EBIT.

Results and Analysis

Table 1 lists variables and their measurements. A total of 189 students participated in the exercise. After deleting ten non-usable cases where students did not complete key tasks, our final sample consisted of 179 usable cases. The University's Office of Institutional Research provided data for the ACT score, cumulative GPA, and cumulative credit hours completed for each student.

Table 1: Description of Variables

Name	Nature	Values/Measure
Dependent variable:		
Truthful reporting behavior	Binary	Unethical (0) / ethical (1) – actual work performed based on comparison of system logs and work reported. This variable has three different representations, one for each phase of the exercise
Independent variables:		
Maturity		
- Cumulative credit hours	Raw score	Total hours completed by student
- Course	Binary	Lower level (1), upper level (0)
Academic performance		
- Overall GPA	Raw score	
- ACT Score	Raw score	
Major	Binary	Accounting (1), non-accounting (0)
Time pressure	Binary	Total exercise time: ▪ High (0) – 10 minutes ▪ Low (1) – 20 minutes
Gender	Binary	Male (1) / Female (0)

Notes:

- Questions for the search and discovery phase asked students if they reviewed specific information that was available in files placed in the course management system on the Web.
- Questions for the analysis and computation phase asked students if they changed specific numbers in the spreadsheet based on the information they had discovered in the search and discovery phase.

Table 2 presents descriptive statistics for our sample. Thirty-three percent of the students were accounting majors. Non-accounting majors included students in marketing, finance, management, and MIS. We conducted the exercise in two undergraduate classes – a second-year course (lower-level) and a fourth-year course (upper-level). About sixty-five percent of the students came from the lower-level course. Thirty-nine percent of the sample was female.

RQ1: Do students report truthfully?

Of the total sample, thirty-five percent of students reported their work untruthfully (Table 3, Panel A). Those students were more likely to say that they completed work that they, in fact, did not complete. We observed untruthful reporting among students in the lower-level course, the upper-level course, and the

full sample across all stages of the exercise. In particular, lower-level students were more untruthful than upper-level students in both SD and AC phases (Table 3, Panels A, B, D and E; *p*-value<.01).

In the AC phase, truthful reporting averaged about ninety-six percent for the full sample up to the first half of the phase and then suddenly dropped to about forty-five percent truthful reporting for the second half. Interestingly, only thirty-two percent of students in the lower-level course reported truthfully in the second half of the phase (Table 3, Panel C). We call this behavior a *midway sign-off*.

Table 2: Descriptive Statistics

	Accounting				Non-accounting				Total
	Male		Female		Male		Female		
	Lower-level course	Upper-level course	Lower-level course	Upper-level course	Lower-level course	Upper-level course	Lower-level course	Upper-level course	
Freshmen	1			1	5	1	3		11
Sophomore	9		5		40		24		78
Junior	2	8	1	2	14	1	13		41
Senior		11	1	17	6	3	4	3	45
Other		2			1		1		4
Total	12	21	7	20	66	5	45	3	179

Total sample size…….. 179

Status: Freshman……. 78
Senior…..... 15
Junior…….. 45
Sophomore….. 41

Gender: Female…… 75
Male…… 104

Course: Lower level…….. 130
Upper level…….. 49

Major: Accounting…… 60
Non-accounting…. 119

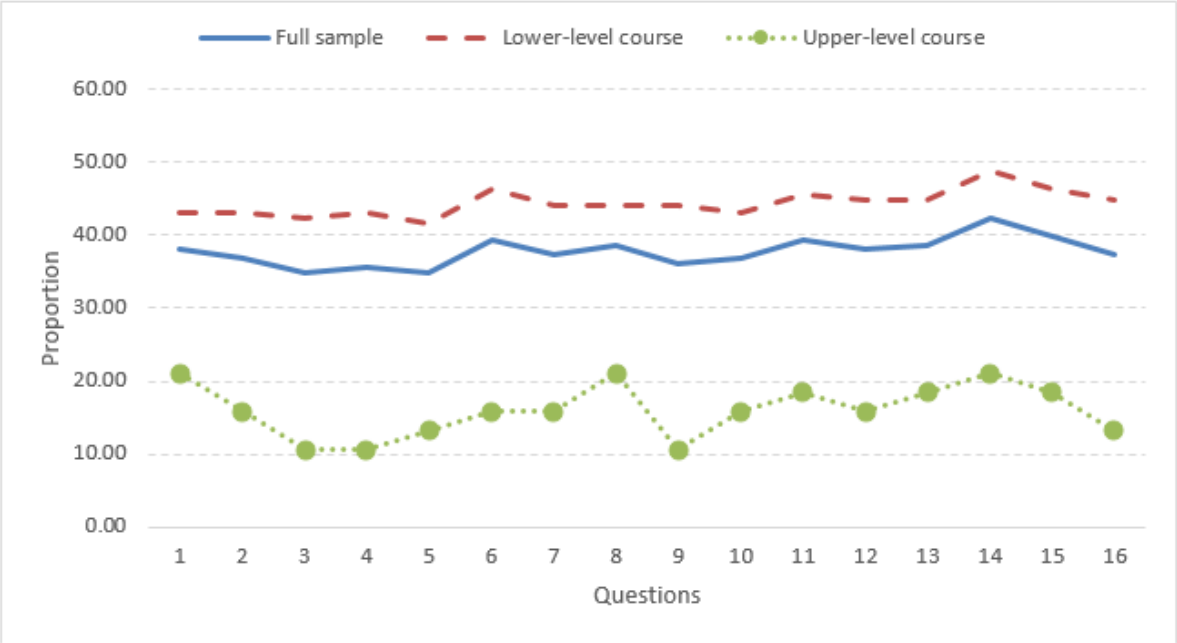
While we observe that lower-level students were more untruthful in both SD and AC phases, this behavior is not consistent in the decision phase. During the decision phase, upper-level students were about twice as likely to be unethical as lower-level students (Table 3, Panel E, *p*-value is .004 for certifying the accuracy of the work completed and .01 for recommending the introduction of the new product).

Table 3: Proportion of Unethical Behavior

Panel A: **Proportion of unethical behavior in the exercise**

	Full sample	Lower-level course	Upper-level course
Search & discovery phase	37.77%	44.4%	15.95%
Analysis & computation phase	31.85%	38.61%	7.64%
Total	34.66%	41.34%	11.73%

Panel B: **Unethical behavior in the Search & Discovery phase***

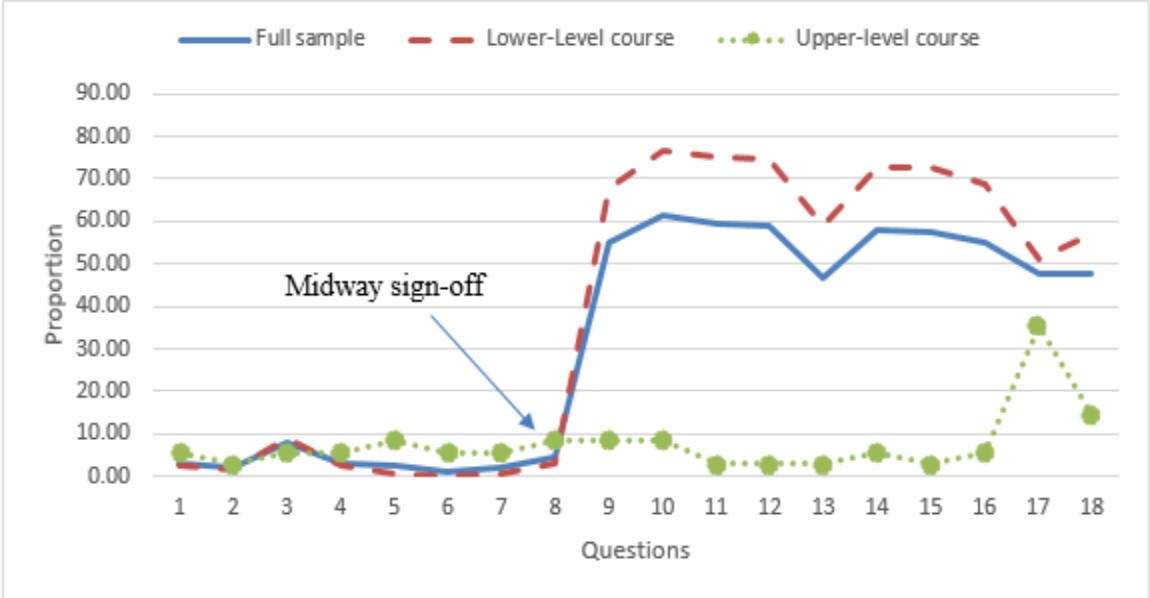


**Unethical behavior is represented by differences between system logs and work papers.*
Proportion indicates the proportion of students who reported unethically for each question.

Search & Discovery (SD) questions

Q1. Did you open the CEO's Biography Sheet on the Web?
Q2. Did you open the Assumptions Sheet on the Web?
Q3. Did you open the Sales & Market Profile Sheet on the Web?
Q4. Did you open the Commission Information Table Sheet on the Web?
Q5. Did you open the Company Facts Sheet on the Web?
Q6. Did you open the Component Redesign Sheet on the Web?
Q7. Did you open the Computation Formulae Sheet on the Web?
Q8. Did you open the East Region Updates Sheet on the Web?
Q9. Did you open the Employee Benefits Sheet on the Web?
Q10. Did you open the Expense Report Sheet on the Web?
Q11. Did you open the Manufacturing Costs Sheet on the Web?
Q12. Did you open the Marketing Costs Sheet on the Web?
Q13. Did you open the Non-Commission Sales Sheet on the Web?
Q14. Did you open the Officers Sheet on the Web?
Q15. Did you open the Payroll Report Sheet on the Web?
Q16. Did you open the Product Line Sheet on the Web?

Panel C: **Unethical behavior in the Analysis & Computation phase****



***Unethical behavior is represented by differences between system logs and work papers.*
Proportion indicates the proportion of students who reported unethically for each question.

Analysis & Computation (AC) questions*

Q1. Did you change Sara Goodwrench's Year 2 sales?
Q2. Did you change Janet Jackson's Year 1 sales?
Q3. Did you change Martha Morris's Year 1 sales?
Q4. Did you change Amada Sharp's Year 2 sales?
Q5. Did you change Frank Sinatra's Year 2 sales?
Q6. Did you change Donald Trump's Year 1 sales?
Q7. Did you change Christopher Driver's Year 1 sales?
Q8. Did you change Jordan Bell's Year 2 sales?
Q9. Did you change John Quincy's commission rate?
Q10. Did you change Mark Anthony's commission rate?
Q11. Did you change George Jetson's commission rate?
Q12. Did you change Ian McIntryre's commission rate?
Q13. Did you change Herbert Herfordshire's commission rate?
Q14. Did you change Richard Harrison's commission rate?
Q15. Did you change Martha Morris' commission rate?
Q16. Did you change Stacy Luminere's commission rate?
Q17. Did you change the Year 2 Manufacturing Cost Goods Sold?
Q18. Did you change the Year 2 Consulting Fees?

* Names in each question are sales representatives

Panel D: **Average unethical behavior**

	Search & Discovery	Analysis & Computation	Certification	Recommendation
Full Sample				
Mean	5.5028	8.2458	0.6975	0.6928
SD	7.0531	7.5866	0.4608	0.4628
n	179	179	162	153
t	10.438*	14.541*	19.268*	18.515*
Lower-level course				
Mean	6.8308	10.9846	0.7280	0.7190
SD	7.5618	7.0820	0.4468	0.4514
N	130	130	125	121
t	10.299*	17.684*	18.217*	17.523*
Upper-level course				
Mean	1.9796	0.9796	0.5946	0.5938
SD	3.6543	2.1064	0.4977	0.4990
N	49	49	37	32
t	3.792*	3.255*	7.266*	6.731*

*: p-value < .01 for all differences; H_0: mean = 0; H_a: mean > 0

Panel E: ***t*-test of difference in the count of unethical behavior for each student in lower-level course and upper-level course across three stages of the exercise**

	Lower-level Course			Upper-level Course				
	Mean	**Variance**	***n***	**Mean**	**Variance**	***n***	***df***	***t*-value**
Search & Discovery phase	6.831	57.180	130	1.980	13.354	49	167	5.748*
Analysis & Computation phase	6.677	13.321	130	0.980	4.437	49	148	12.968*
Decision phase	2.554	0.358	130	1.694	0.467	49	77	7.761*

Decision Phase: Test of proportions of unethical behavior between upper- and lower-level courses

	Lower-level Course	**Upper-level Course**	***z*-value**	***p*-value**
Certification	26.61%	40.54%	-2.557	0.004*
Recommendation	28.10%	40.63%	-2.259	0.010*

Truthful Reporting During Each Phase of the Due Diligence Task

Table 4 shows the association between unethical behavior and demographic variables (maturity, academic performance, time pressure, and gender) in each phase of the exercise. We test three models: SD model, AC model, and combined SD/AC model (see Table 4 for model specifications and results). All three models are statistically significant (p-value < .01), and the adjusted R-squares are fifty-six percent, fifty-one percent, and sixty-four percent for the SD model, the AC model, and the combined SD/AC model, respectively.

RQ2: How does maturity correlate with ethical behavior?

Credit hours completed is significant in all three models (Table 4). This corroborates our earlier finding that lower-level students were more untruthful than upper-level students in the SD phase. These observations suggest that the ethical behavior is influenced by students' maturity.

RQ3: How does academic performance correlate with ethical behavior?

We use both cumulative GPA and ACT scores to proxy academic performance. Table 4 confirms a significant (*p*-value<.01) relationship between academic performance (proxied by cumulative GPA) and ethical behavior across all three models. This is consistent with prior research (Bloodgood et al., 2010; Klein et al., 2007). On the other hand, ACT score is significant in only the SD model, suggesting a somewhat inconclusive relationship between academic performance and ethical behavior. The literature is not unequivocally settled on the role of such variables in the ethical behavior of students (Gupta et al., 2010).

Table 4: Factors Associated With Unethical Behavior

		SD[1]	AC[2]	Total Proportion[3]
Model statistics				
R-square		.5681	.5177	.64
Adjusted R-square		.5408	.4872	.6172
F-value		20.83***	16.99***	28.15***
Factors: Coefficient, (*t*-statistic)				
RQ3: Maturity	Credit hours	-.005 (-4.94)***	-.002 (-4.46)***	-.004 (-5.8)***
RQ3: Academic performance	Cum. GPA	-.404 (-5.72)***	-.136 (-3.91)***	-.26 (-6.187)***
	ACT score	-.008 (-.91)**	-.003 (-.86)	-.005 (-1.09)
RQ4: Major		.018 (.25)	-.091 (-2.46)**	-.03 (-.87)
RQ5: Time pressure		-.101 (-.85)	-.003 (-.05)	-.04 (-.69)
RQ6: Gender		.09 (1.33)	.034 (1.02)	.06 (1.48)

The following relationships are explored in this table:

1 SD = *f*(Hours, GPA, ACT, Major, Time, Gender)
2 AC = *f*(Hours, GPA, ACT, Major, Time, Gender)
3 Total Proportion = *f*(Hours, GPA, ACT, Major, Time, Gender)

- SD = Proportion of unethical behavior during Search & Discovery phase
- AC = Proportion of unethical behavior during Computation & Analysis phase
- Total proportion = Proportion of unethical behavior during the two phases combined
- All reported coefficients are unstandardized, followed by their standard error. Numbers in parentheses are *t*-values.
- ***, **: *p*-value < .01 and .05 respectively.
- Credit hours proxy the "Maturity" construct.
- GPA and ACT score proxy the "Academic performance" construct.

RQ4: How does academic major correlate with ethical behavior?

Accounting majors had higher ethical behavior (measured as the count of ethical responses in each phase of the exercise) compared with non-accounting majors for only the AC model (Table 4). The coefficient for major was insignificant in the other two models. When we compared students at the same level (upper- or lower-level students only), we observed no statistically significant relationships. This finding is consistent with Borkowski and Ugras (1998), who report that students pursuing different majors demonstrate increases in moral development over time, but when students at the same level are compared, there are no significant differences.

RQ5: What is the correlation of time pressure with ethical behavior?

With respect to time pressure, our results are inconclusive. The coefficient for time pressure is insignificant in all three models in Table 4. This result is inconsistent with some of the prior research (e.g., Goodie and Crooks 2004), which finds time pressure to vary inversely with ethical behavior.

RQ6: How does gender correlate with ethical behavior?

Gender is not significant in any of the three models. While this result is surprising given such studies as Borkowski and Ugras (1998) and Ritter (2006), it is consistent with some of the prior research that shows an inconclusive relationship between gender and ethical behavior (Radtke 2000).

Discussion

Given the high level of integrity expected in public accounting and given the associated regulatory and market penalties for even the appearance of ethical lapses and quality deficiencies, any evidence of unethical behavior could have significant implications for the accounting profession. Certifying that a specific due diligence task has been completed when, in fact, the underlying work has not been done is unethical and may constitute fraudulent behavior. According to SAS No. 99 and the fraud triangle literature, factors that can lead a person to yield to moral temptation include pressure (incentives), rationalization, and opportunity (SAS No. 99). Both educators and professionals agree on the role of ethics education in reducing the likelihood of such behavior (Tenbrunsel, 2007; Martin, 2007). Without formal instruction that requires them to learn about ethics, students may not behave ethically once they become accountants and business leaders (Misiewicz, 2007).

An interesting finding in this paper pertains to the midway sign-off. Possible reasons for the observed findings include the nature of the due diligence task, fatigue, or the likelihood that students merely rushed to complete the work. We should note that it is quite possible for students to make an honest error in documenting their work by forgetting to make changes in the worksheet or neglecting to follow some directions in the due diligence task. However, such behavior is clearly characteristic of a lack of due care. The task was simple, and the students in both courses had sufficient ability and experience with spreadsheets to complete all parts of the assigned exercise. Competence and due care are the linchpins in the code of conduct for most professional organizations, including the AICPA, IMA, and IIA. These organizations require their members to exercise due care in the discharge of their duties. Section 56 of Article V of the AICPA Code of Professional Conduct notes that "Due care requires a member to discharge professional responsibilities with competence and diligence" (AICPA, 2007). Competence, integrity, and credibility are the cornerstones of ethical principles for management accountants (IMA, 2008). Similarly, Section 1200 of International Standards for the Professional Practice of Internal Auditing states proficiency and due professional care as uncompromising and mandatory attributes expected of internal auditors (IIA, 2008).

Limitations

The findings in this study are subject to various limitations. The use of students limits the generalization of our findings. It is possible that students will behave differently when the dynamics of uncertainty, power, and responsibility are real as opposed to contrived. Further, the motivation and incentives in our exercise do not have the same force and consequences as do *real-world* situations, where real life, real

money, and real status are at stake. However, it is noteworthy that we find evidence of unethical behavior even in the presence of contrived incentives.

Implications and Conclusions

We examine accounting students' ethical behavior by assessing how truthfully they reported the due diligence work they performed. We find that a relatively large proportion of students claim that they did work which they actually did not perform. We interpret this as evidence of unethical behavior. We found differences between the ethics of students in upper-level and lower-level courses.

The ethical behavior of accounting students has implications for curriculum design and delivery. While many business and accounting programs have responded to calls for incorporating ethics into the curriculum in some form, active learning exercises for students to experience and understand ethical issues are uncommon. Our findings suggest that accounting education programs can help students better understand ethics by engaging them in simulated due diligence tasks.

Replication and extension of the issues examined in this paper may further advance knowledge of ethical behavior. For example, our study used students in a contrived setting. We are unable to tell whether professionals would exhibit a similar tendency to be untruthful in documenting and reporting their work (through working papers) as the students in our exercise did. Replication of this study with professional accountants and auditors as subjects would contribute to a better understanding of this issue. In addition, future research may examine the effect of cognitive development, as well as the effect of task characteristics, on ethical behavior. Observation of a midway sign-off is intriguing and merits further investigation and replication to determine whether it is systematic.

References

Abdolmohammadi, M. (2008). Who should teach ethics courses in business and accounting programs? Research on Professional Responsibility and Ethics in Accounting (Research on Professional Responsibility and Ethics in Accounting, Volume 13) Emerald Group Publishing Limited, 13, 113-134.

Ackerman, D. S., and Gross, B. L. (2003). Is Time Pressure all Bad? Measuring the Relationship between Free Time Availability and Student Performance and Perceptions. *Marketing Education Review*, *13*(2), 21-32.

Adkins, N., and Radtke, R. R. (2004). Students' and Faculty Members Perceptions of the Importance of Business Ethics and Accounting Ethics Education: Is there an Expectations Gap? *Journal of Business Ethics*, *51*(3), 279-300.

AICPA (American Institute of Certified Public Accountants). (2007). AICPA Code of Professional Conduct. http://www.aicpa.org/about/code/et_56.html (Accessed April 23, 2015).

AICPA (American Institute of Certified Public Accountants). (2013). Core Competency Framework & Educational Competency Assessment. http://www.aicpa.org/interestareas/accountingeducation/resources/pages/corecompetency.aspx (Accessed April 23, 2015).

Alexander, D., and Jermakowicz, E. (2006). A true and fair view of the principles/rules debate. *Abacus*, *42*(2), 132-164.

Armstrong, M. B. (1987). Moral Development and Accounting Education. *Journal of Accounting Education*, *5*(1), 27-43.

Arnold, D. F. and Ponemon, L. A. (1991). Internal Auditors Perceptions of Whistle-Blowing and the Influence of Moral Reasoning: An Experiment. *Auditing: A Journal of Practice & Theory*, *10*(2), 1-15.

Audi, R., and Murphy, P. E. (2006). The many faces of integrity. *Business Ethics Quarterly*, 3-21.

Bay, D. D. and Greenberg, R. R. (2001). The Relationship of the DIT and Behavior: A Replication. *Issues in Accounting Education*, *16*(3), 367-380.

Bayou, M. E., A. Reinstein, and P. F. Williams, (2011). To tell the truth: A discussion of issues concerning truth and ethics in accounting. *Accounting, Organizations and Society*, 36(2), 109-124.

Bernardi, R. A. (1994). Fraud Detection: The Effect of Client Integrity and Competence and Auditor Cognitive Style. *Auditing: A Journal of Practice & Theory*, *13* (1), 68-84.

Bernardi, R. A. and Arnold, D. F. (1997). An Examination of Moral Development within Public Accounting by Gender, Staff Level, and Firm. *Contemporary Accounting Research*, *14*(4), 653-668.

Bloodgood, J. M., W. H. Turnley and P. E. Mudrack (2010). Ethics Instruction and the Perceived Acceptability of Cheating. *Journal of Business Ethics*, *95*(1), 23-37.

Bonaci, C. G., Strouhal, J., Müllerová, L., & Roubíčková, J. (2013). Corporate Governance Debate on Professional Ethics in Accounting Profession. *Central European Business Review*, 2(3), 30-35.

Borkowski, S. C. and Ugras, Y. J. (1998). Business Students and Ethics: A Meta-Analysis. *Journal of Business Ethics*, *17*(11), 1117-1127.

Buckley, J. and Cameron, L. D. (2011). Automatic Judgments of Exercise Self-Efficacy and Exercise Disengagement in Adults Experienced and Inexperienced in Exercise Self-Regulation. *Psychology of Sport & Exercise*, *12*(3), 324-332.

Chan, S. Y. S. and Leung, P. (2006). The Effects of Accounting Students' Ethical Reasoning and Personal Factors on their Ethical Sensitivity. *Managerial Auditing Journal*, *21*(4), 436-457.

Cohen, J. R., Pant, L.W. and Sharp, D. J. (2001). An Examination of Differences in Ethical Decision-Making between Canadian Business Students and Accounting Professionals. *Journal of Business Ethics, 30*(4), 319-336.

Dallmann, H. U. (1998). Niklas Luhmann's Systems Theory as a Challenge for Ethics, *Ethical Theory and Moral Practice, 1*(1), 85-102.

Dreike, E. and Moeckel, C. (1995). Perceptions of Senior Accountants: Ethical Issues and Factors Affecting Actions. *Research on Accounting Ethics*, *1*(4), 331-348.

Eaton, T. V. and Giacomino, D. E. (2000). Personal Values of Business Students: Differences by Gender and Discipline. *Research on Accounting Ethics*, 7, 83-102.

Evans, L. (2003). The true and fair view and the 'fair presentation' override of IAS 1. *Accounting and Business Research*, *33*(4), 311-325.

Eynon, G., Hill, N. T. and Stevens, K. T. (1997). Factors that Influence the Moral Reasoning Abilities of Accountants: Implications for Universities and the Profession. *Journal of Business Ethics*, *16*(12), 1297-1309.

Federation of European Accountants. 2009. *Integrity in Professional Ethics*, Discussion Paper.

Fulmer, W. E. and Cargile, B. R. (1987). Ethical Perceptions of Accounting Students: Does Exposure to a Code of Professional Ethics Help? *Issues in Accounting Education*, *2*(2), 207-219.

Gibson, A. M. and Frakes, A. H. (1997). Truth or Consequences: A Study of Critical Issues and Decision Making in Accounting. *Journal of Business Ethics*, *16*(2), 161-171.

Goodie, A. S. and Crooks, C. L. (2004). Time-Pressure Effects on Performance in a Base-Rate Task. *The Journal of General Psychology*, *131*(1), 18-28.

Green, S. and Weber, J. (1997). Influencing Ethical Development: Exposing Students to the AICPA Code of Conduct. *Journal of Business Ethics*, *16*(8), 777-790.

Gupta, S., N. Swanson and D. Cunningham. (2010). A study of the effect of age, gender, & GPA on the ethical behavior of accounting students. *Journal of Accounting, Ethics & Public Policy, 11*(1), 63-93.

IIA (2008). International Standards for the Professional Practice of Internal Auditing. http://www.theiia.org/guidance/standards-and-guidance/ippf/standards/full-standards/?search=risk. (Accessed April 23, 2015).

IMA (2008). Statement of Ethical Professional Practice. http://www.imanet.org/pdfs/statement%20of%20Ethics_web.pdf (Accessed April 23, 2015).

Jones, J., Massey, D. W. and Thorne, L. (2002). A Review and Synthesis of the Empirical Research on the Ethical Dimension of Accountants' Professional Judgment, *in meeting of American Accounting Association*, Professionalism and Ethics Symposium, San Antonio, TX.

Karcher, J. N. (1996). Auditors' Ability to Discern the Presence of Ethical Problems. *Journal of Business Ethics*, *15*(10), 1033-1050.

Klein, H. A., Levenburg, N. M., McKendall, M. and Mothersell, W. (2007). Cheating During the College Years: How do Business School Students Compare? Journal of Business Ethics, *72*(2), 197-206.

Kohlberg, L. (1976). Moral Stages and Moralization: The Cognitive-Developmental Approach. in Lickona, Thomas (Ed), *Moral Development and Behavior: Theory, Research, and Social Issues*. New York: Holt, Rinehart and Winston, (31-53).

Lewis, P. V. (1985). Defining 'business ethics': Like nailing jello to a wall. *Journal of Business ethics*, *4*(5), 377-383.

Lipshitz, R. and Strauss, O. (1997). Coping with Uncertainty: A Naturalistic Decision-Making Analysis. *Organizational Behavior & Human Decision Processes*, *69*(2), 149-163.

Martin, R. D. (2007). Through the Ethics Looking Glass: Another View of the World of Auditors and Ethics. *Journal of Business Ethics*, 70(1), 5-14.

McCabe, D. L., Butterfield, K. D. and Treviño, L. K. (2006). Academic Dishonesty in Graduate Business Programs: Prevalence, Causes, and Proposed Action. *Academy of Management Learning & Education*, *5*(3), 294-305.

McLain, D. L. and Keenan, J. P. (1999). Risk, Information, and the Decision about Response to Wrongdoing in an Organization. *Journal of Business Ethics*, *19*(3), 255-271.

Misiewicz, K. M. (2007). The Normative Impact of CPA Firms, Professional Organizations, and State Boards on Accounting Ethics Education. *Journal of Business Ethics*, *70*(1), 15-21.

PCAOB 2004. Auditing Standard No. 3. http://pcaobus.org/Standards/Auditing/Pages/Auditing_Standard_3.aspx (Accessed April 23, 2015).

Ponemon, L. A. (1992). Ethical Reasoning and Selection-Socialization in Accounting. *Accounting Organizations and Society*, *17*(3-4), 239-258.

Ponemon, L. A. (1995). The Objectivity of Accountants' Litigation Support Judgments. *The Accounting Review*, *70*(3), 467-488.

Procario-Foley, E. G. and McLaughlin, M. T. (2003). A Propaedeutic for a Framework: Fostering Ethical Awareness in Undergraduate Business Students. *Teaching Business Ethics*, *7*(3), 279-301.

Radtke, R. R. (2000). The Effects of Gender and Setting on Accountants' Ethically Sensitive Decisions. *Journal of Business Ethics*, *24*(4), 299-312.

Ritter, B. A. (2006). Can Business Ethics Be Trained? A Study of the Ethical Decision-Making Process in Business Students. *Journal of Business Ethics*, *68*(2), 153-164.

Sankaran, S. and Bui, T. (2003). Ethical Attitudes among Accounting Majors: An Empirical Study. *Journal of the American Academy of Business, Cambridge*, *3*(1/2), 71-77.

SAS No. 99. Consideration of Fraud in a Financial Statement Audit. AICPA 2002. http://www.aicpa.org/Research/Standards/AuditAttest/DownloadableDocuments/AU-00316.pdf (Accessed April 23, 2015).

Shaub, M. K. (1994). An Analysis of the Association of Traditional Demographic Variables with the Moral Reasoning of Auditing Students and Auditors. *Journal of Accounting Education*, *12*, 1-26.

Smith, A. and Rogers, V. (2000). Ethics-Related Responses to Specific Situation Vignettes: Evidence of Gender-Based Differences and Occupational Socialization. *Journal of Business Ethics*, *28*(1), 73-86.

Spilker, B. C. and Prawitt, D. F. (1997). Adaptive Responses to Time Pressure: The Effects of Experience on Tax Information Search Behavior. *Behavioral Research in Accounting*, *9*, 172-198.

St. Pierre, K. E., Nelson, E. S. and Gabbin, A. L. (1990). A Study of the Ethical Development of Accounting Majors In Relation To Other Business and Nonbusiness Disciplines. *The Accounting Educators' Journal*, *3*(1), 23–35.

Svensson, G. and Wood, G. (2003). The Dynamics of Business Ethics: A Function of Time and Culture--Cases and Models. *Management Decision*, *41*(4), 350-361.

Sweeney, J. (1995). The moral expertise of auditors: An exploratory analysis. *Research on Accounting Ethics*, *1*(2), 213-234.

Tenbrunsel, A. E. (2007). Today's Ethical Issues: A Perspective from Accounting, Finance, Management, and Marketing', *Journal of Business Ethics*, *70*(1), 1-3.

Thorne, L. (1999). An Analysis of the Association of Demographic Variables with the Cognitive Moral Development of Canadian Accounting Students: An Examination of the Applicability of American-Based Findings to the Canadian Context. *Journal of Accounting Education*, *17*(2), 157-174.

Thorne, L. (2001). Refocusing Ethics Education in Accounting: An Examination of Accounting Students' Tendency to use their Cognitive Moral Capability. *Journal of Accounting Education*, *19*(2), 103-117.

Thorne, L. and Magnan, M. (2000). Canadian Public Accountant Moral Development and Domain Specific Reasoning. *Research on Accounting Ethics*, *7*, 177-196.

Tse, A. C. B. and Au, A. K. M. (1997). Are New Zealand Business Students More Unethical than Non-Business Students? *Journal of Business Ethics*, *16*(4), 445-450.

Wright, G. B., Cullinan, C. P. and Bline, D. M. (1998). Recognizing Ethical Issues: The Joint Influence of Ethical Sensitivity and Moral Intensity. *Research on Accounting Ethics*, *4*, 29–52.